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Before the
UNITED STATES COPYRIGHT ROYALTY JUDGES
LIBRARY OF CONGRESS
Washington, D.C.

In the Matter of: **DETERMINATION OF ROYALTY RATES AND TERMS FOR MAKING AND DISTRIBUTING PHONORECORDS (*Phonorecords IV*)**	**Docket No. 21-CRB-0001-PR (2023-2027)**

WRITTEN REBUTTAL STATEMENT OF GOOGLE LLC

Volume 4 of 4

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Before the
COPYRIGHT ROYALTY BOARD
LIBRARY OF CONGRESS
Washington, D.C.

In the Matter of: Determination of Rates and Terms for Making and Distributing Phonorecords (Phonorecords III)	Docket No. 16-CRB-0003-PR (2018-2022)

EXPERT WITNESS STATEMENT OF DR. GREGORY K. LEONARD

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(Phonorecords III)

I. QUALIFICATIONS AND ASSIGNMENT

1. I am an economist and partner at Edgeworth Economics, 333 Bush Street, Suite 1450, San Francisco, CA 94104. I received a Bachelor of Science degree in Applied Mathematics-Economics from Brown University in 1985 and a Ph.D. in Economics from the Massachusetts Institute of Technology in 1989. Prior to joining Edgeworth Economics, I was, at various times, a senior vice president with NERA Economic Consulting, a senior vice president with Lexecon Inc., a founding member and director of Cambridge Economics, Inc., and an assistant professor of economics at Columbia University.

2. My specialties within economics are applied microeconomics, which is the study of the behavior of consumers and firms, and econometrics, which is the application of statistical methods to economics data. I have published over sixty papers in scholarly and professional journals. My publications are listed on my curriculum vitae, attached as Appendix A. A number of these papers address issues in industrial organization, demand for products, intellectual property and the calculation of damages in patent infringement litigation, and econometrics, including publications in the *Journal of Industrial Economics*, the *RAND Journal of Economics*, the *Journal of Econometrics*, the *Berkeley Journal of Technology and Law*, and *les Nouvelles*.

3. For example, a paper in the *Journal of Econometrics* addresses econometric approaches to estimating patent value for use in patent litigation and licensing negotiations; a recent paper in *Antitrust* focuses on methodologies for determining "reasonable and non-discriminatory royalties" for standard-essential patents; and a paper in the *Columbia Science and Technology Review* discusses the concept of apportionment in patent valuation.

4. I am a senior editor of the *Antitrust Law Journal* and have served as a referee for numerous economics and other professional journals. I have given invited lectures on intellectual property and antitrust issues at the Federal Trade Commission (FTC), the United States Department of Justice (DOJ), the Directorate General for Competition of the European Commission, the Fair Trade Commission of Japan, and China's Supreme People's Court and Ministry of Commerce. I have been retained by the DOJ to consult on antitrust matters.

5. In 2009, I was invited to speak at a session of the FTC's hearings on the "Evolving IP Marketplace" concerning the calculation of patent damages. In the report that the FTC subsequently issued, my views on damages calculation were cited extensively.[1] In 2007, I served as a consultant to and testified before the Antitrust Modernization Commission, which was tasked by Congress and the President of the United States to make recommendations for revising U.S. antitrust laws. In its *Uniloc* decision, the U.S. Court of Appeals for the Federal Circuit cited one of my publications in support of its conclusion that a method of calculating reasonable royalty damages in a patent case (the so-called "25% Rule") is an unreliable and flawed methodology.[2]

6. I have served as an expert witness in a number of litigation matters before U.S. District Courts, the (U.S.) International Trade Commission, state courts, and arbitration panels. A list of cases in which I have testified (in deposition or at trial) in the last four years is provided in my curriculum vitae, attached as Appendix A to this Written Direct Statement. One of those cases was *Oracle v. Google*, where I analyzed damages for alleged copyright infringement as well as

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[1] Federal Trade Commission, *The Evolving IP Marketplace: Aligning Patent Notice and Remedies with Competition*, March 2011.

[2] *Uniloc USA, Inc. v. Microsoft Corp.*, Nos. 2010-1035, 2010-1055, 2011 WL 9738 (Fed. Cir. Jan. 4, 2011).

factors related to whether use of a copyright was fair use. My hourly rate for this matter is $900.

My fee is not contingent on the outcome of this proceeding.

7. The Judges of the Copyright Royalty Board ("CRB") have commenced this proceeding to set the rates and terms of the 17 U.S.C. § 115 ("Section 115") compulsory license for making and distributing phonorecords of nondramatic musical works for the period from January 1, 2018 through December 31, 2022. I understand that the Copyright Royalty Judges received requests to participate in this proceeding from Amazon Digital Services, Inc. ("Amazon"); Apple, Inc. ("Apple"); American Society of Composers, Authors and Publishers ("ASCAP"); Broadcast Music, Inc. ("BMI"); Church Music Publishers Association ("Church Music"); David Powell; Deezer S.A. ("Deezer"); Digital Media Association ("DiMA"); Gear Publishing Co ("Gear"); George Johnson; Google Inc. ("Google"); Music Reports, Inc. ("Music Reports"); Nashville Songwriters Association International ("NSAI"); National Music Publishers Association ("NMPA"); Harry Fox Agency ("Harry Fox"); Omnifone Group Limited ("Omnifone"); Pandora Media, Inc. ("Pandora"); Recording Industry Association of America, Inc. ("RIAA"); Rhapsody International, Inc. ("Rhapsody"); Songwriters of North America ("SONA"); Sony Music Entertainment ("SME"); SoundCloud Limited ("SoundCloud"); Spotify USA Inc. ("Spotify"); Universal Music Group; and Warner Music Group.[3] I note that Universal Music Group, Warner Music Group, and Sony Music Entertainment have entered into a settlement agreement with participating Copyright Owners covering the rates and terms for 37 C.F.R. § 385 ("Section 385"), Subpart A, and are thus no longer participating in the proceeding. Several other

[3] 37 CFR Part 385, *Determination of Rates and Terms for Making and Distributing Phonorecords* (Phonorecords III), Federal Register 48371 Vol. 81 No. 142, July 25, 2016.

participants have also withdrawn from the proceeding. Amazon, Apple, George Johnson, Google, NSAI, NMPA, Pandora, and Spotify remain as participants.

8. I have been asked by Google to review the relevant economic evidence in this matter and to provide my opinions on the appropriate range of rates and terms for the Section 115 compulsory license for the period from January 1, 2018, through December 31, 2022, specifically those pertaining to services providing interactive streaming and limited downloads covered by Section 385, Subpart B, and limited offerings, mixed service bundles, music bundles, paid locker services, and purchased content locker services covered under Section 385, Subpart C. My opinions regarding the appropriate rates and terms have been undertaken in accordance with the factors described in 17 U.S.C. § 801(b)(1) ("the Section 801(b)(1) factors").

9. In the course of my analysis, I have reviewed the documents and other information listed in Appendix B to this Written Direct Statement. Specific documents and other information cited as support in this testimony are not meant to be an exhaustive listing of all such documents or information.

10. My analysis and this report are based on information currently available to me. I reserve the right to augment or update opinions based on information learned in ongoing discovery.

II. SUMMARY OF OPINIONS

11. I understand that Google has proposed the following rate for Section 385, Subpart B: the greater of (i) 10.5% of service revenue and (ii) the lesser of (a) 13.5% of the total amount expensed by the service provider for sound recording rights, and (b) the existing per-subscriber per-month minima set forth in 37 C.F.R. 385.13(a). Similarly, for Section 385, Subpart C, Google proposes that the rate be the greater of (i) the existing Subpart C topline rates, and (ii)

13.5% of the total amount expensed by the service provider for sound recording rights. Google also proposes maintaining the per subscriber minima for the two service categories that contain such minima in Subpart C. For both subparts, the resulting royalty pool would be subject to a deduction for payments made for public performance rights.[4] I also understand that Google has proposed amending the definitions of Service Revenue in 37 C.F.R. 385.11 and Subpart C Service Revenue in 37 C.F.R. 385.21 to allow for deduction of certain costs of revenue, such as credit card transaction fees, carrier billing fees, and app store commissions, up to a maximum of 15 percent.

12. Google's proposals for Subparts B and Subpart C are economically reasonable. Based on my review of the relevant economic evidence produced in this matter, my opinions regarding the appropriate rates and terms for the Section 115 compulsory license for the period from January 1, 2018, through December 31, 2022, for the services covered under Section 385, Subparts B and C are as follows:

- 37 C.F.R. § 385, Subpart B – Interactive Streaming and Limited Downloads
  - The economically reasonable range for the all-in topline royalty rate for all of the service offering categories under Section 385, Subpart B is 10.0% to 11.0%, assuming the service revenue definitions proposed by Google. The lower end of this range, 10.0%, is calculated by dividing (1) the current Section 385, Subpart A royalty rate of the greater of $0.091 or $0.0175 per minute of playing time per download, which is approximately $0.093 per permanent digital download ("PDD"), by (2) the most current (2015) average retail price of a PDD of $1.10, after deducting up to 15% of revenue for certain costs of revenue under Google's proposed service revenue definitions. The upper end of the range, 11.0%, is calculated by dividing $0.093 per PDD by the historical (2006) average retail price of a PDD of $0.99, after deducting up to 15% of revenue based on Google's proposed service revenue definitions. Google's proposed all-in royalty rate of 10.5% is within this range.
  - The overall rate structure proposed by Google is also supported by [redacted]

[4] Google's proposal also includes a carve-out for compositions that have been directly licensed.

[redacted] The parties to these agreements have demonstrated a preference for a structure in which the licensee pays an all-in royalty rate for the package of rights. To be consistent with this structure, the Section 115 statutory rate should continue to provide for deduction of a service's musical composition public performance royalty payments; and the application of mechanical-only per-subscriber royalty floors should be removed from the Section 385, Subpart B royalty calculation.

- Amending the definition of service revenue to allow for deduction of up to 15% of revenue for certain costs of revenue, such as app store fees, credit card transaction fees, and carrier billing fees, is reasonable. These costs are analogous to deductions allowed for ad-supported services under 37 C.F.R. 385.11. [redacted] Further, as discussed below, application of the Section 801(b) factors from an economic perspective suggests that a decrease in the payments under the compulsory license is appropriate. That decrease can be accomplished in part by allowing for certain deductions to service revenue associated with services' costs directly incurred to expand the revenue base. Lastly, Google's maintenance of the 10.5% all-in rate and the greater-of structure with the lesser of percentage-of-sound-recording and existing per-subscriber minima, in addition to the 15% cap on the proposed deduction, ensures that the effect of such a change to the definition of service revenue will be limited.

- The economically reasonable minimum to apply under Section 385, Subpart B is the lesser of a percentage of the service's payments for sound recording rights and a per-subscriber minimum, as follows:

  - Percentage of service payments for sound recording rights – A minimum of 13.5% of service payments for sound recording rights is economically reasonable. This percentage is calculated by dividing (1) the current Section 385, Subpart A royalty of $0.093 per PDD for musical works rights by (2) the royalties paid to record labels for sound recording rights, which are equal to 70% of the retail price of a PDD less the musical works royalty.[6]

  - All-in per-subscriber minimum royalty rate – Maintenance of the existing per-subscriber per-month minima is economically reasonable, provided that they remain part of a lesser-of formulation with sound recording royalty payments.[7]

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[5] [redacted]

[6] In the instance of pass-through percentages applicable to record company revenues when the record company clears mechanical rights, this minimum should be adjusted accordingly.

[7] I understand that the current regulations are unclear on how to treat family plans, annual subscriptions, and student discounts with regard to the all-in per-subscriber minimum royalty rate. It is my opinion that when calculating a minimum for the purposes of family plans, the minimum should follow the economics of how the plans are priced; e.g., if a $10 per subscriber plan has an $0.80 all-in per-subscriber minimum, then a $15 per-family plan should have a $1.20 all-in per-family minimum. Alternatively, the per-subscriber minimum for family plans could be fixed at 150% of the per-subscriber minimum for individual plans, to conform to existing industry

- 37 C.F.R. § 385, Subpart C – Limited Offerings, Mixed Service Bundles, Music Bundles, Paid Locker Services, and Purchased Content Locker Services
  - The economically reasonable range for the all-in topline royalty rates for all of the service offering categories under Section 385, Subpart C is 10.0% to 11.0% based on the same analysis as that described for Subpart B. Google's proposal to maintain the existing all-in topline rates of up to 12% subject to its proposed definition of service revenue is conservatively high.
  - The overall rate structure proposed by Google is also supported by [redacted] the prior settlements in Phonorecords I and II. The parties to these agreements have demonstrated a preference for a structure in which the licensee pays an all-in royalty rate for the package of rights. To be consistent with this structure, the Section 115 statutory rate should continue to provide for deduction of a service's musical composition public performance royalty payments; and the application of mechanical-only per-subscriber royalty floors should be removed from the Section 385, Subpart C royalty calculation.
  - Amending the definition of Subpart C Service Revenue to allow for deduction of up to 15% of revenue for certain costs of revenue, such as app store fees, credit card transaction fees, and carrier billing fees is reasonable. These costs are analogous to deductions allowed for ad-supported services under 37 C.F.R. 385.21. [redacted] Further, as discussed below, application of the Section 801(b) factors from an economic perspective suggests that a decrease in the statutory rate is appropriate. That decrease can be accomplished in part by allowing for certain deductions to service revenue associated with services' costs directly incurred to expand the revenue base. Lastly, Google's maintenance of the existing topline all-in rates and the greater-of structure with the percentage-of-sound-recording and existing per-subscriber minima, in addition to the 15% cap on the proposed deduction, ensures that the effect of such a change to the definition of service revenue will be limited.
  - The economically reasonable minimum to apply under Section 385, Subpart C is:
    - Percentage of service payments to record companies for sound recording rights – Consistent with my analysis for Section 385, Subpart B (see above), for all of the service offering categories under Section 385, Subpart C, this minimum should be 13.5% of service payments for sound recording rights.[8]
    - All-in per-subscriber minimum royalty rate – Maintenance of the existing per subscriber per month minima is economically reasonable.

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pricing practices. See "Choose the Best Music Streaming Service for Your Family", CNET, October 14, 2016 (discussing prevailing on-demand streaming service price of $14.99 per month).

[8] In the instance of pass-through percentages applicable to record company revenues when the record company clears mechanical rights, this minimum should be adjusted accordingly.

III. BACKGROUND

A. Key Players in the Music Licensing Landscape

13. A songwriter is the author of a musical work, contributing music or lyrics. The Songwriters Guild of America ("SGA") and NSAI, a participant in this proceeding, are trade organizations that represent songwriters.[9]

14. Music publishers are entities that enter into publishing agreements with songwriters, under which the publishers in part finance songwriters' efforts in exchange for future royalty collections. Music publishers usually license songwriters' musical works and collect royalties from licensees of the musical works; and publishers in return receive from songwriters an ownership percentage in the musical work or the royalty streams that they collect from licensees.[10] There are three major music publishers: (1) Sony/ATV Music Publishing ("Sony/ATV"); (2) Warner/Chappell Music ("Warner/Chappell"); and (3) Universal Music Publishing Group ("Universal Music Publishing"). These firms hold a significant combined position, controlling the majority of the U.S. music publishing market.[11] There are also a number of mid-sized music publishers, including Kobalt Music Group ("Kobalt") and BMG Chrysalis ("BMG"), followed by thousands of smaller music publishers and self-published

[9] "About NSAI," Nashville Songwriters Association International, August 3, 2016; "SGA Professional Services," Songwriters Guild of America, March 12, 2007.

[10] Donald S. Passman, "Publishing Companies and Major Income Sources," (Chapter 16), *All You Need to Know about the Music Business*, Eighth Edition, Simon and Schuster, 2013, pp. 219-220.

[11] "Publishers Quarterly: Sony/ATV Rules Again But Warner/Chappell Gets a Big Boost from Lukas Graham," Billboard, July 28, 2016.

songwriters.[12] NMPA, a participant in this proceeding, and the Association of Independent Music Publishers ("AIMP"), are two trade organizations in the music publishing industry.[13]

15. The licensing of mechanical rights for musical works is often handled by mechanical rights administrators, such as Harry Fox — the largest such administrator — and Music Reports, due to the administrative burdens associated with a Section 115 compulsory license, which include serving notice on the copyright holder and the reporting of royalties on a song-by-song basis every month. Mechanical rights licensing for musical works is also often handled directly by music publishers.[14]

16. Performing rights organizations ("PROs") are organizations that license the public performance rights in musical works on behalf of songwriters and publishers, which typically align themselves with a particular PRO. ASCAP and BMI are the two largest PROs and represent the majority of songs publicly performed in the United States. ASCAP and BMI are not-for-profit businesses that must operate according to certain antitrust consent decrees that constrain their membership and licensing practices. SESAC, Inc. ("SESAC"), and Global Music Rights ("GMR") are two smaller, for-profit PROs that are involved in licensing public performance rights in musical works outside of government control.[15]

17. A record company (or label) typically finances the production of sound recordings, which are the result of a contractual relationship between the recording artists and record company.

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[12] "Publishers Quarterly: Sony/ATV Rules Again But Warner/Chappell Gets a Big Boost from Lukas Graham," Billboard, July 28, 2016.

[13] "About," National Music Publishers Association, June 18, 2015; "About Us," Association of Independent Music Publishers, December 21, 2011.

[14] Al Kohn & Bob Kohn, "Licensing Music in Sound Recordings (Mechanical Licenses)," (Chapter 13), *Kohn on Music Licensing*, Fourth Edition, 2010, pp. 808-809.

Record companies also promote the sound recording and recording artists, and arrange for the physical and digital distribution of the sound recording. Record companies own and generally handle the licensing of the reproduction and public performance rights for their sound recordings themselves. An exception is the licensing of incidental reproductions and public performances of sound recordings for digital, non-interactive streaming services, which are the subject of Section 112 and 114 statutory licenses, respectively, and where the industry collective, SoundExchange, is responsible for collecting and paying out royalties to recording artists, non-featured artists, and record companies.[16] There are major record labels and independent record labels. Universal Music Group, Sony Music Entertainment, and Warner Music Group are the primary major record labels. These major record labels share common corporate ownership with the major music publishers discussed above — e.g., Sony Corporation owns SME (record company) and half of Sony/ATV (music publisher); Universal Music Group (record company) owns Universal Music Publishing (music publisher); and Warner/Chappell (music publisher) is a division of Warner Music Group (a record company). Independent labels are those that are not wholly owned by one of these three major record labels.

18. Music service providers represent the channels of distribution for musical works and sound recordings, including radio and television stations, digital music companies, and physical and online record stores. In this matter, the music service providers relevant to the Section 115 compulsory license include companies that provide digital, interactive streaming services. Digital interactive streaming, also known as on-demand streaming, enables listeners to select and

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[15] "Music in the Marketplace," Better Business Bureau; "Music Publishing Groups Have New Competitor," Ernie Smith, Associations Now, October 31, 2014.

[16] Donald S. Passman, "Broad-Strokes Overview of the Record Business," (Chapter 7), *All You Need to Know about the Music Business*, Eighth Edition, 2013, p. 63.

play songs on demand. Examples of digital interactive streaming service providers include Spotify, Google, Apple, and Rhapsody. In contrast, I understand that non-interactive digital streaming services, also known as internet radio, have not been subject to the Section 115 compulsory license. These types of services enable listeners to play music without the ability to select the specific songs that are played. Pandora historically has been an example of a digital, non-interactive streaming service provider.[17] The National Association of Broadcasters ("NAB"), Radio Music License Committee, and Television Music License Committee are the primary organizations representing terrestrial radio and television broadcasters.[18] DiMA is the national organization that represents the interests of digital music and media companies such as, for example, Apple, Pandora, Spotify, and Google.[19]

B. Section 115 – Compulsory License for Making and Distributing Phonorecords

19. Under Section 115, the exclusive rights to make and distribute phonorecords (including digital phonorecords) of nondramatic musical works (i.e., mechanical rights) are subject to a compulsory license.[20] The process of obtaining a compulsory license under Section 115 begins by serving a notice of intention ("NOI") on the copyright owner.[21] Once an NOI has been served, the licensee must provide statements of account and pay the statutory royalties on a monthly basis. The CRB is the administrative body consisting of three Copyright Royalty Judges appointed by the Librarian of Congress that is responsible for establishing the statutory

[17] "The 2 Types of Streaming Royalties and How You Can Collect Both," Songtrust, August 4, 2014.

[18] "About Us," National Association of Broadcasters, November 6, 2009; "Homepage," Radio Music License Committee, February 24, 2010; "About Us," Television Music License Committee, October 14, 2013.

[19] "About DiMA," Digital Media Association, June 13, 2009.

[20] 17 U.S.C. § 115.

[21] 17 U.S.C. § 115(b).

royalty rates and terms under the Section 115 compulsory license for mechanical rights associated with musical works, a process that by statute takes place every five years.[22] The statutory royalty rates for the compulsory license are established under a standard set forth in Section 801(b)(1),[23] which requires the CRB to weigh several factors and to seek to achieve the following policy-oriented objectives:

> (A) To maximize the availability of creative works to the public.
>
> (B) To afford the copyright owner a fair return for his creative work and the copyright user a fair income under existing economic conditions.
>
> (C) To reflect the relative roles of the copyright owner and the copyright user in the product made available to the public with respect to relative creative contribution, technological contribution, capital investment, cost, risk and contribution to the opening of new markets for creative expression and media for their communication.
>
> (D) To minimize any disruptive impact on the structure of the industries involved and on generally prevailing industry practices.[24]

20. The current royalty rates and terms of the compulsory license for mechanical rights in musical works are presented in Section 385, and are discussed in the following sections. In this matter, the relevant rates and terms for the use of musical works under a Section 115 compulsory license for mechanical rights for Google are covered under: Subpart B — interactive streaming and limited downloads; and Subpart C — limited offerings, mixed service bundles, music bundles, paid locker services, and purchased content locker services.

21. As an alternative to the compulsory license, copyright owners and users are free to negotiate voluntary licenses that may depart from the Section 115 statutory rates and terms.

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[22] 17 U.S.C. § 804(b)(4).

[23] 17 U.S.C. § 115(c)(3)(A).

[24] 17 U.S.C. § 801(b)(1).

According to Section 115: "License agreements voluntarily negotiated at any time between one or more copyright owners of nondramatic musical works and one or more persons entitled to obtain a compulsory license under subsection (a)(1) shall be given effect in lieu of any determination by the Librarian of Congress and Copyright Royalty Judges."[25] Mechanical rights licensing is predominantly accomplished through voluntary licenses between music service providers and mechanical rights administrators (e.g., Harry Fox) or music publishers.[26]

C. Section 385 – Rates and Terms for Use of Musical Works under Compulsory License for Making and Distributing of Physical and Digital Phonorecords

1. Subpart A [§ 385.1 – 385.4] – Physical Phonorecord Deliveries, Permanent Digital Downloads, and Ringtones

22. Under Section 385, the current royalty rates for licensing mechanical rights for physical phonorecord deliveries, PDDs, and ringtones are as follows:

- Physical phonorecord deliveries and PDDs – maximum of $0.091 and $0.0175 per minute of playing time or fraction thereof.
- Ringtones - $0.24 per ringtone.[27]

I understand that, under historical industry practice, record labels generally secure and pass through the mechanical rights to physical and digital music stores.[28]

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[25] 17 U.S.C. § 115(c)(3)(E)(i).

[26] W. Jonathan Cardi, "Über-Middleman: Reshaping the Broken Landscape of Music Copyright", Iowa Law Review, Vol. 92, p. 835 (2007), pp. 841-42.

[27] 37 C.F.R. § 385.1-4.

[28] [redacted]

2. Subpart B [§ 385.10 – 385.17] – Interactive Streaming and Limited Downloads

23. Under Section 385, the current royalty rates for licensing mechanical rights for interactive streams and limited downloads of musical works are calculated based on the following steps:[29]

- Calculate the All-In Publishing Royalty for the Service Offering[30]
  - Maximum of 10.5% of service revenue and the following specified all-in minimum royalties based on the type of service:
    - (1) Standalone Non-Portable Subscription, Streaming Only:[31] Lesser of 22% of service payments for sound recording rights and $0.50 per subscriber per month.[32]
    - (2) Standalone Non-Portable Subscription, Mixed Use:[33] Lesser of 21% of service payments for sound recording rights and $0.50 per subscriber per month.
    - (3) Standalone Portable Subscription, Mixed Use:[34] Lesser of 21% of service payments for sound recording rights and $0.80 per subscriber per month.
    - (4) Bundled Subscription Services:[35] 21% of service payments for sound recording rights.

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[29] See 37 C.F.R. § 385.10-17, and "Rate Charts," Harry Fox Agency.

[30] "All-In Publishing Royalty" refers to the royalties for licenses covering both mechanical and public performance rights for musical works.

[31] Standalone Non-Portable Subscription, Streaming Only is defined as a "subscription service through which an end user can listen to sound recordings only in the form of interactive steams and only from a non-portable device to which such streams are originally transmitted while the device has a live network connection." (37 C.F.R. § 385.13.)

[32] I understand that only the higher of the percentages of service payments for sound recording rights is relevant for all of the Subpart B service offerings as it is the recording industry's practice not to pass through mechanical royalties for subscription services.

[33] Standalone Non-Portable Subscription, Mixed Use is defined as "a subscription service through which an end user can listen to sound recordings either in the form of interactive streams or limited downloads but only from a non-portable device to which such streams or downloads are originally transmitted." (37 C.F.R. § 385.13.)

[34] Standalone Portable Subscription, Mixed Use is defined as "a subscription service through which an end user can listen to sound recordings in the form of interactive streams or limited downloads from a portable device." (37 C.F.R. § 385.13.)

[35] Bundled Subscription Services are defined as "a subscription service providing licensed activity that is made available to end users with one or more other products or services (including products or services subject to other subparts) as part of a single transaction without pricing for the subscription service providing licensed activity separate from the product(s) or service(s) with which it is made available (e.g., a case in which a user can buy a portable device and one-year access to a subscription service providing licensed activity for a single price)." (37 C.F.R. § 385.13.)

(5) Free Non-Subscription/Ad-Supported Services:[36] 22% of service payments for sound recording rights.

- Subtract Applicable Performance Royalties
  - Subtract from the result in the previous step the "total amount of royalties for public performance of musical works that has been or will be expensed pursuant to public performance licenses in connection with uses of musical works through such offering."[37]

- Determine the Payable Royalty Pool
  - Maximum of the result in the previous step and the following mechanical-only per-subscriber royalty floors based on the type of service:

    (1) Standalone Non-Portable Subscription, Streaming Only: $0.15 per subscriber per month.

    (2) Standalone Non-Portable Subscription, Mixed Use: $0.30 per subscriber per month.

    (3) Standalone Portable Subscription, Mixed Use: $0.50 per subscriber per month.

    (4) Bundled Subscription Services: $0.25 per active subscriber per month.

    (5) Free Non-Subscription/Ad-Supported Services: NA.

- Calculate the Per-Work Royalty Allocation for Each Relevant Work
  - Divide the result in the previous step by the total number of plays of all musical works through the service offering to calculate a per-play figure. Then multiply this figure by the total number of plays for each musical work through the service offering.

3. Subpart C [§ 385.20 – 385.26] – Limited Offerings, Mixed Service Bundles, Music Bundles, Paid Locker Services, and Purchased Content Locker Services

24. Under Section 385, the current royalty rates for licensing mechanical rights for limited offerings, mixed service bundles, music bundles, paid locker services, and purchased content locker services are calculated based on the following steps:[38]

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[36] Free Non-Subscription/Ad-supported Services are defined as "a service offering licensed activity free of any charge to the end user." (37 C.F.R. § 385.13.)

[37] 37 C.F.R. § 385.12.

- Calculate the All-In Publishing Royalty for the Service Offering
  - Maximum of the applicable percentage of service revenue based on the type of service:

    (1) Mixed Service Bundle:[39] 11.35% of service revenue.

    (2) Music Bundles:[40] 11.35% of service revenue.

    (3) Limited Offering:[41] 10.5% of service revenue.

    (4) Paid Locker Service:[42] 12% of incremental service revenue.

    (5) Purchased Content Locker:[43] 12% of service revenue.

    and the applicable all-in minimum based on the type of service:

    (1) Mixed Service Bundle: 21% of service payments for sound recording rights.[44]

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[38] See 37 C.F.R. § 385.20-26, and "Rate Charts," Harry Fox Agency.

[39] Mixed Service Bundle is defined as "an offering of one or more of permanent digital downloads, ringtones, locker services or limited offerings, together with one or more of non-music services (e.g., Internet access service, mobile phone service) or non-music products (e.g., a device such as a phone) of more than token value, that is provided to users as part of one transaction without pricing for the music services or music products separate from the whole offering." (37 C.F.R. § 385.21.)

[40] Music Bundles is defined as "an offering of two or more of physical phonorecords, permanent digital downloads or ringtones provided to users as part of one transaction (e.g., download plus ringtone, CD plus downloads). A music bundle must contain at least two different product configurations and cannot be combined with any other offering containing licensed activity under subpart B of this part or subpart C of this part." (37 C.F.R. § 385.21.)

[41] Limited Offering is defined as "a subscription service providing interactive streams or limited downloads where - (1) An end user is not provided the opportunity to listen to a particular sound recording chosen by the end user at a time chosen by the end user (i.e., the service does not provide interactive streams of individual recordings that are on-demand, and any limited downloads are rendered only as part of programs rather than as individual recordings that are on-demand); or (2) The particular sound recordings available to the end user over a period of time are substantially limited relative to services in the marketplace providing access to a comprehensive catalog of recordings (e.g., a service limited to a particular genre or permitting interactive streaming only from a monthly playlist consisting of a limited set of recordings)." (37 C.F.R. § 385.21.)

[42] Paid Locker Service is defined as "a locker service that is a subscription service." Locker service is defined as "a service providing access to sound recordings of musical works in the form of interactive streams, permanent digital downloads, restricted downloads or ringtones, where the service has reasonably determined that phonorecords of the applicable sound recordings have been purchased by the end user or are otherwise in the possession of the end user prior to the end user's first request to access such sound recordings by means of the service." (37 C.F.R. § 385.21.)

[43] Purchased Content Locker is defined as "a locker service made available to end-user purchasers of permanent digital downloads, ringtones or physical phonorecords at no incremental charge above the otherwise applicable purchase price of the permanent digital downloads, ringtones or physical phonorecords, with respect to the sound recordings embodied in permanent digital downloads or ringtones or physical phonorecords purchased from a qualified seller...whereby the locker service enables the purchaser to engage in one or both of the qualifying activities." "Qualifying activity for purposes of this definition of 'purchased content locker service' is enabling the purchaser to – (i) Receive one or more additional phonorecords of such purchased sound recordings of musical works in the form of permanent digital downloads or ringtones at the time of purchase, or (ii) Subsequently access such purchased sound recordings of musical works in the form of interactive streams, additional permanent digital downloads, restricted downloads or ringtones." (37 C.F.R. § 385.21.)

(2) Music Bundles: 21% of service payments for sound recording rights.

(3) Limited Offering: 21% of service payments for sound recording rights (subject to a further minimum payment of $0.18 per subscriber per month).

(4) Paid Locker Service: 20.65% of service payments for sound recording rights (subject to a further minimum payment of $0.17 per subscriber per month).

(5) Purchased Content Locker: 22% of any incremental service payments to record companies for sound recording rights (above the otherwise applicable payments for permanent digital downloads and ringtones).

- Subtract Applicable Performance Royalties
  - Subtract from the result in the previous step the "total amount of royalties for public performance of musical works that has been or will be expensed pursuant to public performance licenses in connection with uses of musical works through such subpart C offering."[45]

- Calculate the Per-Work Royalty Allocation for Each Relevant Work
  - Calculate the per-work royalty allocation based on the type of service:

    (1) Limited Offering: Divide the result in the previous step by the total number of plays of all musical works through the service offering to calculate a per-play figure. Then multiply this figure by the total number of plays for each musical work through the service offering.

    (2) Mixed Service Bundle, Paid Locker Service, and Purchased Content Locker: Divide the result in the previous step by the total number of plays of all musical works through the service offering, which is equal to the sum of the total number of interactive streams, the total number of plays of restricted downloads, and 5 times the total number of downloads, to calculate a per-play figure. Then, multiply this figure by the sum of the total number of interactive streams, restricted downloads, and 5 times the total number of downloads, for each musical work through the service offering.

    (3) Music Bundles: Separate the result in the previous step by the product types in the music bundle using the relative prices of each product type in the bundle. Then divide each product-type total by the total number of sound recordings of musical works of that product type included in the music bundle.

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[44] I understand that only the higher of the percentages of service payments for sound recording rights is relevant for all of the Subpart C service offerings as it is the recording industry's practice not to pass through mechanical royalties for subscription services

[45] 37 C.F.R. § 385.22.

D. Digital Interactive Streaming Services Subject to Section 385, Subparts B and C

25. In this section, I provide an overview of some of the digital interactive streaming services that are subject to Subparts B and C of Section 385 provided by companies that are a part of this proceeding.

1. Google Play Music

26. Google Play Music includes a music store from which users can purchase music content ("Google Play Music Store") that is subject to Subpart A of Section 385, an online storage service for a user's music collection ("Google Play Locker Music Service") subject to Subpart C, and a music subscription service ("Google Play Subscription Service") subject to Subpart B that integrates with the online storage service and the music store.[46]

27. The Google Play Music Store is a music store from which users can purchase music content. The purchased content can be placed in the user's Google Play Locker Music.[47] A music store was first added to Google's Android Market on November 16, 2011.[48]

28. The Google Play Music locker service provides users with access to store music and associated data files, as well as software applications and related services that allow users to update, manage, access, and play the user's stored music, including songs the user purchases

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[46] [redacted] The "Google Locker Music Service" used to be referred to as "Google Play Music Library."

[47] [redacted]

[48] "Google Music Is Open for Business," Google Official Blog, November 16, 2011.

from the Google Play Store.[49] Specifically, the service offers a digital locker that scans and matches users' music collections up to 50,000 songs, with songs purchased from the Google Play Store excluded from the storage limit, and allows users to stream them to their Android devices or computers in the U.S. for free.[50]

29. Google Play Music subscription service provides interactive streams and conditional downloads.[51] Google launched its new subscription on-demand interactive streaming music service, called Google Play Music All Access, on May 15, 2013.[52] The service was later rebranded Google Play Music.

30. The current Google Play Music service offers both a free service and subscription plan to its users. Its free service enables users to upload up to 50,000 songs to personal cloud libraries and the ability to stream customized radio stations on an ad-supported basis.[53] Free users may also listen to "Upsell Plays" that provide interactive streams to non-subscribers for the purpose of upselling such users to Google's subscription-based service or purchase opportunities.[54] Google Play Music's subscription tier allows subscribers to stream 35 million commercially-available songs on-demand, access offline playback, and access YouTube Red, which is

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[49] "Google Play Terms of Service," Google, July 27, 2016; GOOG-PHONOIII-00000090. Purchased Music Locker makes available digital downloads, cache copies, and interactive streams of purchased files via single server copies to users who have purchased such files via the Google Play Music Store.

[50] "Google Play" Google+, December 18, 2012; "Comparing Music Storage Services from Apple, Amazon, Google," CNET, March 10, 2015.

[51] [redacted] Conditional Download means a digital transmission of a digital file available to users for off-line playback on an authorized device for up to thirty-one (31) consecutive days.

[52] "Google Unveils Streaming Music Subscription Service," Mashable, May 15, 2013; "Google Launches 'Google Play Music All 'Access' On-Demand $9.99 a Month Subscription Service," TechCrunch, May 15, 2013.

[53] "Apple Music, Spotify and a Guide to Music Streaming Services," The New York Times, April 5, 2016.

[54] [redacted]

YouTube's ad-free subscription service.[55] The Google Play Music subscription plan is available to users for $9.99 a month. The platform is available through Apple and Android apps as well as web browsers.[56]

2. Amazon Prime Music

31. Amazon Prime Music is available with a $99 annual Amazon Prime subscription.[57] The service launched in June 2014.[58] Amazon Prime Music gives users access to a catalog of more than 1 million songs. The ad-free service enables users to access on-demand music as well as customizable radio stations and playlists. Additionally, mobile users can save songs to their devices for offline listening. Amazon Prime is available through Apple, Android, Windows, BlackBerry, and Roku apps.[59] In October 2016, Amazon launched an on-demand music streaming service called Amazon Music Unlimited. The subscription service is priced at $9.99 per month, with Amazon Prime and Echo users paying a respective $7.99 and $3.99 per month. Amazon Music Unlimited provides access to a larger catalog of music compared to the Amazon Prime Music service, with access to tens of millions of tracks.[60] Further, Amazon Music Unlimited also provides its subscribers access to curated music playlists and personalized stations.[61]

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[55] "Apple Music vs. Spotify vs. Google Play Music," Android Authority, July 20, 2016; "Apple Music, Spotify and a Guide to Music Streaming Services," The New York Times, April 5, 2016.

[56] "Apple Music, Spotify and a Guide to Music Streaming Services," The New York Times, April 5, 2016.

[57] "Apple Music, Spotify and a Guide to Music Streaming Services," The New York Times, April 5, 2016.

[58] "Amazon Launches Streaming Music Service for Prime Members," The Verge, June 12, 2014.

[59] "Apple Music, Spotify and a Guide to Music Streaming Services," The New York Times, April 5, 2016.

[60] "Now Streaming: Amazon Music Unlimited," Amazon, October 12, 2016; "Amazon Pairs Its Speaker With Streaming Music, at a Bargain Price," The New York Times, October 12, 2016.

[61] "Now Streaming: Amazon Music Unlimited," Amazon, October 12, 2016.

2. Apple Music

32. Apple Music launched in 2015.[62] Apple Music provides a free service and a paid subscription plan with access to more than 30 million songs. Apple's free service provides users with access to Beats 1, which is an internet radio station. Its subscription service is available for $9.99 a month or $14.99 for a family account. Paying subscribers are able to play songs on demand and use offline playback.[63] Apple Music has 15 million paid subscribers.[64] Apple Music is available through Apple and Android mobile devices as well as Mac and Windows desktop applications.[65]

3. Pandora

33. Pandora provides a free ad-supported, non-interactive streaming service as well as an ad-free version called Pandora One for $4.99 per month.[66] Pandora, which launched its radio service in 2004, has approximately 78 million users of which 4 million are paying subscribers.[67] In 2016, Pandora expects to launch an on-demand music service.[68]

4. Spotify

34. Spotify has more than 100 million users, including 30 million paying subscribers as of July 2016.[69] Spotify offers both a free and paid subscription service enabling users to access its catalog of more than 30 million songs. Spotify's advertising-based free service option enables

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[62] "Apple Music vs. Spotify vs. Google Play Music," Android Authority, July 20, 2016.

[63] "Apple Music, Spotify and a Guide to Music Streaming Services," The New York Times, April 5, 2016.

[64] "Spotify Has 100 Million Users But Apple Music Remains a Threat," Macworld, June 20, 2016.

[65] "Apple Music, Spotify and a Guide to Music Streaming Services," The New York Times, April 5, 2016.

[66] "Apple Music, Spotify and a Guide to Music Streaming Services," The New York Times, April 5, 2016.

[67] Pandora Media, Inc. 10-Q, 2016 Quarterly Report, October 27, 2016.

[68] "Pandora's New Strategy: It's Going On-Demand," Media Life Magazine, August 23, 2016; "Amazon and Pandora to Gauge Music's Value in the Internet Age," The New York Times, September 11, 2016.

users to play songs on demand through its desktop version and playlists on its mobile version.[70]

Spotify's $9.99 monthly subscription plan allows users to play songs on demand, download music directly, use playback offline, and listen to music without advertisements.[71] Its service is available through Apple and Windows mobile and desktop computer applications, Android phones, PlayStation, Roku, and web browsers.[72]

IV. OVERVIEW OF THE SECTION 801(b)(1) FACTORS USED TO DETERMINE THE RATES AND TERMS FOR THE SECTION 115 COMPULSORY LICENSE

35. As previously discussed, the statutory rates for the Section 115 compulsory license are established under a standard set forth in Section 801, which I understand requires the CRB to weigh several policy objectives (i.e., the Section 801(b)(1) factors). To determine the appropriate rates and terms for the Section 115 compulsory license in this matter, I first identify market-based benchmarks for the Section 115 rates — these benchmarks are derived from economic evidence including, for example, the current Section 385 Subpart A royalty rates for PDDs, the recent proposed settlement pertaining to future Subpart A rates, and the terms of Google's and other music service providers' agreements involving licenses to mechanical rights in musical works for digital interactive music streaming services. Then, I analyze additional economic evidence pertaining to each of the four 801(b)(1) factors to determine if the market-based benchmarks should be adjusted to reflect the policy objectives and economic considerations under each of these factors.

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[69] "Spotify Wants to Go Public Despite a History of Losses," Fortune, July 20, 2016.

[70] "Apple Music, Spotify and a Guide to Music Streaming Services," The New York Times, April 5, 2016.

[71] "Spotify," TechCrunch, September 20, 2016; "Go Premium," Spotify, September 20, 2016.

[72] "Apple Music, Spotify and a Guide to Music Streaming Services," The New York Times, April 5, 2016.

V. BENCHMARK ANALYSIS FOR THE RATES AND TERMS FOR THE SECTION 115 COMPULSORY LICENSE

A. Continuation of the Current Rates in Section 385, Subpart A – Physical Phonorecord Deliveries, Permanent Digital Downloads, and Ringtones

36. The Copyright Royalty Judges ruled on November 24, 2008 that the statutory rates payable under a Section 115 compulsory license for musical works in physical phonorecords and PDDs would be the greater of $0.091 or $0.0175 per minute of playing time for the period until successor rates and terms become effective.[73] The rate for ringtones was set at $0.24 per download.[74] These are the rates that licensees had been paying under a Section 115 compulsory license for physical phonorecord deliveries, PDDs, and ringtones since 2006.[75]

37. On November 13, 2013, the Copyright Royalty Judges issued the final regulations that set the rates and terms for a Section 115 compulsory license, including the rates and terms for services covered under Section 385, Subpart A, which would become effective January 1, 2014. The rates for physical phonorecords and PDDs were kept the same at the greater of $0.091 or

[73] Final Determination of the Rates and Terms, Mechanical and Digital Phonorecord Delivery Rate Determination Proceeding, Docket No. 2006-3 CRB DPRA (November 24, 2008), p. 1. For the effective dates of these rates, see U.S.C. § 803(d)(2)(b): "In other cases where rates and terms do not expire on a specified date, successor rates and terms shall take effect on the first day of the second month that begins after the publication of the determination of the Copyright Royalty Judges in the Federal Register, except as otherwise provided in this title, or by the Copyright Royalty Judges, or as agreed by the participants in a proceeding that would be bound by the rates and terms. Except as otherwise provided in this title, the rates and terms, to the extent applicable, shall remain in effect until such successor rates and terms become effective."

[74] Final Determination of the Rates and Terms, Mechanical and Digital Phonorecord Delivery Rate Determination Proceeding, Docket No. 2006-3 CRB DPRA (November 24, 2008), p. 1.

[75] Final Determination of the Rates and Terms, Mechanical and Digital Phonorecord Delivery Rate Determination Proceeding, Docket No. 2006-3 CRB DPRA (November 24, 2008), p. 17.

$0.0175 per minute of playing time; the rates for ringtones were also kept the same at $0.24 per download.[76]

38. On June 15, 2016, the Copyright Royalty Judges received a motion stating that the participants listed below had reached a partial settlement regarding the rates for services covered under Section 385, Subpart A for the period from 2018 to 2022, and seeking approval of that partial settlement.[77]

- Copyright Owners
  - Church Music
  - NSAI
  - NMPA
  - Harry Fox
  - SONA
- Licensees
  - Universal Music Group
  - Warner Music Group

39. The settlement proposes "that the royalty rates and terms presently set forth in 37 C.F.R. Part 385 Subpart A should be continued for the rate period at issue in the proceeding."[78] A2IM, an independent label group (though not a participant in the proceeding), submitted a comment to

[76] See 37 CFR Part 385, *Adjustment of Determination of Compulsory License Rates for Mechanical and Digital Phonorecords*, Federal Register 67938 Vol. 78 No. 219, November 13, 2013. No changes were made to Section 385, Subpart A.

[77] 37 CFR Part 385, *Determination of Rates and Terms for Making and Distributing Phonorecords* (Phonorecords III), Docket No. 16-CRB-0003-PR (2018-2022), Federal Register 48371 Vol. 81 No. 142, July 25, 2016.

[78] 37 CFR Part 385, *Determination of Rates and Terms for Making and Distributing Phonorecords* (Phonorecords III), Docket No. 16-CRB-0003-PR (2018-2022), Federal Register 48371 Vol. 81 No. 142, July 25, 2016.

the CRB in support of the partial settlement on August 24, 2016.[79] On October 28, 2016, Sony Music Entertainment and Copyright Owners NMPA and NSAI filed a joint motion to adopt the terms of the proposed settlement with Universal Music Group and Warner Music Group on an industrywide basis.[80]

40. In summary, from 2006 to the present, and likely through 2022, the royalty rates paid under the Section 115 compulsory license for Section 385 Subpart A have remained, and will remain, constant. Specifically, for physical phonorecords and PDDs the rates have remained constant at the greater of $0.091 or $0.0175 per minute of playing time per download. During this same time period, the weighted average price per digital download — based on the price per download for singles and the price per song for albums — has steadily increased. In Exhibit 7, I present the weighted average price per download from 2006 to 2015, which has increased from $0.99 per download in 2006 to $1.10 per download in 2015, an increase of approximately 11%. Based on data provided by Google for tracks sold on the Google Play Store in August 2016, I understand that [redacted] of U.S. track purchases were less than or equal to [redacted] minutes and that, for the [redacted] of U.S. track purchases that were greater than [redacted] minutes, the average track length was [redacted]. Using these data, I calculated the effective Section 385, Subpart A royalty rate to be ([redacted]*$0.091) + ([redacted]*([redacted]+[redacted])*$0.0175) = $0.093. Comparing this effective rate to the weighted average price per download shows that the Subpart A effective royalty rate as a

[79] Comments of A2IM in Support of Proposed Settlement, *Determination of Royalty Rates and Terms for Making and Distributing Phonorecords (Phonorecords III),* Docket No. 16-CRB-0003-PR (2018-2022), August 24, 2016.

[80] See Mot. Adopt Settlement Industry-Wide, filed Oct. 28 2016 (joint mention of the NMPA, NSAI, and SME; "The Parties have agreed that the royalty rates and terms provided in the UMG/WMG Settlement should be applied industry-wide to all licensees under Section 115. The UMG/WMG Settlement calls for continuation of the rates and terms presently set forth in 37 C.F.R. Part 385 Subpart A . . . .").

percentage of the weighted average price per download has actually decreased from 9.4% in 2006 to 8.5% in 2015.[81]

41. Using the royalties paid in connection with PDDs as a benchmark is conservative because the contribution of the service relative to that of the copyright owner is larger in the case of interactive streaming than in the case of PDDs.

42. After adjusting for the fact that deductions of up to 15% of revenue would be permitted under Google's proposed service revenue definitions for Subpart B (and assuming hypothetically that this would also be the case for sellers of PDDs under Subpart A, who pay download store commissions of 30%), the 2006 percentage of revenue after deductions would be 11.0%. This is similar to the current 10.5% Subpart B rate, which accounts for all necessary publishing rights. Using the 2015 weighted average price per PDD of $1.10, and adjusting for the fact that deductions of up to 15% of revenue would be permitted under Google's proposed service revenue definitions for Subpart B, the corresponding 2015 effective Subpart A percentage of revenue royalty rate is 10.0%.

43. Furthermore, there is some evidence that interactive streaming may supplant download sales,[82] which suggests there should be consistency between the effective percentage of revenue

[81] I reserve the right to update my calculations if additional data are produced that relate to this point.

[82] See, e.g., the decision of the Second Circuit in *Arista Records, LLC v. Launch Media, Inc.*, 578 F.3d 138 (2nd Cir. 2009). In that case, the Court explained, "[i]f the user has sufficient control over the interactive service such that she can predict the songs she will hear, much as she would if she owned the music herself and could play each song at will, she would have no need to purchase the music she wishes to hear. *Launch Media*, 578 F.3d at 161. I also understand that the copyright owners in this proceeding have consistently made the argument that on-demand streaming substitutes for download sales, and that this understanding explains the industry's prior Section 115 settlements' licensing of on-demand streaming services and exemption of non-interactive services. See also *Digital Performance Right in Sound Recordings Act of 1995, House of Representatives* No. 104-274, at 14 (1995) ("Of all the new forms of digital transmission services, interactive services are most likely to have a significant impact on traditional record sales, and therefore pose the greatest threat to the livelihoods of those whose income depends upon revenues derived from traditional record sales.").

reflected in the Subpart A rate and the Subpart B rate. As also demonstrated above, the percentage of revenue rate derived from the effective Subpart A rate of $0.093 per download, has declined over time as the price per download has consistently increased (i.e., from 11.0% in 2006 to 10.0% in 2015, adjusted for the proposed 15% of revenue cost deduction). This economic evidence supports a corresponding decrease in the current Subpart B percentage-of-revenue rate.

44. I have also compared the effective Subpart A rate of $0.093 per download paid to publishers for musical works rights under Section 385, Subpart A to the royalties paid to record companies for sound recording rights on the same sale of a PDD. [redacted] Additionally, according to several sources, Apple also pays royalties to record labels equal to 70% of the retail price for sales of digital downloads through the iTunes Music Store.[84] I understand that the royalties paid by both Google and Apple to record companies are inclusive of the $0.093 per download effective royalty owed to music publishers, and that the record companies pass through the $0.093 payment to the music publishers. As discussed above, the weighted average retail price per digital download has increased from $0.99 in 2006 to $1.10 in 2015; which means that the royalties that companies such as Apple [redacted] have been paying to record labels for sales of PDDs based on the 70% royalty rate have been increasing over time. As a result, the ratio of musical works-to-sound recordings royalties on sales of PDDs covered under Section 385, Subpart A has decreased from approximately 15.5% to 13.8% from 2006 to 2015. These ratios

[83] [redacted]

are lower than the current ratios of musical works-to-sound recordings royalties contained in Section 385, Subparts B and C (e.g., musical works royalties are between 17.36% and 21% of the service payment to record companies for sound recordings for Standalone Portable Subscription, Mixed Use services covered under Subpart B). This analysis supports a reduction in the current Section 385, Subparts B and C minimum payments based on percentages of service payments paid for sound recording rights to bring them in line with the implied Subpart A musical works-to-sound recordings percentages.[85]

B. Existing Agreements Involving Licenses to Mechanical Rights in Musical Works for Digital Interactive Music Streaming Services

45. In general, in the absence of any constraints, the outcome of an arm's-length negotiation between unrelated parties represents a "fair" outcome for both parties as contemplated under Section 801(b)(1)(B). Additionally, it may also represent an outcome that appropriately divides the value created by the combination of the two parties' assets as contemplated under Section 801(b)(1)(C). Therefore, existing licenses negotiated in the open market can potentially be used to form a benchmark for setting rates for the Section 115 compulsory license that provide both a "fair" return to the copyright owner and leave the copyright user with a "fair" income, while also properly reflecting the relative contributions of the copyright owner and the copyright user in the product made available to the public.

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[84] "The New Economics of the Music Industry," Rolling Stone, October 25, 2011; "More Artists Steer Clear of iTunes," The Wall Street Journal, August 28, 2008. For further support for the 70% of the sales price figure, see Testimony of David B. Pakman, November 1, 2016, FN 6.

[85] The 13.5% of label payments proposed by Google is very close to the 13.8% figure calculated here. Additionally, the 13.8% number represents the latest in a downward trend. And the number, which is based on only one month of data, is subject to change as I obtain industry wide data and data on additional time frames.

46. Only existing licenses that are "comparable" to the Section 115 compulsory license should be used in a benchmark analysis. In the context of intellectual property licensing, an existing agreement is a valid comparable for a prospective license if the economic conditions that surrounded the agreement are similar to the economic conditions surrounding the prospective license. Such conditions include the economic positions of the parties (including, e.g., the products or services sold by the licensee) and the rights being licensed. In the event that there are differences in economic conditions between a potential comparable agreement and the prospective license being assessed, it may be possible to make adjustments to account for those differences.

47. Comparable licenses are commonly used in analysis by financial economists as benchmarks for the valuation of companies and their assets, including intellectual property.[86] Comparable licenses are also commonly used by damages experts in intellectual property litigation to determine the "reasonable royalty" that would have resulted from a hypothetical licensing negotiation between the patent owner and the alleged infringer.[87] When evaluating licenses as potential benchmarks, it is important to consider the circumstances surrounding the negotiation of the licenses.

48. I have reviewed a number of existing agreements produced by the parties in this matter, including agreements involving licenses to various rights in musical works and sound recordings.

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[86] See, e.g., Robert F. Reilly and Robert P. Schweihs, The Handbook of Business Valuation and Intellectual Property Analysis, Chapter 23: Research Techniques for an Intellectual Property Economic Analysis, 2004, pp. 615-616. ("The identification of comparative sale/license transactions should reflect the industry and economic environment in which the subject intellectual property operates." See also Aswath Damodaran, Damodaran on Valuation, Security Analysis for Investment and Corporate Finance, 2006, p. 238-254.

[87] See, e.g., Christine Meyer and Bryan Ray, "A Critique of Noneconomic Methods of Reasonable Royalties," Economic Approaches to Intellectual Property, pp. 90-93. See also *VirnetX, Inc. v. Cisco Systems, Inc.*, September 16, 2014.

A summary of these agreements is provided in Exhibits 1a-1j. In the following sections, I focus my discussion and analysis on the agreements that include, among other things, licenses covering mechanical rights in musical works for digital interactive music streaming services, and address their relevance in terms of establishing a benchmark for the rates for the Section 115 compulsory license. A detailed summary of my review of these agreements (and their related amendments) is provided in Exhibits 2a-2h.

1. Google's Publishing Agreements Involving Licenses for Mechanical Rights in Musical Works for Digital Interactive Music Streaming Services

49. Google has entered into publishing agreements that include a license for mechanical rights in musical works covering its digital interactive music streaming services subject to the Section 115 compulsory license. These Google licenses cover Google Play Subscription Services, Google Locker Music Services, or YouTube.

50. I have compared the terms of the Google mechanical rights licenses with those of the current Section 115 statutory license, with a focus on the actual rights being licensed under the Google licenses, the services covered under these licenses, and the corresponding royalty calculation terms of these licenses as compared to the royalty calculation methodologies currently presented in Subparts B and C of Section 385. In general, the terms outlined in the Google publisher agreements are consistent with the Section 385 terms with several exceptions, which I address in the following sections.

a. Google Play Subscription Services Licenses

51. I have reviewed a number of Google licenses with music publishers covering mechanical rights in musical works, [redacted]

I note that these Google licenses cover [redacted] of mechanical rights for the Google Play Subscription Service, and that for Google the Section 115 compulsory license is only necessary to obtain mechanical rights for the small remaining portion of the service.[89] The most notable difference between these Google direct licenses with music publishers covering Google Play Subscription Services and the Section 115 statutory mechanical license is that the Google licenses are "all-in" licenses. In other words, the licenses granted to Google by the music publishers convey both mechanical and public performance rights. I understand that such all-in licenses are consistent with the fact that, historically, the 10.5% of service revenue "starting point" for the Section 385, Subpart B royalty calculation has been viewed by music service providers (and music publishers)[90] as a rate that covers the costs of all publishing rights associated with Subpart B activities.[91]

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[88] See Exhibit 2a. [redacted] I understand that Google has entered into this form license with a number of licensors. I note that the terms of this agreement pertaining to the Google Play Subscription Service are generally consistent with those of Google's agreements with other music publishers.

[89] I understand that Google's direct publisher licenses cover [redacted] of the total number of compositions in the Google Play Catalog. See Written Direct Testimony of Paul Joyce, November 1, 2016, ¶ 22.

[90] See Trial Tr. 1255:15–23, Pandora Media, Inc. v. Am. Soc'y of Composers, Authors & Publishers, No. 12-cv-8035 (S.D.N.Y. 2014)(testimony of then-UMPG chairman/CEO Zach Horowitz) ("THE COURT: So are you talking about ASCAP's public performance fee for an on-demand service? [Zach Horowitz]: In my mind I blur it, I merge it. It doesn't make any difference to me how Spotify's income to the publishers are designated. It doesn't matter to me if they're called digital royalties or performance royalties. It's a service that offers value to

52. In terms of the actual royalty calculation methodology presented in Google's direct licenses with music publishers covering mechanical and public performance rights in musical works pertaining to Google Play Subscription Services, [redacted] However, the royalty calculation methodology in Google's direct licenses with music publishers has several differences [redacted] including:

[redacted]

As a result, the royalty calculation methodology in Google's direct licenses with music publishers conveying all necessary publishing rights for the Google Play Music subscription service is effectively simplified to [redacted]

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the consumers and a certain amount of money is paid to the publishers as a result. And so I looked at it in a holistic way in terms of the total amounts paid.")

[91] Testimony of David B. Pakman, November 1, 2016, ¶ 21; Written Direct Testimony of Zahavah Levine, November 1, 2016, ¶¶ 35, 40-41.

[92] [redacted]

[93] Note that this last difference is not included in all of the relevant Google license agreements pertaining to Google Play Subscription Services.

[94] [redacted]

53. I note that although these Google Play Subscription Services licenses are voluntary licenses, the negotiations leading to the agreements may have been influenced by the existence of the Section 115 compulsory license. Specifically, neither the licensor nor the licensee has any incentive to agree to terms different from those in the Section 115 compulsory license (because, in the absence of an agreement, they could each fall back on the statutory license) unless it was made better off by doing so. The economic evidence suggests that the influence of the Section 115 compulsory license was favorable to the copyright owners (i.e., compared to if there was no Section 115 compulsory license to fall back upon). First, as discussed below, the services have not been profitable at the current statutory rates, a factor likely to result in lower negotiated rates absent any influence from the Section 115 compulsory license. Second, Google's Zahavah Levine described [redacted] that is, it has been the copyright owners, not Google, that have used the Section 115 compulsory license as leverage in the negotiations. Third, as discussed above, the effective percentage royalty rate for musical works rights for digital downloads under Subpart A has decreased over time, whereas the royalty rate for musical works rights under Subpart B has remained constant over time.

54. The Google Play Subscription Services licenses confirm that Google and the publishers intended for there to be a fixed all-in rate that Google would pay to publishers for whatever rights were necessary, so that any fluctuations in the public performance rights marketplace would not result in any change to Google's total payments to publishers. This makes economic sense. To the extent streaming requires both mechanical and public performance rights, they are complementary rights, with one having little or no value absent the other. This creates a "Cournot complements" problem, whereby independent sellers of complementary products may

each price inefficiently high because each does not take into account the negative externality on the other of increasing its price. When the Cournot complements problem exists, joint selling of a package consisting of the complementary products leads to a lower overall price, greater output, and increased economic efficiency. The analogous action here is to sell a package of the mechanical and public performance rights for an all-in rate. If the sum of the rates for separately negotiated mechanical and public performance rights was greater than the all-in rate, that would represent a relatively inefficient outcome. Thus, it makes sense to limit the total payments to the publisher to the all-in rate and eliminate the mechanical-only floor fees.

b. Google Locker Music Services Licenses

55. I have reviewed a number of Google licenses with music publishers covering mechanical rights in musical works, [redacted] Like the subscription agreements discussed in the previous section, these Google licenses cover the vast majority of mechanical rights for the Google Locker Music Service. Additionally, as with the subscription agreements, the most notable difference between Google's direct licenses with music publishers covering Google's Locker Music Services and the Section 115 statutory mechanical license is that the Google licenses are "all-in" licenses. In other words, the licenses granted to Google by the music publishers convey

[95] See Exhibit 2a. [redacted]

all necessary publishing rights. I understand that such all-in licenses are consistent with the fact that, historically, the 12% of service revenue "starting point" for the Section 385, Subpart C royalty calculation for locker services has been viewed by music service providers (and music publishers) as a rate that covers the costs of all publishing rights associated with Subpart C activities.[96]

56. In terms of the actual royalty calculation methodology presented in Google's direct licenses with music publishers covering mechanical and public performance rights in musical works pertaining to Google Locker Music Services, [redacted]

As a result, the royalty calculation methodology in Google's direct licenses with music publishers conveying all necessary publishing rights for the Google Locker Music Services is effectively simplified to [redacted] Because Google's music locker service is offered free to the consumer (i.e., there is no service revenue), this reduces to [redacted] Google incurs the cost of operating this service in part because it funnels users towards Google's revenue

[96] Testimony of David B. Pakman, November 1, 2016, ¶ 21; Written Direct Testimony of Zahavah Levine, November 1, 2016, ¶¶ 35, 40-41.

[97] [redacted]

generating music services (e.g., the Google Play Store and the Google Play subscription service).[98]

57. As discussed in the previous section, any influence of the Section 115 compulsory license on these negotiated agreements was likely in favor of the copyright owners. Moreover, again the agreements demonstrate the intention of the parties that Google's publishing payments would be [redacted] and would not increase due to fluctuations in the public performance rights marketplace.

c. YouTube Licenses

58. The most notable difference between Google's direct licenses with music publishers covering YouTube and the Section 115 statutory license is that the YouTube licenses are designed primarily to cover audiovisual works, which makes these licenses less relevant as benchmarks for purposes of the current analysis. Unlike the Section 115 statutory license or the Google Play Subscription Services and Google Locker Music Services agreements discussed above, these licenses also include additional types of rights, including synchronization rights and the rights covering derivative works.

59. In terms of the actual royalty calculation methodology presented in YouTube's direct licenses with music publishers pertaining to audio-only tracks [redacted]

[98] See Written Direct Testimony of Paul Joyce, November 1, 2016, ¶ 8.

[99] [redacted]

[redacted]

[redacted][100]

2. Other Music Service Providers' Agreements Involving Licenses to Mechanical Rights in Musical Works for Digital Interactive Music Streaming Services

60. I have also reviewed agreements from other music service providers that include a license for mechanical rights in musical works for their digital interactive music streaming services. I have compared the terms of these mechanical rights licenses with those of the Section 115 statutory license; with a focus on the actual rights being licensed under these licenses, the services covered under these licenses, and the corresponding royalty calculation terms of these licenses as compared to the royalty calculation methodologies currently presented in Subparts B and C of Section 385. In the following sections, I focus on the notable differences between the terms of these music service providers' licenses and Section 385.

a. Amazon Agreements

61. I have reviewed several Amazon agreements that license mechanical rights for musical works.[101] The rights licensed cover Amazon Prime Music.[102] The ad-free service is part of an

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[100] [redacted]

[101] See Exhibit 2c. One of these licenses—the Amazon Digital Services LLC Music Publishing Rights Agreement, AMZN00000147—does not identify a specific music publisher as the licensor. However, I understand that Amazon has entered into this form license with a number of licensees. [redacted]

[102] Prior to June 12, 2014, Amazon's music service was called Amazon Cloud Player. See "Amazon Launches Music Service, Adds Another Element to Prime," Mashable, June 12, 2014; "Amazon Launches Smartphone Music Streaming in U.S.," Computerworld, March 29, 2011.

annual Amazon Prime subscription,[103] and enables users to access on-demand music as well as customizable radio stations and playlists. Additionally, mobile users can save songs to their devices for offline listening.[104]

62. [redacted] I note that Amazon

[103] "Apple Music, Spotify and a Guide to Music Streaming Services," The New York Times, April 5, 2016.

[104] "Apple Music, Spotify and a Guide to Music Streaming Services," The New York Times, April 5, 2016.

[105] [redacted]

[106] [redacted]

would have had no economic incentive to negotiate how the publisher allocates its revenues among mechanical and public performance royalties.

63. [redacted]

b. Loudr Agreement

64. I have reviewed an agreement that licenses mechanical rights in musical works covering Loudr Store, a music provider owned by re:Discover, Inc.[109] Loudr Store is a segment of Loudr,[110] and enables consumers to preview, purchase, download, stream, and share store content.[111] [redacted]

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[107] [redacted]

[108] [redacted]

[109] See Exhibit 2g.

[110] Loudr is a platform that specializes in the licensing and distribution of cover songs. See "Distribution Features," Loudr, April 9, 2014.

[111] "Terms of Use," Loudr, March 30, 2015.

[112] [redacted]

c. Pandora Agreements

65. I have reviewed several Pandora License Agreements [redacted]

d. Microsoft Agreement

66. I have reviewed two Microsoft agreements that license mechanical rights in musical works.[116] [redacted]

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[113] See Exhibit 2f.

[114] [redacted]

[115] [redacted]

[116] See Exhibit 2e.

[117] [redacted] Microsoft has since rebranded this music service to Groove Music on July 6, 2015. See "Updates to Entertainment in Windows 10," Microsoft, July 6, 2015.

[118] "What is the Microsoft Groove Music app?," Microsoft, August 18, 2016.

[redacted]

e. Spotify Agreements

67. I have reviewed several Spotify agreements [redacted]

f. Apple Agreements

68. [redacted]

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[119] Additionally, this agreement specifies a minimum payment guarantee of $450,000.

[120] See Exhibit 2h. [redacted]

[121] [redacted]

[122] See Exhibit 2d.

[123] [redacted]

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C. Results of the Benchmark Analysis for the Rates and Terms for the Section 115 Compulsory License

1. Benchmark All-In Topline Royalty Rate

71. I have reached the following conclusions regarding the appropriate all-in topline rate for the service offering categories under Section 385, Subparts B and C suggested by the available benchmarks:

- The economically appropriate all-in topline royalty rate for a Section 115 license, accounting for musical work public performance royalties, for all of the service offering categories under Section 385, Subpart B suggested by the available benchmarks ranges from 10.0% to 11.0%.
  - The lower end of this range, 10.0%, is based on a comparison of the effective Section 385, Subpart A royalty rate of $0.093 per PDD to the most current (2015) average retail price of a PDD of $1.10, adjusted to reflect Google's proposed deductions of up to 15% of revenue. As discussed above, given the relationship between PDDs and streams and the, if anything, greater relative contribution of the services in the case of streams, the effective percentage of revenue rate derived from the $0.093 per stream Subpart A rate should be consistent with the Subpart B percentage of service revenue rate.
  - The upper end of this range, 11.0%, is based on a comparison of the effective Section 385, Subpart A royalty rate of $0.093 per PDD to the historical (2006) average retail price of a PDD of $0.99, adjusted to reflect that deductions of up to 15% of revenue are permitted under Google's proposed service revenue definitions.
  - Google's proposal for the all-in topline royalty rate of 10.5% is within this range.
  - Google's and other music service providers' voluntary licenses provide an upper bound on the payments that should be set in this proceeding. Moreover, in terms of its structure, Google's proposal is consistent with these agreements.
    - Google's voluntary licenses with music publishers for its Google Play Subscription Service — classified in the Standalone Portable Subscriptions, Mixed Use service offering category for Section 385, Subpart B — involve parties, services of the licensee, and rights licensed that are similar to those of the Section 115 license.
    - Pandora's voluntary licenses [redacted]

[redacted]

- Spotify's voluntary licenses [redacted]
- Google's voluntary licenses with music publishers covering YouTube are less comparable to the Section 115 license that I am addressing in this proceeding because they are designed to primarily cover audiovisual works and not the interactive streaming and limited download services covered under the Section 115 license; and they include a license to additional types of rights, including synchronization rights and the rights covering derivative works, which are not subject to the Section 115 license.
- Microsoft's voluntary [redacted]
- Apple's voluntary licenses [redacted]
- Finally, Amazon's more recent voluntary licenses [redacted]

- The economically appropriate all-in topline royalty rate for a Section 115 license, accounting for musical work public performance royalties, for all of the service offering categories under Section 385, Subpart C suggested by the available benchmarks ranges from 10.0% to 11.0%.
  - The upper and lower ends of this range are based on the same Subpart A benchmark analysis described above for Subpart B. Given this range, Google's proposal to retain the current all-in rates of up to 12% is conservatively high.
  - Google's and other music service providers' voluntary licenses and the Phonorecords II settlement support the rate structure proposed by Google.
    - Google's voluntary licenses with music publishers for its Google Locker Music Service — classified in the Purchased Content Locker service offering category for Section 385, Subpart B — involve parties, services of the licensee, and rights licensed similar to those of the Section 115 license.
    - Pandora's voluntary licenses [redacted]

- Amazon's historical voluntary licenses

72. Other conclusions can be drawn from the voluntary agreements. The parties to these agreements therefore have a revealed preference for royalties based on a percentage of revenue. A percentage of revenue structure has a number of advantages over, for example, a per-stream royalty structure. For example, the same revenue percentage can be applied to a wide variety of plans, under the reasonable assumption that the relative contributions of the musical work and the service are roughly constant across plans, with the subscription fees varying with the willingness to pay ("WTP") of consumers who choose the plans.[131] In contrast, using the same per-stream royalty for different plans assumes that the absolute contribution of the plan is constant, across all plans and consumer WTP. In addition, as discussed in more detail below, the percentage of revenue structure likely encourages more musical consumption than a per-stream structure because the latter penalizes consumption.

[131] A structure based on a percentage of an appropriate measure of profits would be theoretically preferable to a structure based on percentage of revenues, but measurement and verification of profits is difficult. For this reason, revenues, rather than profits, form the royalty base in virtually all of the intellectual property licenses I have reviewed over the course of my career that specify a percentage royalty rate.

73. For Purchased Content Lockers that are free-to-the-user, like Google's, the license fee under the existing agreements is equal to [redacted] Establishing the rate structure proposed by Google would not foreclose Google and other services from negotiating corresponding alternative rate structures in voluntary licenses where appropriate.

74. Another implication of the voluntary agreements, and in particular, the widespread adoption of an all-in rate that covers both mechanical and performance rights, is that the parties view these two rights as a single bundle to be licensed at the same time. Indeed, in the context of streaming, there is no apparent economic reason why a service would seek a license to either the mechanical right, but not the performance right, or vice-versa. A service is only concerned with securing whatever rights in musical works are necessary for streaming.

75. The definition of service revenue in the agreements and in the current Section 115 compulsory license allows for the deduction of expenses required to obtain such revenue up to a maximum of 15% of revenue, in some cases.[132] The business rationale for defining the "royalty base" in this way is that such costs should be shared between the licensor and licensee because they pay for activities that expand the subscriber base to the benefit of both parties. However, there are other costs, such as credit card processing fees, that play a similar role in expanding the subscriber base, but are not considered to be allowable deductions from revenue under the existing Section 115 compulsory license. Given, as discussed above, that the existing statutory

[132] See 37 C.F.R. §§ 385.11 and 385.21 for the definition of "service revenue" and "Subpart C service revenue," including allowable deductions.

rates weigh somewhat to the favor of copyright owners, I conclude that Google's proposal to allow costs such as credit card processing fees to be deducted from revenue (subject to the same 15% maximum) is a reasonable way to address this concern. In the case of Google, this would have only a small effect on the royalty base because credit card fees are generally only [redacted] of revenue and app store fees are limited.

2. Benchmark Minimum

a. Percentage of the Service Payments for Sound Recording Rights

76. I have reached the following preliminary conclusions regarding the economically appropriate all-in minimum royalty, based on a percentage of service payments for sound recording rights, to apply for the service offering categories under Section 385, Subparts B and C suggested by the Subpart A benchmark:

- The economically appropriate all-in minimum royalty for a Section 115 license, accounting for musical work public performance royalties, for all service offering categories under Section 385, Subparts B and C suggested by the available benchmarks ranges from 13.8% to 15.5% of service payments for sound recording rights.
  - The lower end of this range, 13.8%, is based on a comparison of the effective rate paid by Google based on the current Section 385, Subpart A royalty rate of the greater of $0.091 or $0.0175 per minute of playing time per download, or $0.093 per PDD, to the royalties paid to record labels for sound recording rights, which is based on 70% of the most current (2015) average retail price of a PDD of $1.10.
  - The upper end of this range, 15.5%, is based on a comparison of the effective Subpart A royalty rate of $0.093 per PDD to the royalties paid to record labels for sound recording rights, which is based on 70% of the historical (2006) average retail price of a PDD of $0.99.
  - Google's proposal of 13.5% is reasonable, given that it is close to the low end of the reasonable range described above and the endpoints of the range are subject to some imprecision due to, among other things, being based in part on song length data from a limited time period.[133]

[133] I note that the 13.8%, which was based on one month of data from the Google Play Store, may be subject to further revision as I obtain additional data concerning industry wide data on download sales and data for additional time periods.

b. All-In Per-Subscriber Minimum Royalty Rate

77. For a typical subscription streaming plan, the all-in per-subscriber minimum royalty rate does not come into play because, for example, the revenue percentage (10.5%) times the subscriber fee (typically $10) is greater than the $0.80 all-in per-subscriber minimum royalty rate (for the Subpart B Standalone Portable Subscription, Mixed Use service offering category), which is less than the 21% of payments for sound recording rights for $10 per month services. Thus, a reduction in the all-in per-subscriber minimum would have no effect on the mechanical royalties paid on typical subscription plans under the proposed rate structure.

78. Although Google has not proposed a reduction in the applicable all-in per-subscriber minima, as discussed below under the "availability" 801(b)(1) factor, the $0.80 all-in per-subscriber minimum may deter service providers from offering additional subscription plans with a lower per-subscriber price. A reduction in the all-in per-subscriber minimum would give service providers the flexibility to offer new types of plans that have the potential to expand the set of subscribers.[134] An expanded set of subscribers would benefit both music service providers and copyright owners.[135] While a service provider could attempt to negotiate separate agreements with each copyright owner that allowed a lower per-subscriber minimum for such plans, the transactions costs for doing so would be high, and one of the economic rationales for the compulsory license is to save on such transactions costs. As such, it would be useful to build flexibility into the compulsory license terms. That said, to the extent that all-in per-subscriber

[134] Offering a menu of plans is a means by which service providers can separate out users into groups with different willingness to pay for the service and charge them different prices. To the extent overall output (measured by subscribers) expands, economic efficiency likely has increased as a result.

[135] Service providers would prefer to minimize the extent to which any new plans "cannibalize" existing subscribers on existing plans. This means the service providers' incentives in this regard would be aligned roughly with the interests of the copyright owners.

minima are part of a lesser-of comparison with 13.5% of sound recording fees, as Google has proposed, it is likely that the percentage-of-sound-recording royalties prong will be lower than the all-in per-subscriber prong.

79. Different types of plans may be designed to attract subscribers with different levels of willingness to pay for streaming (or other services). Basing the royalty on a percentage of subscriber revenue makes sense when the relative contributions of the publishing rights and the music service providers to attracting a subscriber is roughly the same regardless of the plan the subscriber chooses. If anything, the contribution of the publishing right may be relatively smaller for a subscriber who was enticed only by a new limited plan and would not otherwise have subscribed to the existing unlimited plan (because such a subscriber is a less "intense" music listener with lower WTP for streaming). Changing the all-in per-subscriber minimum royalty to be equal to 10.5% of the lowest reasonable subscription plan price would provide for a reasonable all-in per-subscriber minimum that would protect copyright owners from arguably too-low per-subscriber royalties. Consistent with this concept, under the existing statutory royalty structure, the per-subscriber minima for lower-priced services like locker services are set to lower levels than for streaming.

c. Mechanical-Only Per-Subscriber Royalty Floor

80. Many of the music service provider licenses that I have reviewed in this matter were all-in licenses that conveyed all required rights in musical works. For example, all of Google's Google Play Subscription and Locker Music Services licenses were all-in licenses. When mechanical and public performance rights are bundled together, as they were in these licenses, the deduction of the public performance royalties in the Section 385 Subparts B and C royalty calculations become unnecessary. Similarly, the application of a mechanical-only per-subscriber

royalty floor for certain services covered in the Section 385, Subpart B royalty calculation also becomes unnecessary since the licenses do not cover only mechanical rights and the publishers are free to allocate as they see fit.

81. As discussed above, the agreements reflect the parties' revealed preference for a fixed all-in rate that the service pays to publishers/songwriters for the combination of mechanical and public performance rights, regardless of how the publishers/songwriters divide the all-in rate between the two types of rights. In particular, the all-in rate in these agreements does not change depending on what happens in the public performance rights marketplace. Accordingly, the exclusion of the mechanical–only per-subscriber royalty floor from the royalty calculation for Subpart B is economically appropriate.

VI. ANALYSIS OF THE RELEVANT ECONOMIC EVIDENCE PERTAINING TO § 801(b)(1)(A): TO MAXIMIZE THE AVAILABILITY OF CREATIVE WORKS TO THE PUBLIC

82. To an economist, "maximizing the availability of [musical] works to the public" has two aspects. First, the availability of existing musical works to consumers will be greater if there are a wider set of providers and mechanisms (including plans with different characteristics) through which consumers can access the works. Second, the availability of musical works to consumers will be greater to the extent that there are more musical works.

A. Greater Variety of Product Offerings and a Greater Number of Competing Service Providers

83. Consumers vary in their preferences not only over musical works themselves, but also in the methods by which they gain access to musical works. For example, some consumers prefer to listen to CDs, some prefer to download and listen to MP3s, some prefer to stream musical

works, and so on. Many consumers use a mix of these methods. Consumers also vary in the devices through which they listen to music, including mobile devices, PCs, and stereo equipment, and again many consumers use a mix of devices. Finally, consumers vary in the amount of time in which they listen to music.

84. The economics of "product differentiation" suggests that, when consumers vary in their preferences over product attributes, producers have the incentive to offer a variety of products with different sets of product attributes that appeal to different subsets of consumers.[136] Product variety is beneficial to consumers because each consumer has a number of different products from which to choose and thus can find a good match among the different products to his or her preferences.[137]

85. Music service providers have developed a number of different "product offerings" (often called "business models") that appeal to different types of consumers.[138] CDs are available from retailers, companies such as Pandora provide non-interactive streaming services, companies such as Spotify provide interactive streaming services, and companies like Google offer digital downloads as well as streaming services. Even within these broad categories, there is variety in product offerings. Spotify, for example, offers two types of streaming services — a free service with advertisements and a subscription service without advertisements.

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[136] See, generally, Jean Tirole, "Product Differentiation: Price Competition and Non-Price Competition," (Chapter 7), *The Theory of Industrial Organization*, MIT Press, 1988.

[137] If there are fixed costs associated with offering a product, it is possible that producers provide "too much" product variety from a social welfare point of view (the fixed costs incurred by the producers do not justify the gains to consumers from the additional variety). Id. However, consumers benefit from the overprovision of variety.

[138] From the music service provider's point of view, the offering of different products can also allow the sorting of customers into groups based on their WTP for, e.g., streaming. Different prices can be charged to the different groups of customers, which can increase the revenue that the music service provider can extract. This in turn can benefit the copyright owners.

86. Growth in the set of product offerings in the music service provider space appears likely to continue in the future. For example, Pandora will soon offer an interactive streaming service in addition to its non-interactive streaming service, and Amazon has forthcoming interactive streaming service that it plans to introduce. Providers may choose to offer additional types of subscription plans, such as a lower-priced subscription that may be limited in the amount of music that can be streamed or the number of devices used.

87. The substantial variety in the product offerings of musical service providers benefits consumers and leads to a greater availability of musical works because each consumer is more likely to find a product offering that is to his liking and therefore worth paying for. A consumer that prefers a free, advertising-supported non-interactive streaming service has several different options. A consumer that is willing to pay a fee for interactive streaming has a number of options. A consumer that prefers to one-stop shop at Amazon can do so. As a result, consumers consume more music.

88. The substantial variety in product offerings is the result of service providers determining that investing in developing greater product variety is worthwhile, i.e., that the expected returns from the investment are greater than the costs. The expected returns depend in part on the incremental total royalty costs associated with providing greater product variety to customers. As a general matter, higher royalty costs would be expected to cause a decrease in the number of product offerings (either through a decreased number of service providers that are able to pay the royalty costs and remain profitable, fewer product offerings from each service provider, or both) and, conversely, lower royalty costs would be expected to increase the number of product offerings. I understand that under the current rates (and the rates proposed by the copyright owners in this proceeding) it is likely that some interactive music streaming service providers

will have to exit the market due to an inability to achieve profitability.[139] Furthermore, I understand that many digital music services have already exited the market under the existing rate structure.[140]

89. Thus, from the point of view of "maximizing the availability of musical works to the public," an important consideration in setting the royalty rates are that they not be set at a level that would overly limit product variety by foreclosing reasonable product offerings.

90. The "availability" of a product is also greater when its price is lower, as more consumers will be willing to pay a lower price to obtain the product. Prices in a market tend to be lower the more competitors participate in the market. As noted above, at higher royalty rates, the number of musical service providers that can operate profitably may be lower. In addition to the adverse effects on product variety, a smaller set of competing music service providers may lead to higher prices. For example, Spotify likely places a competitive constraint on other music service providers, such as Apple. If royalty rates were set in a way such that Apple could pay the rates and remain in business while Spotify could not, consumers likely would be harmed, not only because of the loss of the Spotify product offerings, which some consumers may find preferable, but also because Apple may be able to increase the prices of its product offerings once it no longer faced competition from Spotify.

91. The evidence suggests that an increase in royalty payments for musical works would result in a decrease in the variety of product offerings. Thus, overall I conclude that consideration of the "availability" factor weighs against any increase from the current payment levels.

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[139] Testimony of David B. Pakman, November 1, 2016, ¶¶ 29-30.

92. On the other hand, the current rates, and in particular the per-subscriber minimums, may render new types of product offerings economically infeasible. For example, a subscriber plan offered at a lower price, but with limitations on usage or devices, may not be economically feasible for service providers because the per-subscriber minimums would apply and would represent a large percentage of the subscriber fee. For a $5 per-subscriber plan, 10.5% of revenue would be less than the $0.80 per-subscriber minimum (for Subpart B Standalone Portable Subscriptions, Mixed Use), and a $0.80 royalty would represent 16% of revenue. Thus, a reduction in the $0.80 per-subscriber minimum likely would result in an increase in the variety of plan offerings. In this respect, Google's proposal to leave the per-subscriber minimum at current rates is conservative.

B. Set of Existing Musical Works

93. The second consideration with respect to the "availability of musical works" is the size of the set of existing musical works. A musical work has to have been created to be "available." Financial rewards, of which royalty payments are one form, likely play a role in songwriters' decisions to create compositions. This is one of the principal justifications for the recognition of copyrights in the United States.[141]

94. However, there is no evidence that the existing royalty structure has adversely affected the creation of compositions. The total number of affiliated songwriters, composers, and music publishers for the two largest PROs, ASCAP and BMI, increased steadily from 2004 to 2016 as shown in Exhibit 9. Additionally, the total number of musical compositions in the repertories of

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[140] Written Direct Testimony of Zahavah Levine, November 1, 2016, ¶¶ 16-17.

[141] *Feist Publ'ns, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340, 349 (1991) ("The primary objective of copyright is not to reward the labor of authors, but '[t]o promote the Progress of Science and useful Arts.'").

ASCAP and BMI has similarly increased from 14.5 million in 2010 to over 20 million in 2015, as shown in Exhibit 10.

VII. Analysis of the Relevant Economic Evidence Pertaining to § 801(b)(1)(B): To Afford the Copyright Owner a Fair Return for His or Her Creative Work and the Copyright User a Fair Income under Existing Economic Conditions

A. Benchmark Analysis for the Rates and Terms for the Section 115 Compulsory License

95. As previously discussed, I performed a benchmark analysis for the rates and terms for the Section 115 compulsory license that examined certain economic evidence including the current Section 385 Subpart A royalty rates for PDDs and existing license agreements. This type of evidence provides evidence useful in assessing "fair" outcomes for both the copyright owner and copyright user as contemplated under this Section 801(b)(1) factor. See Section IV for my conclusions from the benchmarking analysis. As discussed in the next section, the payment terms in the current compulsory license and the existing agreements may be overly favorable to the copyright owners given the lack of profitability for music service providers (and the decline in the Subpart A benchmark rate over time).

B. Digital Interactive Streaming Service Providers Have Had a History of Not Being Profitable

96. I understand, that since its inception, Google Play Music has not been profitable. This is despite the fact that its user base and its corresponding subscription revenue has grown continuously. For example, both Google Play Music's U.S. subscriber base and monthly subscription revenues have [redacted]. However, Google Play Music has incurred significant costs as well; these include, for example: investments to build the infrastructure

behind the Google Play Music service; variable costs such as music royalties paid to record companies and publishers; credit card fees, carrier fees, and customer support efforts; and other Google Play-related operating expenses that are not directly allocated down to a specific product such as the Google Play Subscription Service—such as payroll and marketing expenses—but are necessary for the music service to operate. As a result, I understand that the U.S. operations of Google Play Music have historically generated operating losses of [redacted] per quarter.[142]

97. It is also significant that despite its success and popularity, steadily increasing revenue, and overall reputation in the digital interactive music streaming industry, Spotify has not generated a profit. Costs have exceeded revenues, and a substantial portion of costs are made up by the licensing fees that Spotify pays to record labels and music publishers. In 2015, Spotify generated $2.2 billion in revenue and paid $1.8 billion, or 82% of its revenue, in licensing fees.[143] Spotify's overall losses were $206 million in 2015 compared to $184 million in 2014[144] (see Exhibit 4 for Spotify's historical revenues and net losses (in Euros) from 2009 to 2015). In an effort to increase profitability, Spotify has expanded into new businesses such as short videos and concert ticket promotions.[145]

98. It is still not clear whether the market can support the existing set of interactive music streaming companies, in part, due to the existing high licensing fees relative to revenues.[146]

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[142] Written Direct Testimony of Elliot Alyeshmerni, November 1, 2016, ¶¶ 17-18.

[143] "Spotify Wants to Go Public Despite a History of Losses," Fortune, July 20, 2016.

[144] "Spotify's Financial Results Reinforce Just How Broken the Music Business Is," Fortune, May 24, 2016.

[145] "Spotify Wants to Go Public Despite a History of Losses," Fortune, July 20, 2016.

[146] Testimony of David B. Pakman, November 1, 2016, ¶¶ 25-26, 28-30; see also, "Massive Losses in Music Streaming Leave Industry Giants on Low Note," In The Black, June 1, 2016.

Tidal reportedly lost $28 million in 2015, despite a 30% year-over-year increase in revenue and reaching over 4 million paid subscribers.[147] Deezer, a growing European interactive streaming service provider with approximately 6 million subscribers, paid 84% of its revenue in licensing fees, is currently not profitable, and had to recently cancel a planned IPO.[148] Rhapsody, branded as Napster outside of the United States, had revenue of $202 million but lost $35.5 million in 2015. Samsung's Milk Music and JB Hi-Fi's Now streaming services in Australia have already closed down in 2016.[149] Furthermore, I understand that other music streaming services have recently shut down (e.g., Rara.com closed in March 2015 and in November 2015 Rdio filed for bankruptcy before being eventually acquired by Pandora).[150]

99. The lack of profitability among music service providers suggests that, if anything, the current statutory rates are overly favorable to copyright owners and that lower rates may be "fair."[151]

C. Profitability of the Music Publishers

100. I have analyzed the profitability of music publishers based on the financial documents received from the following music publishers: BMG, EMI, Sony/ATV, Kobalt, Universal, and Warner/Chappell.[152] These financial statements report data from 2010 to Q3 2016.[153]

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[147] "Jay Z's Music Streaming Service Tidal Posts Huge Loss in 2015," Wall Street Journal, September 13, 2016.

[148] "Deezer prospectus makes one thing clear: Streaming Music is a Terrible Business," Fortune, September 25, 2015; "Music Streaming Service Deezer Abandons IPO," Financial Times, October 28, 2015.

[149] "Massive Losses in Music Streaming Leave Industry Giants on Low Note," In The Black, June 1, 2016.

[150] Written Direct Testimony of Zahavah Levine, November 1, 2016, ¶ 17.

[151] An argument may be made that the services expect to be profitable eventually, otherwise they would go out of business and Spotify, for example, would not have positive market value. However, when considering the appropriate royalty rates for the next five years, the lack of current profitability is relevant and suggests that profitability is not imminent. This situation can, of course, be reevaluated in five years.

[152] I note that my analysis considers the U.S. operations of these music publishers, except for Kobalt, whose financial statements are on a worldwide basis.

Profitability was analyzed by operating margin and earnings before interest, taxes, depreciation, and amortization ("EBITDA").[154] Average EBITDA for each music publisher ranges from [redacted], with exception of [redacted], which reports an average EBITDA of [redacted] Average operating margin for each music publisher ranges from [redacted] except for [redacted], which reports an average operating margin of [redacted]

VIII. Analysis of the Relevant Economic Evidence Pertaining to § 801(b)(1)(C): To Reflect the Relative Roles of the Copyright Owner and the Copyright User in the Product Made Available to the Public With Respect To Relative Creative Contribution, Technological Contribution, Capital Investment, Cost, Risk, and Contribution to the Opening of New Markets for Creative Expression and Media for Their Communication

A. Benchmark Analysis for the Rates and Terms for the Section 115 Compulsory License

101. As previously discussed, I performed a benchmark analysis for the rates and terms for the Section 115 compulsory license. This type of evidence provides an appropriate division of the value created by the combination of the copyright owner's and copyright user's assets between the two parties as contemplated under this Section 801(b)(1) factor. See Section IV for my conclusions from the benchmark analysis. In general, the benchmarks, together with the lack of profitability of music service providers, tend to suggest that rates lower than the prevailing rates would appropriately divide the value between the copyright owner and user.

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[153] See Exhibits 5a-5f.

[154] Profitability for BMG was analyzed only by EBITDA as information on the company's depreciation and amortization expense was not reported.

B. Contributions of the Digital Interactive Streaming Service Providers

102. There have been a number of important developments in the music industry that have led to the rise of streaming in general, and digital interactive streaming services more specifically. In this section, I provide a timeline addressing some of the key events, product launches, and innovations that have contributed to the current success of digital interactive streaming services in terms of their use (e.g., number of streams) and popularity (e.g., number of users of streaming services).

103. In June 1999, Napster, the first widely used peer-to-peer ("P2P") file-sharing site, launched.[155] The service had 70 million users at its peak, before filing for bankruptcy in 2002. Napster shut down on July 1, 2001, after losing a protracted legal battle with the RIAA over copyright infringement. The music streaming site, Rhapsody, bought what was left of Napster in 2012, and now runs its (legal) business under the Napster brand.[156]

104. Napster was one of the first companies to use the P2P business model, with subsequent P2P examples being Uber and Airbnb.[157] It also offered an alternative to the established business model for music distribution: users could download songs they wanted (for free) on their computers instead of buying them from retailers; users could download individual tracks instead of buying whole albums; users could also find old songs that were no longer in production; and musicians could promote their work while bypassing record company gatekeepers.[158]

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[155] "15 Years After Napster: How the Music Service Changed the Industry," The Daily Beast, June 6, 2014; "Ashes to Ashes, Peer to Peer: An Oral History of Napster," Fortune, September 5, 2013.

[156] "Ashes to Ashes, Peer to Peer: An Oral History of Napster," Fortune, September 5, 2013; "Napster Files for Bankruptcy," CNN Money, June 3, 2002.

[157] "Ashes to Ashes, Peer to Peer: An Oral History of Napster," Fortune, September 5, 2013.

[158] "15 Years After Napster: How the Music Service Changed the Industry," The Daily Beast, June 6, 2014.

105. In April 2003, Apple launched the iTunes Music Store, which began the next year that Napster went bankrupt, with a relatively small catalogue of 200,000 songs. Unlike Napster, the iTunes Music Store had the support of the major record companies at that time. Unbundled singles sold for $0.99, and albums for $9.99. Buying songs on the iTunes Music Store quickly became a significant method to obtain music online, legally. The iTunes Music Store sold one million songs in the first week, and 50 million songs in its first year. By 2008, the iTunes Music Store had become the largest music retailer in the United States, and the largest worldwide just two years later in 2010.[159]

106. Apple broke up the record industry's long-standing, preferred product bundle, the album, and allowed customers to legally buy just the songs they wanted.[160]

> Indeed iTunes hacked away at the dominance of the album as a sales unit and simultaneously tapped into consumer desire to be more selective about the music they owned. Apple's business model brought back the single, which up until the early 1990s was one of the primary formats for the recording industry. The single all but vanished with the rise of the CD, and music fans were forced to pay for the entire albums to get the songs they wanted. Apple unbundled songs, sold them for less than a buck – and paved the way for the CD's eventual extinction.[161]

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[159] "iTunes Store at 10: How Apple Built a Digital Media Juggernaut," The Verge, April 26, 2013; "Who Killed the Music Industry," Pando, August 5, 2013.

[160] "iTunes Store at 10: How Apple Built a Digital Media Juggernaut," The Verge, April 26, 2013.

[161] "iTunes Store at 10: How Apple Built a Digital Media Juggernaut," The Verge, April 26, 2013. "Jobs fought music executives hard on pricing. But in the end, the industry caved, desperate to convince a new generation raised on Napster to start paying for music, even if it was on Apple's terms. But by ceding pricing, the record companies lost control of their product. Now albums were back down to an affordable $9.99. Singles were $0.99. On top of that, virtually any song was available as a 'single,' not just the tracks chosen by the record label. Gone were the days of dropping $15 on one album for only a couple songs you liked...The data supports this consumer shift: Since 2004, when the RIAA began calculating digital sales, digitally-downloaded singles have outsold albums in terms of both revenue and units sold." ("Who Killed the Music Industry," Pando, August 5, 2013.)

107. After revenues for the music industry reached its apex in 1999, total music industry revenues fell sharply over the subsequent decade.[162] As illustrated in Exhibit 6a, between 2005 and 2010 total U.S. music industry revenues declined dramatically from $12.3 billion to $7.0 billion, a decline of approximately 43%. This decline in revenues was predominantly driven by the decline in revenues from CD sales, which were $10.5 billion in 2005 but decreased to $3.4 billion in 2010, a decline of approximately 68%. Exhibit 6a shows that between 2005 and 2010, CD unit sales declined from 705.4 million shipments to 253.0 million shipments, while Download Single unit sales increased from 366.9 million shipments to 1,177.4 million shipments. Therefore, between 2005 and 2010, the decline in total U.S. music industry revenues was a result, in large part, of consumers switching from purchasing more expensive CDs (albums) to relatively lower cost singles due to the unbundling of album sales and the rise of digital download services such as iTunes. Services such as iTunes enabled consumers to easily download single song tracks rather than purchase full CD albums, a factor which resulted in declining music industry revenue as the increased sales of single track songs were unable to offset losses from full album sales.[163] Furthermore, this decline in total U.S. music industry revenues occurred before on-demand music streaming services took off in the marketplace.

108. As also illustrated in Exhibit 6b, since 2010 total U.S. music industry revenues have remained relatively flat despite revenues from CD sales continuing to decline and revenues from Download Single sales remaining relatively flat. The reason that total U.S. music industry revenues have remained relatively constant since 2010 is because revenues from music streaming

[162] "U.S. Recorded Music Revenues by Format," The Recording Industry Association of America.

[163] Elberse, Anita, "Bye-Bye Bundles: The Unbundling of Music in Digital Channels," *Journal of Marketing* 74, no. 3 (May 2010), p. 108; "More Artists Steer Clear of iTunes," The Wall Street Journal, August 28, 2008; "Who

services—captured in categories including Paid Subscriptions, payments to SoundExchange, and free On-Demand Streaming[164]—have all increased substantially since 2010.[165]

109. Founded in 2006, Spotify is a commercial music streaming service. The Sweden-based startup launched in October 2008, enabling users to browse or search by artist, album, genre, playlist, or record label. With premium membership, users are able to remove advertisements, download music directly, listen offline, have unlimited skips, and enjoy higher quality audio.[166] The company has over 100 million users, of which 30 million are premium subscribers.[167] By comparison, Apple Music has 15 million paid subscribers and Pandora has 4 million paying subscribers and 80 million active users.[168]

110. In July 2011, Spotify launched in the United States.[169] Within one month of its release, Spotify had gained 1.4 million U.S. users.[170] Spotify has become the most successful interactive music streaming service (as measured by number of users) in the United States.[171] Spotify's inventive interface, allowing users to stream music instantaneously, and social media integration are both credited as reasons for its success. Spotify allows users to integrate their existing Facebook and Twitter accounts, enabling access to their friend's music and sending tracks and

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Killed the Music Industry," Pando, August 5, 2013; "A Decade of iTunes Singles Killed the Music Industry," CNN Money, April 25, 2013.

[164] "News and Notes on 2015 Mid-Year RIAA Shipment and Revenue Statistics," The Recording Industry Association of America, 2015.

[165] Exhibit 6c.

[166] Spotify," TechCrunch, September 20, 2016; "Go Premium," Spotify, September 20, 2016.

[167] "Spotify Wants to Go Public Despite a History of Losses," Fortune, July 20, 2016.

[168] "Spotify Wants to Go Public Despite a History of Losses," Fortune, July 20, 2016; "Spotify Has 100 Million Users But Apple Music Remains a Threat," Macworld, June 20, 2016.

[169] "Hello America. Spotify Here," Spotify News, July 14, 2011.

[170] "Spotify Gained 1.4 Million Users in a Month," Mashable, August 8, 2011.

[171] "Spotify's Financial Results Reinforce Just How Broken the Music Business Is," Fortune, May 24, 2016.

playlists.[172] Although other streaming services, such as MOG and Rhapsody, were available before Spotify's launch in the United States, these services had not garnered significant traction with consumers. Spotify, however, gave users complete control and access to songs on-demand along with free options to more than simple radio streaming. In addition, Spotify's ability to upload local tracks and its launch of a Pandora-style radio service positioned Spotify as a viable replacement for both iTunes as well as Pandora.[173] In 2012, the MIT Technology Review named Spotify as one of the 50 most "disruptive"[174] companies due to its success in negotiating with record labels to allow users access to a large music library and ability to download music for offline use.[175] Furthermore, in July 2015, Spotify launched its Discover Weekly feature enabling users to receive new 30-track playlists each week tailored to each user based on a machine-learning algorithm.[176] Discover Weekly quickly became one of Spotify's most successful features with over 40 million listeners in May 2016.[177] In 2015, Spotify's Android and iOS apps became the most popular music streaming apps in the world, according to information mobile app analytics company, App Annie.[178]

111. Companies such as Google and Amazon are striving to differentiate themselves from companies such as Spotify.[179]

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[172] "Spotify: The Next Step in Digital Music Innovation," Northwestern Business Review, January 3, 2012.

[173] "How Spotify Turned Free Music into a $10+ Billion Valuation," GrowthHackers.

[174] The term "disruptive" in this context has positive connotations for social welfare. A "disruptive" firm is one that introduces a new business model that displaces an older business model as a result of being more attractive to customers.

[175] "50 Disruptive Companies 2012," The MIT Technology Review, 2012.

[176] "Spotify's Discover Weekly: How It Works," The Guardian, August 1, 2016.

[177] "Why Spotify's Discover Weekly Is So Addictive," Vogue, May 30, 2016.

[178] "Spotify Has Become the World's Most Popular Music Streaming App," Variety, December 1, 2015.

[179] "Global Music Report: State of the Industry Overview 2016," IFPI, April 12, 2016.

112. One of Google Play Music's unique advantages is its human playlist curation. Google Play Music is arguably the best music-streaming service at predicting what listeners want to hear and personalizing playlist recommendations.[180] Google Play Music offers human-curated playlists based on your mood, activity, or the time of day.[181]

113. Google acquired Songza in July 2014 for [redacted].[182] Songza is a context-based music curation service and its technology was integrated into Google Play Music and rolled out on October 21, 2014. Songza co-founder and CEO, Elias Roman, and Google Play Music Project Manager, Brandon Bilinski, stated: "Each station has been handcrafted – song by song – by our team of music experts (dozens of DJs, musicians, music critics and ethnomusicologists) to give you the exact right song for the moment."[183]

114. Another unique feature of Google Play Music is its integration with other Google services. Google Play Music subscribers can store 50,000 tracks for free in the cloud as part of Google's locker service.[184] Google Play Music subscribers also get access to YouTube Red, which allows them to watch videos without ads, offline, in the background, and audio only through the YouTube Music app.[185]

115. Google makes substantial capital investments in its Google Play Music subscription service to differentiate its service offering from its competitors and to grow its music subscription service. These investments include: (1) investments in its free tier (including the

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[180] "Google Might Have the Best Music App in the World," Business Insider, April 27, 2016.

[181] "It's Tuesday Morning, Play Music for a Bright, Sunshiny Day," Android Blog, October 21, 2014.

[182] Written Direct Testimony of Paul Joyce, November 1, 2016, ¶ 7.

[183] "It's Tuesday Morning, Play Music for a Bright, Sunshiny Day," Android Blog, October 21, 2014; "Google Might Have the Best Music App in the World," Business Insider, April 27, 2016.

[184] "Google Might Have the Best Music App in the World," Business Insider, April 27, 2016.

purchase of Songza) to grow the subscription funnel, which consists of the group of free users most likely to become future paying subscribers; (2) investments to grow the music catalog for the subscription service; (3) advertising resources to promote and market the subscription service and to build brand awareness, including using advertising inventory on other Google sites; and (4) investments in curation and playlist capabilities.[186]

116. Amazon's key advantage is the integration of its streaming music service, Amazon Prime Music, into Amazon Prime, the company's $99-per-year premium bundle of services.[187] Amazon's strategy has been to win over casual listeners with smaller WTP for music, who do not highly value having access to 30 million songs (Amazon's catalog is roughly 1 million songs), by offering bundled services at a lower price.[188] Over 63 million people in the United States have Amazon Prime memberships in 2016.[189] That gives Amazon's music service access to potential users that number more than double the 30 million subscribers to the current market leader, Spotify.[190]

117. One of Amazon's contributions to streaming is its bundling of services, which offers value to consumers.[191] For just $8.25 per month with annual subscription, Prime members get free two-day shipping (same day in over 20 cities), unlimited on-demand movies and TV shows

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[185] "What is YouTube Red?," YouTube Red FAQ, last accessed October 31, 2016.

[186] Written Direct Testimony of Paul Joyce, November 1, 2016, ¶¶ 7, 10-11.

[187] "Why You Should Give Amazon Prime Music a Second Chance," Make Use Of, February 17, 2016.

[188] "Amazon's Streaming Music Aims for More Casual Listeners," The New York Times, November 10, 2015.

[189] "Every Day Is Prime Day at Amazon," Bloomberg Gadfly, July 12, 2016.

[190] "Apple Music, Spotify and a Guide to Music Streaming Services," The New York Times, April 5, 2016.

[191] "Why You Should Give Amazon Prime Music a Second Chance," Make Use Of, February 17, 2016.

from Amazon Prime Video, unlimited cloud photo storage, free Kindle e-books, and Audible audio books.[192]

118. Furthermore, as the largest retailer of CDs and vinyl albums in the United States, Amazon leverages its data to offer relevant suggestions to listeners based on their listening and shopping habits.[193] Prime members can upload 250,000 songs from their own library for $25 a year.[194] Music purchases from the Amazon store do not count against that limit, and customers who buy physical records from Amazon will get a digital version put in their account for no extra charge, even retroactively. Amazon Prime Music users can also download unlimited tracks to their mobile devices for offline play.[195]

119. When a consumer subscribes to a streaming service, it is not only to obtain music, but also to obtain the convenience of the resulting method of access to music, plus the other features of the service, such as listening suggestions, curated playlists, or bundling with other products or services. The method of access and features are provided by the services, which have and will continue to bear substantial costs in the necessary infrastructure as well as the development and improvement of features. Ultimately, the services must earn a return on these costs or they will exit the business. The copyright owners have benefited from the existence of the services, just as the services have benefited from having music to stream. The copyright owners on their own could not, for example, create their own streaming service from scratch that would match that of

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[192] "Why You Should Give Amazon Prime Music a Second Chance," Make Use Of, February 17, 2016. Amazon prime membership costs $10.99 per month with monthly subscription. "Amazon Prime," Amazon.com, last accessed October 5, 2016.

[193] "New Amazon Music Streaming Service Costs Echo Speaker Owners $4 a Month," Nasdaq, October 12, 2016.

[194] "Why You Should Give Amazon Prime Music a Second Chance," Make Use Of, February 17, 2016.

[195] "I'm Obsessed With a Music Streaming Service Millions of People Probably Don't Know They Can Use For Free," Business Insider, May 16, 2015.

Google or Spotify without incurring substantial time and expense. Yet, revenues from the streaming services have been an important source of revenue to copyright owners that were otherwise experiencing a decline in revenue streams (for reasons including piracy). By offering a wide variety of business models and plans, streaming services have been successful to expanding revenues and subscribers beyond what otherwise would have occurred.[196]

IX. Analysis of the Relevant Economic Evidence Pertaining to § 801(b)(1)(D): To Minimize Disruptive Impact on the Structure of the Industries Involved and On Generally Prevailing Industry Practices

A. Meaning of "Disruption"

120. I understand that in the November 24, 2008 ruling for Section 385, Subpart A, the Copyright Royalty Judges noted that a new mechanical royalty rate may be considered to be disruptive "if it directly produces an adverse impact that is substantial, immediate and irreversible in the short-run because there is insufficient time for [the parties impacted by the rate] to adequately adapt to the changed circumstances produced by the rate change and, as a consequence, such adverse impacts threaten the viability of the music delivery system currently offered to customers under this license."[197]

B. Google's Proposal Is Not Disruptive

121. Google's proposal is not disruptive because it moves only incrementally from the terms of the existing Section 115 compulsory license. Under Google's proposal, the basic structure would remain the same, with all-in rates and all-in minimums remaining substantially the same

[196] See also Testimony of David B. Pakman, November 1, 2016, ¶ 39 for additional discussion of the technological contributions and service innovations made by service providers.

[197] Final Determination of the Rates and Terms, Mechanical and Digital Phonorecord Delivery Rate Determination Proceeding, Docket No. 2006-3 CRB DPRA (November 24, 2008), p. 58.

as current levels. Google proposes three changes. First, certain types of expenses, such as credit card processing fees, would be allowed to be deducted from revenues (while maintaining the 15% cap on such expenses), which would serve to address the existing imbalance in the size of the payments that favors copyright owners. Second, the percentage-of-sound-recording-fee minimum would be adjusted to bring it into line with the ratio suggested by the proposed Subpart A settlement. Third, the mechanical rights fee floor would be eliminated given that the division of the all-in rate between mechanical and public performance rights has no economic relevance and that voluntary agreements have negotiated an all-in rate that is fixed and not subject to changes in the public performance marketplace.

C. A Substantial Increase in Royalties Would Disrupt Streaming Services

122. As discussed above, the evidence demonstrates that streaming services, such as Google Music and Spotify, have not been profitable to date. While Spotify has been estimated to have an enterprise value of several billion dollars, this valuation is based on the assumption that Spotify will be profitable in the future despite its current lack of profitability. Other streaming services similarly remain in business despite a lack of current profitability because they expect to generate a profit in the future. Forecasts of future profitability, in turn, likely are based, either explicitly or implicitly, on the assumption that the structure and level of the compulsory license royalty rates will remain roughly the same (or perhaps decrease) over time.

123. Music copyright royalties represent the major component of the costs of providing a streaming service. Thus, if payments under Section 115 increased, forecasts of the future profitability of streaming services could be revised downward. With a large enough adverse effect on profitability forecasts, a service may decide to shut down. In fact, the evidence

(including the rates suggested by the digital download musical works rate and the lack of streaming service profitability) suggests that a lower level of rates would be justified.

D. A Shift to Per Stream Royalties Would Disrupt Streaming Services

124. A change to the structure of the royalties under the compulsory license, e.g., a shift from the current percentage of revenue with per-subscriber minimums to per-stream royalty rates, likely would also cause substantial disruption to streaming services. The subscription streaming services provided by companies such as Spotify and Google offer "all you can eat" plans, where subscribers pay a fixed monthly fee and then choose the desired amount of streaming. Under the current royalty structure, in which the royalty is based on a percentage of the subscriber fee (subject to minimums), the royalty, like the subscriber fee, is a fixed amount per subscriber. This gives the service certainty about both its revenues and a major cost component on a per-subscriber basis. If the royalty structure were changed to a per-stream basis, on the other hand, the royalty cost component on a per-subscriber basis would be uncertain because it would depend on the amount of usage of the subscribers. Moreover, with per-stream royalties, services would have the incentive to minimize their costs by taking measures to limit usage by each subscriber, including possibly imposing usage limits. This incentive could even result in services themselves starting to charge users on a per-stream basis, which would also tend to limit usage. Changes in service business models that led to reduced usage would be inconsistent with the 801(1)(A) "availability" factor. In any event, the result would likely be a substantial disruption to the way streaming services operate and to the consumers who use those services.

125. Streaming services that rely on advertisements to generate revenue likely would face similar disruption from a change to per-stream royalties. Currently, there is a direct link between

the generation of revenues (advertisements) and the royalty cost component (a percentage of advertising revenues). With per-stream royalties, that link would be broken and would create additional risks for the provider. Here also, a per-stream royalty structure would give providers the incentive to take measures to limit usage to decrease their royalty costs. These changes would disrupt both providers and users. Moreover, per-stream royalties would raise barriers to entry faced by new ad-based services, because a new entrant likely would have to incur substantial royalty costs over a period of time before they were able to gain enough subscribers to generate ad revenues.

E. Changing the Regulatory "Rules of the Game" Would Increase Uncertainty, Disrupting Service Providers' Future Investment Decisions

126. There are further implications of the fact that existing music service providers have previously made sunk cost investments in their businesses with the reasonable expectation that the regulatory "rules of the game" (i.e., the form and level of the royalty rates for the compulsory license) would not change substantially over time. By their nature, sunk cost investments cannot be undone, even if the "rules of the game" change and the investments would no longer make economic sense under the new rules. While a service provider in such a situation might choose to continue in the business despite the higher royalty rates (because the investments are already sunk), it would not earn the return it had expected on those investments. Moreover, service providers would be deterred from making future investments due to increased uncertainty regarding the regulatory rules of the game (having been changed once already) and the associated danger of having the rules change after sunk cost investments have been made.

127. Songwriters may have made investments in the development of their musical works. These investments would generally be time spent composing the works, and the cost would be

the opportunity cost of the composer's time. Songwriters may also have made their investment decisions on the basis of the existing regulatory framework.

128. As a general matter, the consideration of the "disruption" factor suggests that any departures from the status quo should be small. Google's proposal is consistent with this.

F. A Service Provider May Use the Regulatory Process to Disrupt and Weaken Its Rivals

129. A further consideration under the "disruption" factor is whether one service provider may attempt to manipulate the regulatory process to weaken its rivals. A service provider may propose a rate structure or level that would relatively disadvantage the particular type of business model used by its rivals. For example, Spotify, given its pure-play streaming business model, may find it difficult to achieve profitability under the per-stream rate structure proposed by Apple. Apple, on the other hand, given the fact that a user of its music streaming service may also use other Apple services, leading to several sources of revenue and profits for Apple, may be able to be profitable as a whole under the per-stream structure even if its music service is not profitable.[198] If Spotify were weakened, or even forced to exit, under a per-stream structure, Apple would benefit from the decrease in competition it faced. Consumers, on the other hand, would be harmed both from the reduction in product variety and, potentially, an increase in the prices charged by Apple and other remaining service providers.

130. The competition between Apple and Spotify over the past few years has become more direct and aggressive. In June 2013, Apple launched iTunes Radio, an ad-supported (ad-free for iTunes Match users) online streaming music radio service that is free for all users.[199] iTunes

[198] Testimony of David B. Pakman, November 1, 2016, ¶ 29, FN 17.

[199] "iTunes Radio vs. The Competition: Which One Should You Use?," iMore, June 11, 2013.

Radio directly challenged similar services such as Pandora and Spotify's custom radio feature and made rapid gains since its launch.[200] In June 2015, after acquiring Beats (which previously had acquired MOG), Apple Music made its worldwide debut, and shortly after that Apple ended access to iTunes Radio.[201] Apple Music and Spotify are differentiated in increasingly narrow ways, and both can be trialed for three months without much investment. Spotify may be preferred by many consumers, even iOS users.[202]

131. After Apple Music launched, Spotify became more aggressive about encouraging users to pay for the service outside of iTunes. In the fall of 2015, Spotify started a promotional campaign and offered new subscribers three months of music streaming for $0.99 if they signed up via Spotify's own site. In June 2016, Spotify stopped advertising the promotion due to Apple's threat to remove the Spotify app from the Apple Store unless Spotify stopped advertising the promotion to iPhone users, and Spotify also turned off its Apple Store billing option.[203] Spotify has recently accused Apple of blocking an update to its Spotify app unless Spotify uses Apple's billing system in order to push customers towards Apple.[204] Clearly, Apple would stand to gain if Spotify, or other pure-play services, were forced to leave the market.

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Appendix A

GREGORY K. LEONARD

Gregory K. Leonard is a Partner at Edgeworth Economics specializing in applied microeconomics and econometrics.

Dr. Leonard has written widely in the areas of antitrust, industrial organization, econometrics, intellectual property, class certification, and labor economics. His publications have appeared in the *RAND Journal of Economics*, the *Journal of Industrial Economics*, the *Journal of Econometrics*, the *International Journal of Industrial Organization*, the *Journal of Public Economics*, *Annales Economie et de Statistique*, the *Journal of Labor Economics*, the *International Journal of the Economics of Business*, *Antitrust Law Journal*, *Antitrust*, *Antitrust Source*, the *Journal of Economic Analysis & Policy*, *Journal of Competition Law and Economics*, the *Journal of Economic Surveys*, *法学家 (Jurists' Review)*, *Antitrust Chronicle*, the *Berkeley Technology Law Journal*, the *Columbia Science and Technology Law Review*, the *European Competition Law Review*, *les Nouvelles*, *Landslide*, *Managing Intellectual Property*, *Legal Issues of Economic Integration*, *Kokusai Shoji Houmu (International Business Law and Practice)*, and the *George Mason Law Review*. Dr. Leonard authored two chapters and co-authored another chapter in the American Bar Association Section of Antitrust Law (ABA) volume *Econometrics* (2nd Ed., 2014), co-authored two chapters in the ABA volume *Issues in Competition Law and Policy*, and co-authored the "Econometrics and Regression Analysis" chapter of the ABA volume *Proving Antitrust Damages* (2nd Ed., 2010). He co-edited *Economic Approaches to Intellectual Property: Policy, Litigation, and Management* and authored or co-authored three of its chapters. One of these chapters (co-authored with Lauren J. Stiroh) was cited by the Court of Appeals for the Federal Circuit in its *Uniloc* decision. Dr. Leonard is a Senior Editor of the *Antitrust Law Journal* and has served as a referee for numerous economics journals.

Dr. Leonard was invited to speak on merger simulation at the 2004 US Department of Justice and Federal Trade Commission (FTC) Merger Workshop, the econometrics of evaluating competition in local retail markets at the 2008 FTC Retail Mergers Workshop, and the calculation of patent damages at the 2009 FTC Hearings on the Evolving IP Marketplace. The 2011 FTC report resulting from the latter hearings cited Dr. Leonard extensively. In 2005, Dr. Leonard served as a consultant on the issue of immunities and exemptions to the Antitrust Modernization Commission (AMC), which was tasked by Congress and the President with developing recommendations for changes to the US antitrust laws. He testified before the AMC in December 2005. Dr. Leonard gave an invited presentation on the use of natural experiments in antitrust at the European Commission's Directorate General for Competition (DG Comp) in 2014.

Dr. Leonard has extensive experience with international antitrust and intellectual property issues, particularly in Asia. He has been retained by the Anti-Monopoly Bureau of China's Ministry of Commerce (MOFCOM) as an outside economics expert to assist in merger reviews. Dr. Leonard has given invited presentations at MOFCOM, the Supreme People's Court of China, Renmin University, the Chinese Academy of Social Sciences, and the University of Political Science and Law. He was a member of ABA and US Chamber of Commerce delegations to joint workshops with the Chinese antitrust agencies, MOFCOM, NDRC, and SAIC, and served on the working groups of the ABA's Sections of Antitrust Law and International Law that prepared comments on MOFCOM's and SAIC's draft regulations. Dr. Leonard has also given presentations to the Japan Fair Trade Commission and the India Competition Commission.

Dr. Leonard has experience in a broad range of industries, including pharmaceuticals, telecommunications, airlines, semiconductors, hedge funds, securities, commercial and recreational fishing, medical devices, professional sports, credit card networks, payment systems, information services, computer software, computer hardware, chemicals, plastics, flat glass, retailing, advertising, beef processing, fertilizers, printing, petroleum, steel, beer, cereals, cosmetics, athletic apparel, film, milk, canned fish, vitamins, animal feed supplements, tissue, paperboard, industrial gas, concrete, automobiles, contact lens cleaners, sports beverages, soft drinks, diapers, tobacco products, graphite and carbon products, and modems, among others.

Dr. Leonard has provided written and oral testimony and presentations before federal and state courts, government agencies, and arbitration panels on issues involving antitrust, damages estimation, statistics and econometrics, surveys, valuation, and labor market discrimination.

Prior to joining Edgeworth, Dr. Leonard was a Senior Vice President at NERA and Lexecon Inc., a founding member and Director of Cambridge Economics, Inc., and an Assistant Professor at Columbia University, where he taught statistics, econometrics, and labor economics.

Dr. Leonard received an Sc.B. in Applied Mathematics-Economics from Brown University and a Ph.D. in Economics from the Massachusetts Institute of Technology, where he was a National Science Foundation Graduate Fellow and an Alfred P. Sloan Foundation Fellow.

EDUCATION

Massachusetts Institute of Technology

PhD, Economics, 1989
Alfred P. Sloan Foundation Fellowship, 1988-1989
National Science Foundation Graduate Fellowship, 1985-1988

Brown University

ScB, Applied Mathematics-Economics, 1985
Rohn Truell Memorial Premium in Applied Mathematics, 1985

PROFESSIONAL EXPERIENCE

2012-	Partner, Edgeworth Economics
2008-2012	Senior Vice President, NERA Economic Consulting
2004-2008	Vice President, NERA Economic Consulting
2000-2004	Senior Vice President, Lexecon, Inc.
1991-2000	Director, Cambridge Economics, Inc.

1990-1991 Senior Analyst, NERA Economic Consulting

1989-1990 Assistant Professor, Columbia University (Teaching Areas: Econometrics, Statistics, Labor Economics)

PAPERS AND PUBLICATIONS

"A Proposed Method for Measuring Competition Among Imperfect Substitutes," *Antitrust Law Journal* 60, 1992, pp. 889-900 (with J. Hausman and D. Zona).

"Issues in the Contingent Valuation of Environmental Goods: Methodologies for Data Collection and Analysis," in *Contingent Valuation: A Critical Assessment*, Ed. by J. A. Hausman, North Holland Press, 1993 (with D. McFadden).

"Assessing Use Value Losses Due to Natural Resource Injury," in *Contingent Valuation: A Critical Assessment*, ed. by J. A. Hausman, North Holland Press, 1993 (with J. Hausman and D. McFadden).

"Does Contingent Valuation Measure Preferences? Experimental Evidence," in *Contingent Valuation: A Critical Assessment*, ed. by J. A. Hausman, North Holland Press, 1993 (with P. Diamond, J. Hausman, and M. Denning).

"Competitive Analysis with Differentiated Products," *Annales d'Economie et de Statistique* 34, 1994, pp. 159-180 (with J. Hausman and D. Zona).

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"Achieving Competition: Antitrust Policy and Consumer Welfare," *World Economic Affairs* 1, 1997, pp. 34-38 (with J. Hausman).

"Economic Analysis of Differentiated Products Mergers Using Real World Data," *George Mason Law Review* 5, 1997, pp. 321-346 (with J. Hausman).

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"Efficiencies From the Consumer Viewpoint," *George Mason Law Review* 7, 1999, pp. 707-727 (with J. Hausman).

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"On Nonexclusive Membership in Competing Joint Ventures," *RAND Journal of Economics* 34, 2003 (with J. Hausman and J. Tirole).

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"A Practical Guide to Damages," in *Economic Approaches to Intellectual Property, Policy, Litigation and Management*, ed. by G. Leonard and L. Stiroh, 2005 (with L. Stiroh).

"Applying Merger Simulation Techniques to Estimate Lost Profits Damages in Intellectual Property Litigation," in *Economic Approaches to Intellectual Property, Policy, Litigation and Management*, ed. by G. Leonard and L. Stiroh, 2005.

"Antitrust Implications of Pharmaceutical Patent Litigation Settlements," in *Economic Approaches to Intellectual Property, Policy, Litigation and Management*, ed. by G. Leonard and L. Stiroh, 2005 (with R. Mortimer).

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"A Comparison of the Almost Ideal Demand System and Random Coefficients Logit Models For Use with Retail Scanner Data," NERA Working Paper, 2007 (with F. Deng).

PRESENTATIONS

"Merger Analysis with Differentiated Products," paper presented to the Economic Analysis Group of the US Department of Justice, April 1991 (with J. Hausman and D. Zona).

"Assessing Use Value Losses Due to Natural Resource Injury," paper presented at "Contingent Valuation: A Critical Assessment," Cambridge Economics Symposium, April 3, 1992 (with J. Hausman and D. McFadden).

"Contingent Valuation and the Value of Marketed Commodities," paper submitted to the Contingent Valuation Panel of the National Oceanic and Atmospheric Administration, U.S. Department of Commerce, August 12, 1992 (with J. Hausman).

"Economic Analysis of Differentiated Products Mergers Using Real World Data," paper presented to the George Mason University Law Review Antitrust Symposium, October 11, 1996 (with J. Hausman).

"Documents Versus Econometrics in Staples," paper presented to a program of the Economics Committee of the ABA Antitrust Section, September 5, 1997 (with J. Hausman).

Discussant, "New Developments in Antitrust" session, AEA meetings, January 7, 2000.

"In Defense of Merger Simulation," Department of Justice and Federal Trade Commission Merger Workshop, Unilateral Effects Session, February 18, 2004.

Discussant, "Proving Damages in Difficult Cases: Mock Trial & Discussion," NERA Antitrust & Trade Regulation Seminar, July 10, 2004.

"Network Effects, First Mover Advantage, and Merger Simulation in Damages Estimation," LSI Workshop on Calculating and Proving Patent Damages, July 16, 2004.

"Early Exchange of Documents," LSI Workshop on Pre- and Early Stage Patent Litigation, July 23, 2004.

"Lessons Learned From Problems With Expert Testimony: Antitrust Suits," LSI Workshop on Effective Financial Expert Testimony, November 4, 2004.

"Price Erosion and Convoyed Sales," LSI Workshop on Calculating & Proving Patent Damages, January 19, 2005.

"Economic Analysis of Rule 23(b)(3)," LSI Litigating Class Action Suits Conference, June 6, 2005.

"Early Exchange of Documents," LSI Workshop on Pre- & Early-Stage Patent Litigation, July 22, 2005.

"Issues to Consider in a Lost Profits Damages Analysis," Patent Litigation 2005, Practicing Law Institute, September 30, 2005.

"Antitrust Issues in Standard Setting and Patent Pools," Advanced Software Law and Practice Conference, November 3, 2005.

"New Technologies for Calculating Lost Profits," LSI Workshop on Calculating & Proving Patent Damages, February 27, 2006.

"Estimating Antitrust Damages," Fair Trade Commission of Japan, April 21, 2006.

"Economic Analysis of Rule 23(b)(3)," LSI Litigating Class Action Suits Conference, May 11, 2006.

"Permanent Injunction or Damages: What is the Right Remedy for Non-Producing Entities?," San Francisco Intellectual Property Law Association/Los Angeles Intellectual Property Law Association Spring Seminar, May 20, 2006.

"Antitrust Enforcement in the United States" and "Economic Analysis of Mergers," Sino-American Symposium on the Legislation and Practice of Anti-Trust Law, Beijing Bar Association, Beijing, People's Republic of China, July 17, 2006.

"Economic Analysis in Antitrust," Chinese Academy of Social Sciences, Beijing, People's Republic of China, July 20, 2006.

"Issues to Consider in a Lost Profits Damages Analysis," Patent Litigation 2006, Practicing Law Institute, September 26, 2006.

"Comparison of the Almost Ideal Demand System and Random Coefficient Models for Use With Retail Scanner Data," Pacific Rim Conference, Western Economic Association, Beijing, People's Republic of China, January 12, 2007 (with F. Deng).

Discussant, "Applied Economics" Session, Pacific Rim Conference, Western Economic Association, Beijing, People's Republic of China, January 12, 2007.

"Balancing IPR Protection and Economic Growth in China," International Conference on Globalization and the Protection of Intellectual Property Rights, Chinese University of Political Science and Law, Beijing, People's Republic of China, January 20, 2007.

"The Use and Abuse of Daubert Motions on Damages Experts: Lessons from Recent Cases," LSI Workshop on Calculating & Proving Patent Damages, February 27, 2007.

"Will Your Licenses Ever be the Same? Biotechnology IP Strategies," BayBio 2007 Conference, April 26, 2007.

"Tension Between Antitrust Law and IP Rights," Seminar on WTO Rules and China's Antimonopoly Legislation, Beijing, People's Republic of China, September 1, 2007.

"Issues to Consider in a Lost Profits Damages Analysis," Patent Litigation 2007, Practicing Law Institute, September 25, 2007.

Discussant, "Dominance and Abuse of Monopoly Power" Session, China's Competition Policy and Anti-Monopoly Law, J. Mirrlees Institute of Economic Policy Research, Beijing University, and the Research Center for Regulation and Competition, Chinese Academy of Social Sciences, Beijing, People's Republic of China, October 14, 2007.

"Opening Remarks," Seminar on China's Anti-monopoly Law and Regulation on Abuse of Intellectual Property Rights, Beijing, People's Republic of China, April 26, 2008.

"Issues to Consider in a Reasonable Royalty Damages Analysis," Patent Litigation 2008, Practicing Law Institute, October 7, 2008.

"Econometric Evaluation of Competition in Local Retail Markets," Federal Trade Commission and National Association of Attorneys General Retail Mergers Workshop, December 2, 2008

"Merger Review Best Practices: Competitive Effects Analysis," International Seminar on Anti-Monopoly Law: Procedure and Substantive Assessment in Merger Control, Beijing, People's Republic of China, December 15-17, 2008.

"The Use of Natural Experiments in Antitrust," Renmin University, Beijing, People's Republic of China, December 18, 2008.

"China's Antimonopoly Law: An Economist's Perspective," Bloomberg Anti-Monopoly Law of China Seminar, January 29, 2009.

Panelist, "Standards for Assessing Patent Damages and Their Implementation by Courts," FTC Hearings on the Evolving IP Marketplace, February 11, 2009.

"Economic Analysis of Agreements Between Competitors" and "Case Study: FTC Investigates Staples' Proposed Acquisition of Office Depot," Presentation to Delegation of Antitrust Officials from the People's Republic of China, Washington, DC, March 23, 2009.

"Reasonable Royalties in the Presence of Standards and Patent Pools," LSI Workshop, April 20, 2009.

Presentations on Unilateral Effects, Buyer Power, and the Intellectual Property-Antitrust Interface to Delegation from the Anti-Monopoly Bureau of MOFCOM of the People's Republic of China, Washington, DC, May 10-11, 2009.

Panelist, "The Use of Economic and Statistical Models in Civil and Criminal Litigation," Federal Bar Association, San Francisco, May 13, 2009.

"Trends in IP Rights Litigation and Economic Damages in China," Pursuing IP in the Pacific Rim, May 14, 2009.

Presentation on the Economics of Antitrust, National Judicial College of the People's Republic of China, Xi'an, People's Republic of China, May 25-26, 2009.

"Case Study: The Use of Economic Analysis in Merger Review," Presentation to the Anti-Monopoly Bureau of MOFCOM, Beijing, People's Republic of China, May 27, 2009.

"Economics and Antitrust Law," China University of Political Science and Law, Beijing, People's Republic of China, September 21, 2009.

"Case Study: Economic Analysis of Coordinated Interaction," Presentation to the Anti-Monopoly Bureau of MOFCOM, Beijing, People's Republic of China, September 22, 2009.

"Relevant Market Definition," 4th Duxes Antitrust Law Seminar, Beijing, People's Republic of China, September 26, 2009.

"Expert Economic Testimony in Antitrust Litigation," Supreme People's Court, Beijing, People's Republic of China, February 2, 2010.

"New Case Law for Patent Damages," Law Seminars International Telebriefing, April 28, 2010.

"China/India: Sailing in Unchartered Waters: Regulating Competition in the Emerging Economies – New Laws, New Enforcement Regimes and No Precedents," The Chicago Forum on International Antitrust Issues, Northwestern University School of Law Searle Center, May 20, 2010.

"Antitrust and Intellectual Property," Supreme People's Court, Beijing, People's Republic of China, May 26, 2010.

"Cartel Enforcement Trends in the United States," 2nd Ethical Beacon Anti-Monopoly Summit, Beijing, People's Republic of China, May 27, 2010.

Panelist, "The Future of Books and Digital Publishing: the Google Book Settlement and Beyond," 2010 American Bar Association Annual Meeting, August 7, 2010.

"Coordinated Effects" and "Non-Horizontal Mergers," Presentations to Delegation from India Competition Commission, US Chamber of Commerce, Washington, DC, October 26, 2010.

"UPP and Merger Simulation," Annual Conference of the Association of Competition Economics, Norwich, UK, November 11, 2010.

"Uniloc v. Microsoft: A Key Ruling For Patent Damages," Law Seminars International Telebriefing, January 21, 2011.

"Correlation, Regression, and Common Proof of Impact," New York City Bar Association, January 19, 2011.

"Private Litigation Under China's New Antimonopoly Law," Bar Association of San Francisco, February 17, 2011.

"Competition Law and State Regulation: Setting the Stage and Focus on State-Owned Enterprises," Competition Law and the State: International and Comparative Perspectives, Hong Kong, People's Republic of China, March 18, 2011.

Panelist, "Booking it in Cyberspace: The Google Book Settlement and the Aftermath," American Intellectual Property Law Association, San Francisco, May 13, 2011.

"Econometric Estimation of Cartel Overcharges," ZEW Conference on Economic Methods and Tools in Competition Law Enforcement, Mannheim, Germany, June 25, 2011.

Panelist, "Antitrust and IP in China," Antitrust and IP in Silicon Valley and Beyond, American Bar Association and Stanford University, Palo Alto, October 6, 2011.

Panelist, University of San Diego School of Law Patent Law Conference: The Future of Patent Law Remedies, January 18, 2013.

"Economics Framework," US-China Workshop on Competition Law and Policy for Internet Activities, China's State Administration for Industry and Commerce (SAIC) and the U.S. Trade and Development Agency (USTDA), Shenzhen, People's Republic of China, June 4-5, 2013.

Panelist, "China Inside and Out," American Bar Association, Beijing, People's Republic of China, September 16-17, 2013.

Panelist, "Remedies in Patent Cases," Fifth Annual Conference on The Role of the Courts in Patent Law & Policy, Berkeley and Georgetown Law Schools, November 1, 2013.

"Royalty Base," LeadershIP Conference, Qualcomm Incorporated, March 21, 2014.

"Reflections on Natural Experiments," DG Comp, April 8, 2014.

Panelist, "Antitrust in Asia: China," American Bar Association Section of Antitrust Law, Beijing, People's Republic of China, May 21-23, 2014.

Panelist, "Patent Damages Roundtable," 2015 Intellectual Property Institute, University of Southern California Gould School of Law, Los Angeles, March 23, 2015.

Panelist, "IP and Antitrust - The Current State of Economic Analysis," Global Competition Review Live 2nd Annual IP & Antitrust USA, Washington, DC, April 14, 2015.

Panelist, "FRAND Royalty Rates After Ericsson v. D-Link," American Bar Association, May 15, 2015.

PROFESSIONAL ACTIVITIES

Member, American Economic Association

Member, Econometric Society

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Contributor, www.antitrust.org

Contributor, ABA Section of Antitrust Law, *Econometrics*, 2005

Associate Editor, *Antitrust*, 2007-2010

Senior Editor, *Antitrust Law Journal*, 2012-; Associate Editor, 2010-2012

Co-Editor, ABA Section of Antitrust Law Economics Committee Newsletter, 2009-2012

Member, Economics Task Force, ABA Section of Antitrust Law, 2011-2012

Member, ABA Delegation to International Seminar on Anti-Monopoly Law: Procedure and Substantive Assessment in Merger Control, Beijing, People's Republic of China, December 15-17, 2008

Member, Working Group for drafting the "Joint Comments of the American Bar Association Section of Antitrust Law and Section of International Law on the MOFCOM Draft Guidelines for Definition of Relevant Markets," 2009

Member, Working Group for drafting the "Joint Comments of the American Bar Association Section of Antitrust Law and Section of International Law on the SAIC Draft Regulations on the Prohibition of Acts of Monopoly Agreements and of Abuse of Dominant Market Position," 2009.

Member, Working Group for drafting the "Joint Comments of the American Bar Association Section of Antitrust Law and Section of International Law on the SAIC Draft Regulations on the Prohibition of Acts of Monopoly Agreements and of Abuse of Dominant Market Position," 2010.

Referee: *Econometrica, Review of Economics and Statistics, International Journal of Industrial Organization, Review of Industrial Organization, Journal of Sports Economics, Journal of Environmental Economics and Management, Research in Law and Economics, Labour Economics, Eastern Economic Journal, Journal of Forensic Economics, Antitrust, Antitrust Law Journal, Journal of Competition Law and Economics, Advances in Econometrics.*

TESTIMONY IN THE LAST FIVE YEARS

In re: Budeprion XL Marketing and Sales Practices Litigation, Civil Action 2:09-CV-2811, MDL Docket No. 2017, 2011 (Deposition).

Convolve, Inc. v. Dell Inc., et al., United States District Court, Eastern District of Texas, Marshall Division, Case No. No. 2:08-cv-244, 2011 (Deposition, Trial Testimony).

In the Matter of CERTAIN WIRELESS COMMUNICATION DEVICES, PORTABLE MUSIC AND DATA PROCESSING DEVICES, COMPUTERS AND COMPONENTS THEREOF, before the United States International Trade Commission, Investigation No. 337-TA-745, 2011 (Deposition).

In the Matter of CERTAIN MOBILE DEVICES, ASSOCIATED SOFTWARE, AND COMPONENTS THEREOF, before the United States International Trade Commission, Investigation No. 337-TA-744, 2011 (Deposition).

Oracle America, Inc. v. Google, Inc., United States District Court, Northern District for California, Case No. 3:10-CV-03561-WHA, 2011 (Deposition), 2016 (Deposition, Trial Testimony).

In the Matter of CERTAIN GAMING AND ENTERTAINMENT CONSOLES, RELATED SOFTWARE, AND COMPONENTS THEREOF, before the United States International Trade Commission, Investigation No. 337-TA-752, 2011 (Deposition).

General Atomics v. Paul Banks and TetraVue, Inc., Superior Court of the State of California, Case No. 37-2009-00084081-CU-BC-CTL, 2011 (Deposition, Trial Testimony).

Apple Inc., v. Motorola, Inc., United States District Court, Western District of Wisconsin, Case No. 10-CV-662 (BBC), 2011 (Deposition).

Genentech, Inc. and City of Hope v. Glaxo Group, Limited, et al., United States District Court, Central District of California, Western Division, Case No. 2:10-CV-02764-MRP (FMOx), 2011 (Deposition).

In the Matter of CERTAIN HANDHELD COMPUTING DEVICES, RELATED SOFTWARE, AND COMPONENTS THEREOF, before the United States International Trade Commission, Investigation No. 337-TA-769, 2011 (Deposition, Trial Testimony).

In the Matter of CERTAIN EQUIPMENT FOR COMMUNICATIONS NETWORKS, INCLUDING SWITCHES, ROUTERS, WIRELESS ACCESS POINTS, CABLE MODEMS, IP PHONES, AND PRODUCTS CONTAINING SAME, before the United States International Trade Commission, Investigation No. 337-TA-778, 2012 (Deposition).

Plantronics, Inc. v. Aliph, Inc., United States District Court for the Northern District of California, San Francisco Division, Case No. C09-01714 BZ, 2012 (Deposition).

Commonwealth Scientific and Industrial Research Organization v. Lenovo, Inc., et al., United States District Court for the Eastern District of Texas, Tyler Division, Case No. 6:09-cv-00400-LED, 2012 (Deposition).

Bayer HealthCare LLC v. Pfizer Inc., United States District Court, Northern District of Illinois, Eastern Division, Civil Action No. 1:12-cv-00630, 2012-2013 (Deposition).

L-7 Designs, Inc. v. Old Navy, Inc., United States District Court, Southern District of New York, Civil Action No. 09 Civ. 1432 (DC), 2012 (Deposition).

Apple, Inc. v. Motorola, Inc., United States District Court, Northern District of Illinois, Case No. 11-c-08540, 2012 (Deposition).

ITT Manufacturing Enterprises, Inc. v. Cellco Partnership, et al., United States District Court, District of Delaware, Civil Action No. 09-190-LPS, 2012 (Deposition).

Shelbyzyme LLC v. Genzyme Corporation, United States District Court, District of Delaware, Civil Action No. 09-768 (GMS), 2012 (Deposition, Trial Testimony).

In the Matter of CERTAIN DEVICES FOR IMPROVING UNIFORMITY USED IN A BACKLIGHT MODULE AND COMPONENTS THEREOF AND PRODUCTS CONTAINING THE SAME, before the United States International Trade Commission, Investigation No. 337-TA-805, 2012 (Deposition, Trial Testimony).

Rachel Eastman, et al. v. First Data Corporation, et al., United States District Court, District of New Jersey, Case No. 2:10-cv-04860 (WHW) (MCA), 2012 (Deposition).

In the Matter of CERTAIN COMMUNICATIONS EQUIPMENT COMPONENTS THEREOF, AND PRODUCTS CONTAINING THE SAME, INCLUDING POWER OVER ETHERNET TELEPHONES, SWITCHES, WIRELESS ACCESS POINTS, ROUTERS AND OTHER DEVICES USED IN LANs, AND CAMERAS, before the United States International Trade Commission, Investigation No. 337-TA-817, 2012 (Deposition).

Fujitsu Limited v. Belkin, et al., United States District Court, Northern District of California, San Jose Division, Case No. 10-cv-03972-LHK(PSG), 2012 (Deposition, Trial Testimony).

Medivation, Inc. v. The Regents of the University of California, et al., Superior Court of the State of California, Case No. CGC-11-510715, 2012 (Deposition, Trial Testimony).

In Re Photochromic Lens Antitrust Litigation (Direct Purchaser Action), United States District Court for the Middle District of Florida, Tampa Division, MDL Docket No. 2173, 2012 (Deposition, Hearing Testimony).

In Re Photochromic Lens Antitrust Litigation (Indirect Purchaser Actions), United States District Court for the Middle District of Florida, Tampa Division, MDL Docket No. 2173, 2012 (Deposition, Hearing Testimony).

In the Matter of CERTAIN PRODUCTS CONTAINING INTERACTIVE PROGRAM GUIDE AND PARENTAL CONTROL TECHNOLOGY, before the United States International Trade Commission, Investigation No. 337-TA-845, 2012 (Deposition, Trial Testimony).

In the Matter of CERTAIN COMPUTERS AND COMPUTER PERIPHERAL DEVICES AND COMPONENTS THEREOF AND PRODUCTS CONTAINING THE SAME, before the United States International Trade Commission, Investigation No. 337-TA-841, 2012-2013 (Trial Testimony).

Gemalto SA v. HTC Corporation, et al., United States District Court for the Eastern District of Texas, Tyler Division, Civil Action No. 6:10-CV-561-LED, 2013 (Deposition).

Adobe Systems Incorporated v. Wowza Media Systems, LLC, et al., United States District Court for the Northern District of California, Oakland Division, Case No. cv 11-02243, 2013 (Deposition).

In the Matter of CERTAIN AUDIOVISUAL COMPONENTS AND PRODUCTS CONTAINING THE SAME, before the United States International Trade Commission, Investigation No. 337-TA-837, 2013 (Deposition).

Ericsson Inc., et al. v. D-Link Corporation, et al., United States District Court for the Eastern District of Texas, Tyler Division, Civil Action No. 6:10-cv-473, 2013 (Deposition, Trial Testimony).

Edwards Lifesciences v. Medtronic CoreValve, et al., United States District Court for the District of Delaware, Case No. 12-23 (GMS), 2013 (Deposition, Trial Testimony).

Intellectual Ventures I LLC v. Trend Micro Incorporated and Trend Micro, Inc. (USA), United States District Court for the District of Delaware, C. A. No. 12-cv-1581-LPS, 2013 (Deposition).

The Money Suite Company v. Insurance Answer Center, LLC, et al., United States District Court for the Central District of California, Southern Division – Santa Ana, Lead Case No. 11-SACV-01847 AG (JPRx), 2013 (Deposition).

ParkerVision Inc. v. Qualcomm Incorporated, United States District Court for the Middle District of Florida, Jacksonville Division, Case No.: 3:11-cv-719-J-37-TEM, 2013 (Deposition, Trial Testimony).

Medtronic, Inc. v. Edwards Lifesciences Corporation, et al., United States District Court for the Central District of California, Case No.: SACV 12-00327 JVS (JPRx), 2013 (Deposition).

Microsoft Corporation v. Motorola Inc., et al., United States District Court for the Western District of Washington, Seattle Division, Case No. C10-1823JLR, 2013 (Deposition, Trial Testimony).

In the Matter of CERTAIN INTEGRATED CIRCUIT CHIPS AND PRODUCTS CONTAINING SAME, before the United States International Trade Commission, Investigation No. 337-TA-859, 2013 (Deposition, Trial Testimony).

Realtek Semiconductor Corporation v. LSI Corporation and Agere Systems, Inc., United States District Court Northern District of California, San Jose Division, Case No. 5:12-cv-03451 RMW, 2013 (Deposition, Trial Testimony).

Acer Inc., Acer America Corporation, and Gateway Inc. v. Technology Properties Limited, Patriot Scientific Corporation, and Alliacense Limited, United States District Court for the Northern District of California, San Jose Division, Case No. 5:08-cv-00877 PSG, 2013 (Deposition).

Intervet Inc. d/b/a Merck Animal Health, The Arizona Board of Regents on behalf of The University of Arizona v. Boehringer Ingelheim Vetmedica, Inc., United States District Court for the District of Delaware, Case No. 11-595-LPS, 2013 (Deposition).

In Re Innovatio IP Ventures, LLC Patent Litigation, United States District Court for the Northern District of Illinois, Case No. 1:11-cv-09308, 2013 (Deposition, Trial Testimony).

In the Matter of CERTAIN OMEGA-3 EXTRACTS FROM MARINE OR ACQUATIC BIOMASS AND PRODUCTS CONTAINING THE SAME, before the United States International Trade Commission, Investigation No. 337-TA-877, 2013 (Deposition).

Open Text SA v. Box Inc., United States District Court for the Eastern District of Virginia, Norfolk Division, Civil Action No. 2:13-CV-00319-MSD-DEM, 2013-2015 (Deposition, Trial Testimony).

Apple Inc. and Apple Sales International v. Motorola Mobility LLC, United States District Court for the Southern District of California, Case No. 3:12-cv-00355-GPC-BLM, 2013 (Deposition).

iControl Networks, Inc. v. Alarm.com Incorporated and Frontpoint Security Solutions, LLC, United States District Court for the Eastern District of Virginia, Alexandria Division, Case No. 1:13cv834 (LMB-IDD), 2013 (Deposition).

Affinity Labs of Texas, LLC v. General Motors LLC, United States District Court for the District of Eastern District of Texas, Beaumont Division, C.A. No. 1:12-cv-00582-RC, 2014 (Deposition).

W.L. Gore & Associates, Inc. v. C.R. Bard, Inc. and Bard Peripheral Vascular, Inc., United States District Court for the District of Delaware, C.A. No. 11-515-LPS-CJB, 2014 (Deposition).

Richard Noll and Rhythm Motor Sports, LLC v. eBay Inc., eBay Europe S.A.R.L., and eBay International AG, Inc., United States District Court for the Northern District of California, San Jose Division, Case No. 5:11-CV-04585-EJD, 2014 (Deposition).

Bristol-Myers Squibb Company v. Genentech Inc. and City of Hope, United States District Court for the Northern District of California, Western Division, Case No. 2:13-CV-05400-MRP (JEMx), 2014 (Deposition).

Eli Lilly and Imclone v. Genentech Inc. and City of Hope, United States District Court for the Northern District of California, Western Division, Case No. 2:13-CV-07248-MRP, 2014 (Deposition).

Graftech International Ltd. and Graftech International Holdings Inc. F/K/A UCAR Carbon Company Inc. v. Carbone Savoie, Alcan France and Rio Tinto Alcan, International Chamber of Commerce, International Court of Arbitration, Case Ref.: 19798/AGF, 2014 (Hearing Testimony).

Samsung Electronics Co., Ltd. (Korea) v. Nokia Corporation (Finland), International Chamber of Commerce, International Court of Arbitration, Case Ref.: 19602/AGF/RD (c.19638/AGF), 2015 (Hearing Testimony).

In the Matter of CERTAIN NETWORK DEVICES, RELATED SOFTWARE, AND COMPONENTS THEREOF (I), before the United States International Trade Commission, Investigation No. 337-TA-944, 2015 (Deposition).

Broadband iTV, Inc. v. Hawaiian Telecom, Inc., Oceanic Time Warner Cable, LLC, and Time Warner Cable, Inc., United States District Court for the District of Hawaii, Case No. 14-00169 ACK-RLP, 2015 (Deposition).

In the Matter of CERTAIN NETWORK DEVICES, RELATED SOFTWARE, AND COMPONENTS THEREOF (II), before the United States International Trade Commission, Investigation No. 337-TA-945, 2015 (Deposition, Hearing Testimony).

SRI International, Inc. v. Cisco Systems, Inc., United States District Court for the District of Delaware, Case No. 13-1534 (SLR), 2016 (Deposition, Trial Testimony).

ChriMar Systems, Inc., et al. v. Cisco Systems, Inc., et al., United States District Court for the District of Northern California, Oakland Division, Case No. 4:13-cv-01300-JSW, 2016 (Deposition).

TCL Communication Technology Holdings, LTD., et al., v. Telefonaktiebolaget LM Ericsson, et al., United States District Court for the Central District of California, Southern Division, Case No. SACV14-00341 JVS (DFMx), 2016 (Deposition).

Chervon North America, Inc., Positec Tool Corporation, Positec USA, Inc. and Hilti, Inc. v. Milwaukee Electric Tool Corporation, United States Patent and Trademark Office Before the Patent Trial and Appeal Board, Case IPR2015-00595, Case IPR2015-00596, and Case IPR2015-00597, 2016 (Deposition).

Sanofi-Aventis U.S. LLC and Regeneron Pharmaceuticals, Inc. v. Genentech, Inc. and City of Hope, United States District Court, Central District of California, Western Division, Case No. 2:15-CV-05685, 2016 (Deposition).

Irori Technologies, Inc. v. Procopio, Cory, Hargreaves & Savitc, LLP, and Eleanor Musick, JAMS Arbitration Reference No. 1240022033, 2016 (Deposition).

SD3, LLC and SawStop LLC v. Black and Decker (U.S.), Inc., et al., United States District Court for the Eastern District of Virginia, Civil Action No.: 1:14-cv-00191, 2016 (Deposition).

Intellectual Ventures II LLC v. Nextel Operations, Inc., Sprint Spectrum L.P., Boost Mobile LLC, and Virgin Mobile USA, L.P., United States District Court for the District of Delaware, Civil Action No. 13-cv-1635-LPS, 2016 (Deposition).

In Re Lidoderm Antitrust Litigation, United States District Court for the District of Northern California, Case No. 14-MD-02521-WHO, 2016 (Deposition).

SELECTED MERGER EXPERIENCE

R.R. Donnelley/Meredith Burda (1990-1993): Merger of printing companies. Reviewed by the FTC. Preliminary Injunction Hearing. Part III Hearing.

Kimberly-Clark/Scott (1995): Merger of manufacturers of tissue products. Reviewed by the DOJ and the European Commission.

Staples/Office Depot (1996-1997): Proposed merger of office supply retailers. Reviewed by the FTC. Preliminary injunction hearing.

IMC/Western Ag (1997): Merger of mining companies. Reviewed by the DOJ.

Dow/Union Carbide (1999-2001): Merger of chemical manufacturers. Reviewed by the FTC.

Volvo/Scania (2000): Merger of truck manufacturers. Reviewed by the European Commission.

First Data/Concord (2003-2004): Merger of companies involved in merchant acquiring and payment networks. Reviewed by the DOJ.

Bumble Bee/Connors (2004): Merger of canned seafood manufacturers. Reviewed by the DOJ.

Sonaecom/Portugal Telecom (2006): Merger of telecommunications companies. Reviewed by the Portuguese Competition Authority.

Graphic Packaging/Altivity (2007-2008): Merger of paperboard manufacturers. Reviewed by the DOJ.

Inbev/Anheuser-Busch (2008): Merger of beer manufacturers. Reviewed by the DOJ, the UK Competition Commission, and MOFCOM.

Serta/Simmons (2009): Merger of mattress manufacturers. Reviewed by the FTC.

Coty/OPI (2010): Merger of nail polish manufacturers. Reviewed by the DOJ.

Knowles/NXP (2011): Knowles acquired the speaker/receiver business of NXP. Reviewed by MOFCOM.

AT&T/T-Mobile (2011): Consulted for the DOJ regarding the proposed deal between the two wireless service providers.

Confidential engagement for consumer product manufacturer (2012): Consulted for a consumer product manufacturer considering an acquisition with potential overlap in various jurisdictions around the world.

Confidential engagement for consumer product manufacturer (2012): Consulted for a consumer product manufacturer considering an acquisition with potential overlap in numerous product lines in the US.

UPS/TNT (2013): Consulted for the Ministry of Commerce of the People's Republic of China regarding the proposed deal between two package delivery services.

Thermo Fisher/Life Technologies (2014): Consulted for the Ministry of Commerce of the People's Republic of China regarding the proposed deal.

Seagate/Samsung (2014-2015): Consulted for Ministry of Commerce of the People's Republic of China regarding whether "hold separate" conditions should be lifted.

Western Digital/Hitachi (2014-2015): Consulted for Ministry of Commerce of the People's Republic of China regarding whether "hold separate" conditions should be lifted.

Confidential engagement for consumer product manufacturer (2016): Consulted for a consumer product manufacturer concerning possible acquisition in the US.

Appendix B

Appendix B
Documents Considered

Bates Documents

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Court Documents

17 U.S.C. § 115.

17 U.S.C. § 801.

17 U.S.C. § 803.

17 U.S.C. § 804.

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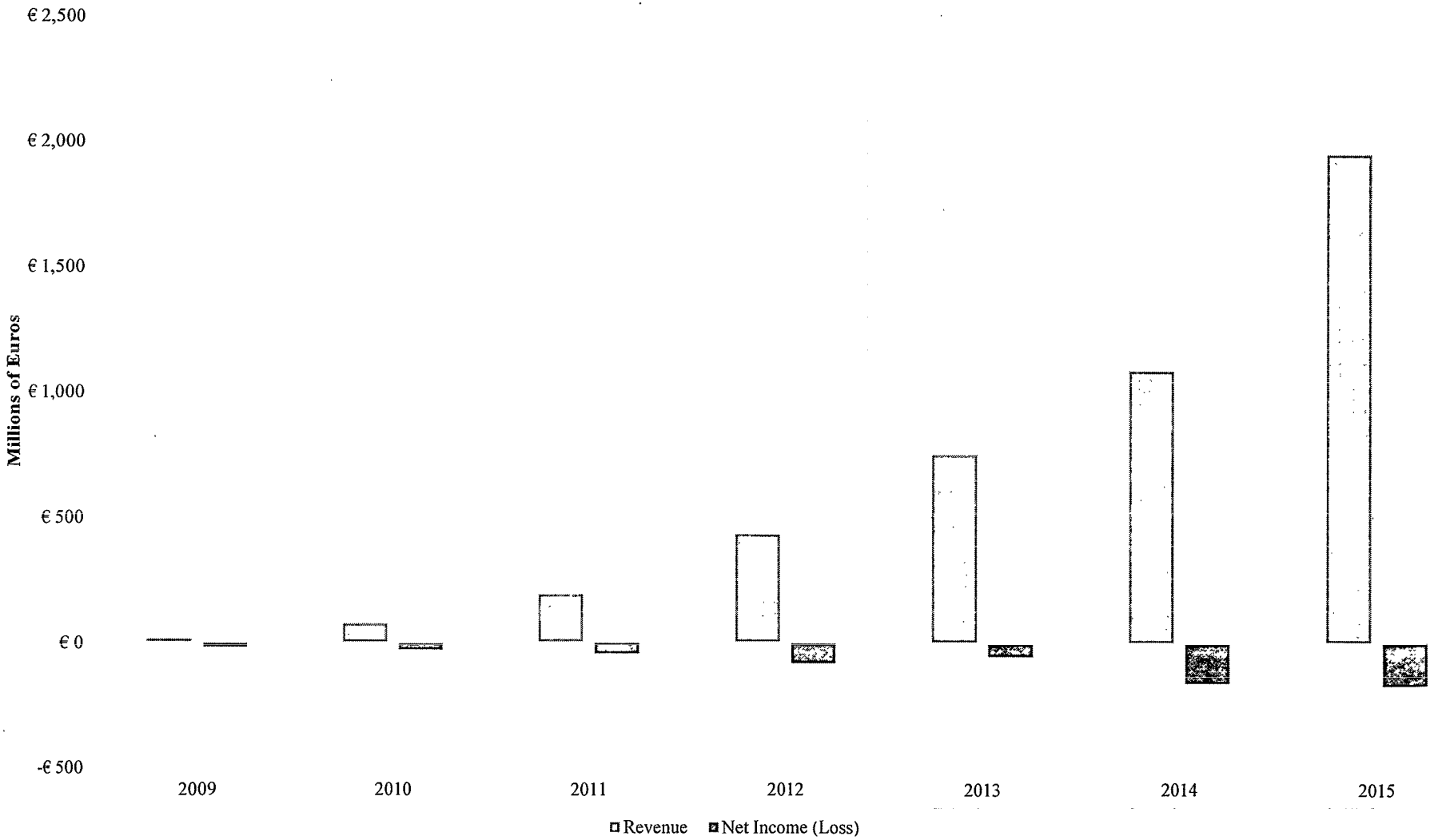
Exhibit 4
Spotify Financial Performance
2009 - 2015



Source: "Spotify's Revenue and Net Income/Loss from 2009 to 2015," Statista, November 20, 2015.

Exhibit 6a
Total Revenue and Shipments for the U.S. Music Industry

2005 - 2015

	2005 (a)	2006 (b)	2007 (c)	2008 (d)	2009 (e)	2010 (f)	2011 (g)	2012 (h)	2013 (i)	2014 (j)	2015 (k)
Revenue (SM)											
LP/EP	$ 14.2	$ 15.7	$ 22.9	$ 56.7	$ 63.8	$ 88.9	$ 119.4	$ 160.7	$ 210.7	$ 314.9	$ 416.2
Vinyl Single	13.2	9.9	4.0	2.9	2.5	2.3	4.6	4.7	3.0	5.9	6.1
8-Track	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cassette	13.1	3.7	3.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cassette Single	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Tapes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CD	10,520.2	9,372.6	7,452.3	5,471.3	4,318.8	3,389.4	3,100.7	2,485.6	2,140.9	1,832.6	1,520.8
CD Single	10.9	7.7	12.2	3.5	3.1	2.9	3.5	3.2	2.5	3.8	1.2
Music Video	602.2	451.1	484.9	227.3	209.6	177.6	151.0	116.6	106.3	91.2	73.2
DVD Audio	11.2	2.4	2.8	1.2	1.6	0.9	0.3	0.2	-0.5	2.1	5.4
SACD	10.0	5.5	3.6	3.1	2.4	1.7	1.5	1.3	1.0	0.8	1.1
Download Single	363.3	580.6	811.0	1,032.2	1,172.0	1,336.4	1,522.4	1,623.6	1,567.6	1,407.8	1,226.9
Download Album	135.7	275.9	497.4	635.3	744.3	872.4	1,070.8	1,204.8	1,232.1	1,150.9	1,090.7
Kiosk	1.0	1.9	2.6	2.6	6.3	6.4	2.7	3.7	6.2	2.6	3.7
Download Music Video	3.7	19.7	28.2	41.3	40.9	36.6	32.4	20.8	16.7	13.6	6.4
Ringtones & Ringbacks	421.6	773.8	1,055.8	977.1	702.8	448.0	276.2	166.9	97.9	66.3	54.5
Paid Subscriptions	149.2	206.2	234.0	221.4	206.2	212.4	247.8	399.9	639.2	800.1	1,218.9
SoundExchange	20.4	32.8	36.2	100.0	155.5	249.2	292.0	462.0	590.4	773.4	802.6
Synchronization	0.0	0.0	0.0	0.0	201.2	188.7	196.5	190.6	189.7	189.7	202.9
On-Demand Streaming	0.0	0.0	0.0	0.0	0.0	0.0	113.8	170.9	220.0	294.8	385.1
Total Revenue	**$ 12,289.9**	**$ 11,759.5**	**$ 10,650.9**	**$ 8,776.8**	**$ 7,831.0**	**$ 7,013.8**	**$ 7,135.6**	**$ 7,015.5**	**$ 7,023.7**	**$ 6,950.5**	**$ 7,015.7**
Shipments (M)											
LP/EP	1.0	0.9	1.3	2.9	3.5	4.2	5.5	6.9	9.4	13.2	16.9
Vinyl Single	2.3	1.5	0.6	0.4	0.3	0.3	0.4	0.4	0.3	0.5	0.5
8-Track	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cassette	2.5	0.7	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cassette Single	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Tapes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CD	705.4	619.7	499.7	368.4	296.6	253.0	240.8	198.2	173.8	142.8	122.9
CD Single	2.8	1.7	2.6	0.7	0.9	1.0	1.3	1.1	0.6	1.0	0.4
Music Video	33.8	23.2	27.5	13.2	11.6	9.1	7.7	6.0	4.8	4.1	3.3
DVD Audio	0.5	0.1	0.2	0.0	0.1	0.0	0.0	0.0	-0.1	0.1	0.2
SACD	0.5	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0
Download Single	366.9	586.4	819.4	1,042.7	1,124.4	1,177.4	1,332.3	1,392.2	1,327.9	1,199.1	1,021.0
Download Album	13.6	27.6	49.8	63.6	74.5	85.8	103.9	116.7	118.0	117.6	109.4
Kiosk	0.7	1.4	1.8	1.6	1.7	1.7	1.3	2.0	3.7	1.6	2.2
Download Music Video	1.9	9.9	14.2	20.8	20.5	18.4	16.3	10.5	8.4	6.8	3.2
Ringtones & Ringbacks	170.0	315.0	433.8	405.1	294.3	188.5	115.4	69.3	39.3	26.6	21.9
Paid Subscriptions	1.3	1.7	1.8	1.6	1.2	1.5	1.8	3.4	6.2	7.7	10.8
Total Shipments	**1,303.2**	**1,590.1**	**1,853.3**	**1,921.2**	**1,829.7**	**1,741.0**	**1,826.8**	**1,806.8**	**1,692.3**	**1,521.1**	**1,312.7**

Notes: SoundExchange includes streaming radio services such as Pandora, SiriusXM and other internet radio. Paid subscriptions includes services such as Rhapsody and paid versions of Spotify. On-demand streaming includes services such as ad-supported Spotify. See "News and Notes on 2015 Mid-Year RIAA Shipment and Revenue Statistics."

The RIAA does not provide shipments information on SoundExchange, synchronization and on-demand streaming services.

Sources: "U.S. Sales Database," The Recording Industry Association of America, https://www.riaa.com/u-s-sales-database/. Last accessed September 21, 2016.

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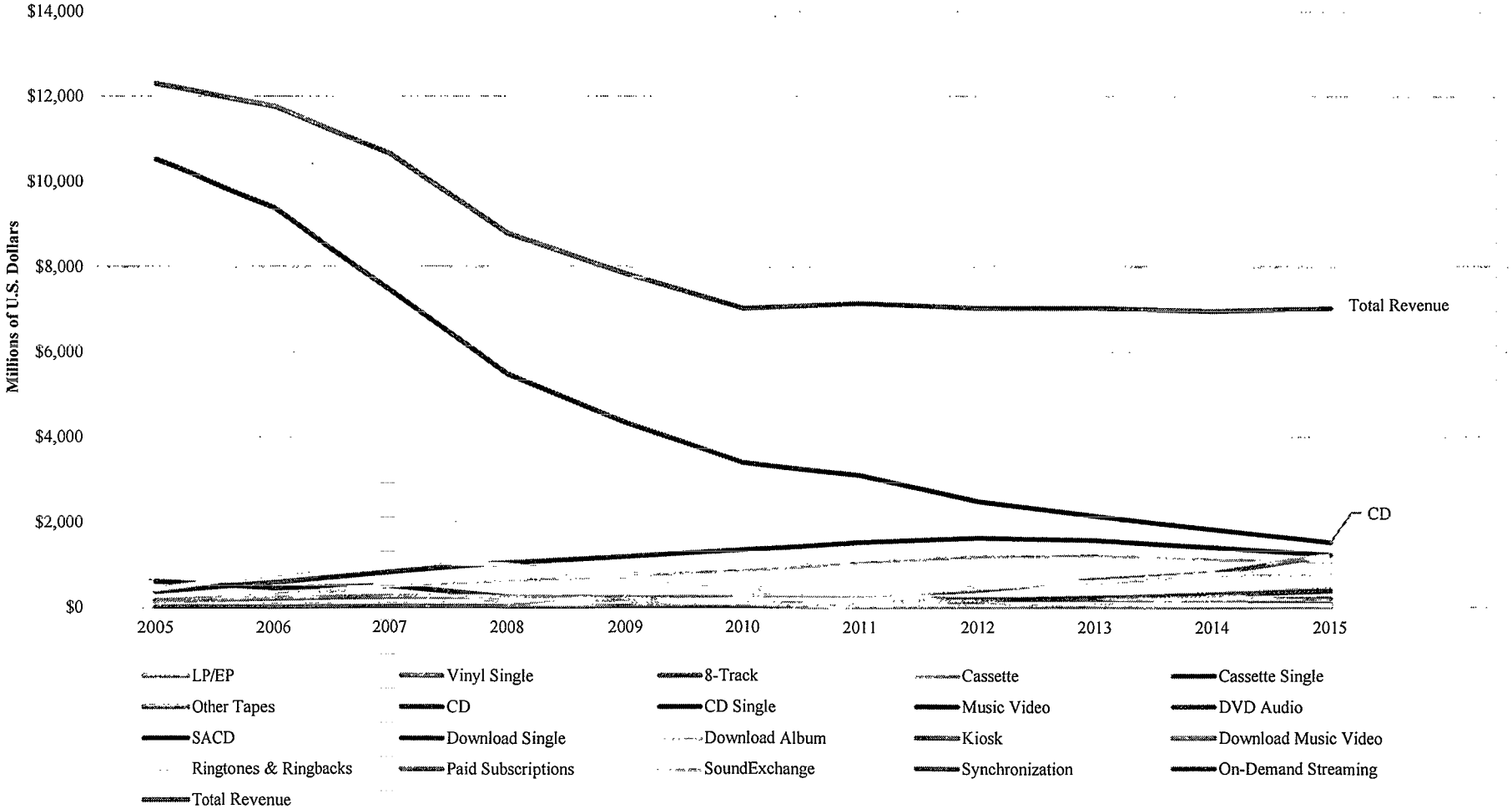
Exhibit 6b
U.S. Music Industry Revenue
2005 - 2015



Notes: SoundExchange includes streaming radio services such as Pandora, SiriusXM and other internet radio. Paid subscriptions includes services such as Rhapsody and paid versions of Spotify. On-demand streaming includes services such as ad-supported Spotify.

Sources: "U.S. Sales Database," The Recording Industry Association of America, https://www.riaa.com/u-s-sales-database/. Last accessed September 21, 2016.
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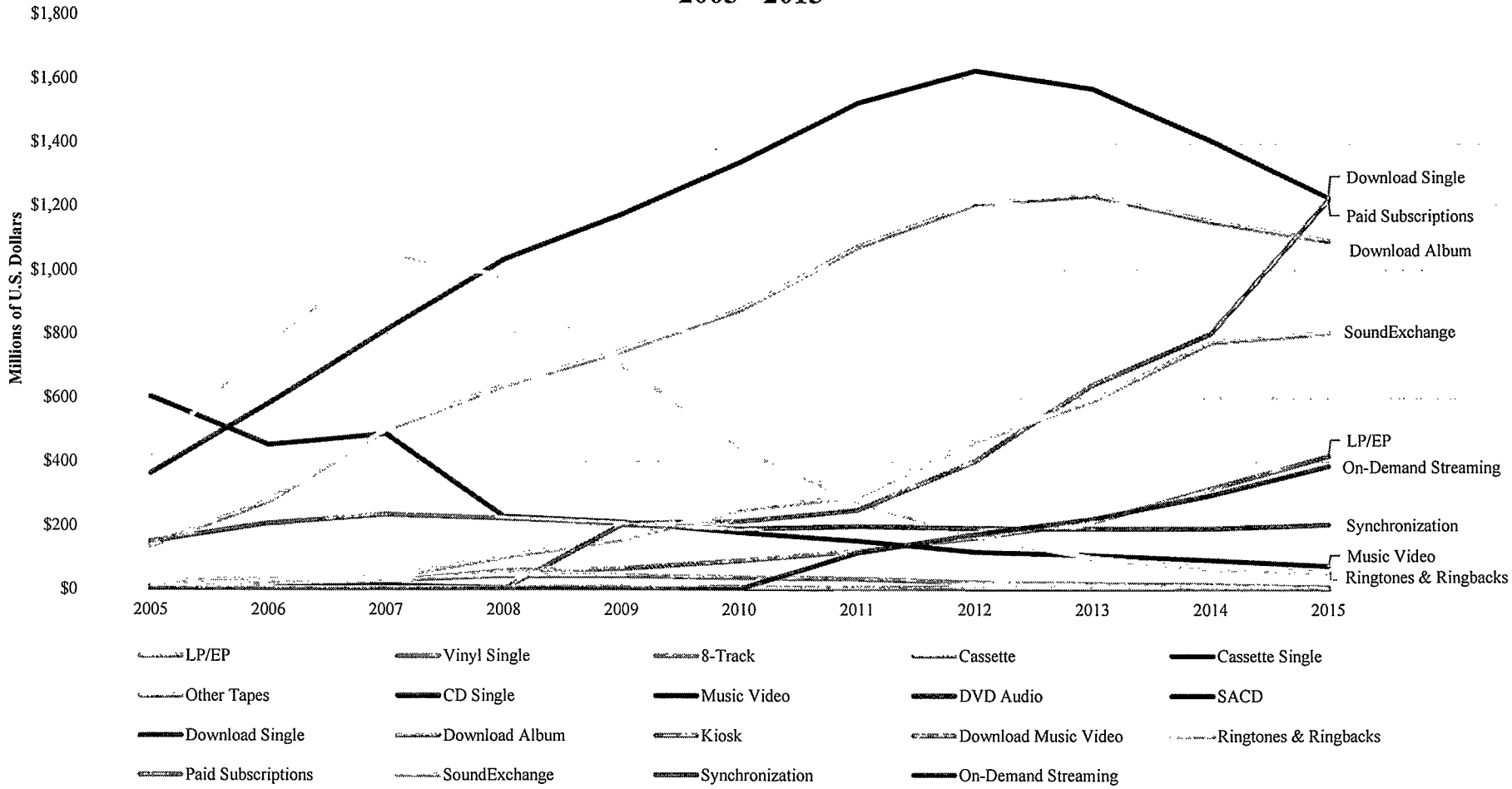
Exhibit 6c
U.S. Music Industry Revenue
Excluding Total Industry and CD Sales
2005 - 2015



Notes: SoundExchange includes streaming radio services such as Pandora, SiriusXM and other internet radio. Paid subscriptions includes services such as Rhapsody and paid versions of Spotify. On-demand streaming includes services such as ad-supported Spotify.

Sources: "U.S. Sales Database," The Recording Industry Association of America, https://www.riaa.com/u-s-sales-database/. Last accessed September 21, 2016.
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Exhibit 7

Subpart A Effective Royalty Rate as a Percentage of the Price Per Song

2006-2015

	2006 (a)	2007 (b)	2008 (c)	2009 (d)	2010 (e)	2011 (f)	2012 (g)	2013 (h)	2014 (i)	2015 (j)
Subpart A Royalty Rate										
Rate for Songs ≤ 5.2 Minutes (Per Song)	$ 0.091	$ 0.091	$ 0.091	$ 0.091	$ 0.091	$ 0.091	$ 0.091	$ 0.091	$ 0.091	$ 0.091
Rate for Songs > 5.2 Minutes (Per Minute)	$ 0.0175	$ 0.0175	$ 0.0175	$ 0.0175	$ 0.0175	$ 0.0175	$ 0.0175	$ 0.0175	$ 0.0175	$ 0.0175
Proportion of Songs > 5.2 Minutes	8.8 %	8.8 %	8.8 %	8.8 %	8.8 %	8.8 %	8.8 %	8.8 %	8.8 %	8.8 %
Avg Length of Songs > 5.2 Minutes (in Minutes)	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
Blended Subpart A Royalty Rate Per Song	$ 0.093	$ 0.093	$ 0.093	$ 0.093	$ 0.093	$ 0.093	$ 0.093	$ 0.093	$ 0.093	$ 0.093
U.S. Sales of Digital Downloads										
Singles										
Unit Shipments	586.4	819.4	1,042.7	1,124.4	1,177.4	1,332.3	1,392.2	1,327.9	1,199.1	1,021.0
Revenue	$ 580.6	$ 811.0	$ 1,032.2	$ 1,172.0	$ 1,336.4	$ 1,522.4	$ 1,623.6	$ 1,567.6	$ 1,407.8	$ 1,226.9
Price Per Song	$ 0.99	$ 0.99	$ 0.99	$ 1.04	$ 1.14	$ 1.14	$ 1.17	$ 1.18	$ 1.17	$ 1.20
Albums										
Unit Shipments	27.6	49.8	63.6	74.5	85.8	103.9	116.7	118.0	117.6	109.4
Revenue	$ 275.9	$ 497.4	$ 635.3	$ 744.3	$ 872.4	$ 1,070.8	$ 1,204.8	$ 1,232.1	$ 1,150.9	$ 1,090.7
Price Per Album	$ 10.00	$ 9.99	$ 9.99	$ 9.99	$ 10.17	$ 10.31	$ 10.32	$ 10.44	$ 9.79	$ 9.97
Songs Per Album	10	10	10	10	10	10	10	10	10	10
Implied Price Per Song	$ 1.00	$ 1.00	$ 1.00	$ 1.00	$ 1.02	$ 1.03	$ 1.03	$ 1.04	$ 0.98	$ 1.00
Singles and Albums										
Price Per Song	$ 0.99	$ 0.99	$ 0.99	$ 1.03	$ 1.09	$ 1.09	$ 1.11	$ 1.12	$ 1.08	$ 1.10
Subpart A Effective Royalty Rate Per Song										
Effective Subpart A Royalty Rate	9.4 %	9.4 %	9.4 %	9.1 %	8.6 %	8.5 %	8.4 %	8.3 %	8.6 %	8.5 %

Average Price Per Song	**$ 1.07**
Effective Subpart A Royalty Rate	**8.7 %**

Notes: Blended Subpart A Royalty Rate Per Song is calculated as 9.1 cents multiplied by one minus the Proportion of Songs > 5.2 Minutes, plus 1.75 cents multiplied by the Average Length of Songs > 5.2 Minutes and the Proportion of Songs > 5.2 Minutes.

Effective Subpart A Royalty Rates are calculated as the Subpart A Royalty Rate Per Digital Download divided by Price Per Song.

The Proportion of Songs > 5.2 Minutes and the Average Length of Songs > 5.2 Minutes are obtained as of August 2016 and are used for 2006 through 2015.

Unit Shipments and Revenue are in millions.

Based on the RIAA's assumption, one album contains 10 songs on average.

Implied Price Per Song in the Albums section is calculated as the Price Per Album divided by Songs Per Album.

Price Per Song in the Singles and Albums section is calculated as the weighted average price per song for singles and albums.

Average Price Per Song is calculated as the weighted average price per song over the 2006-2015 time period.

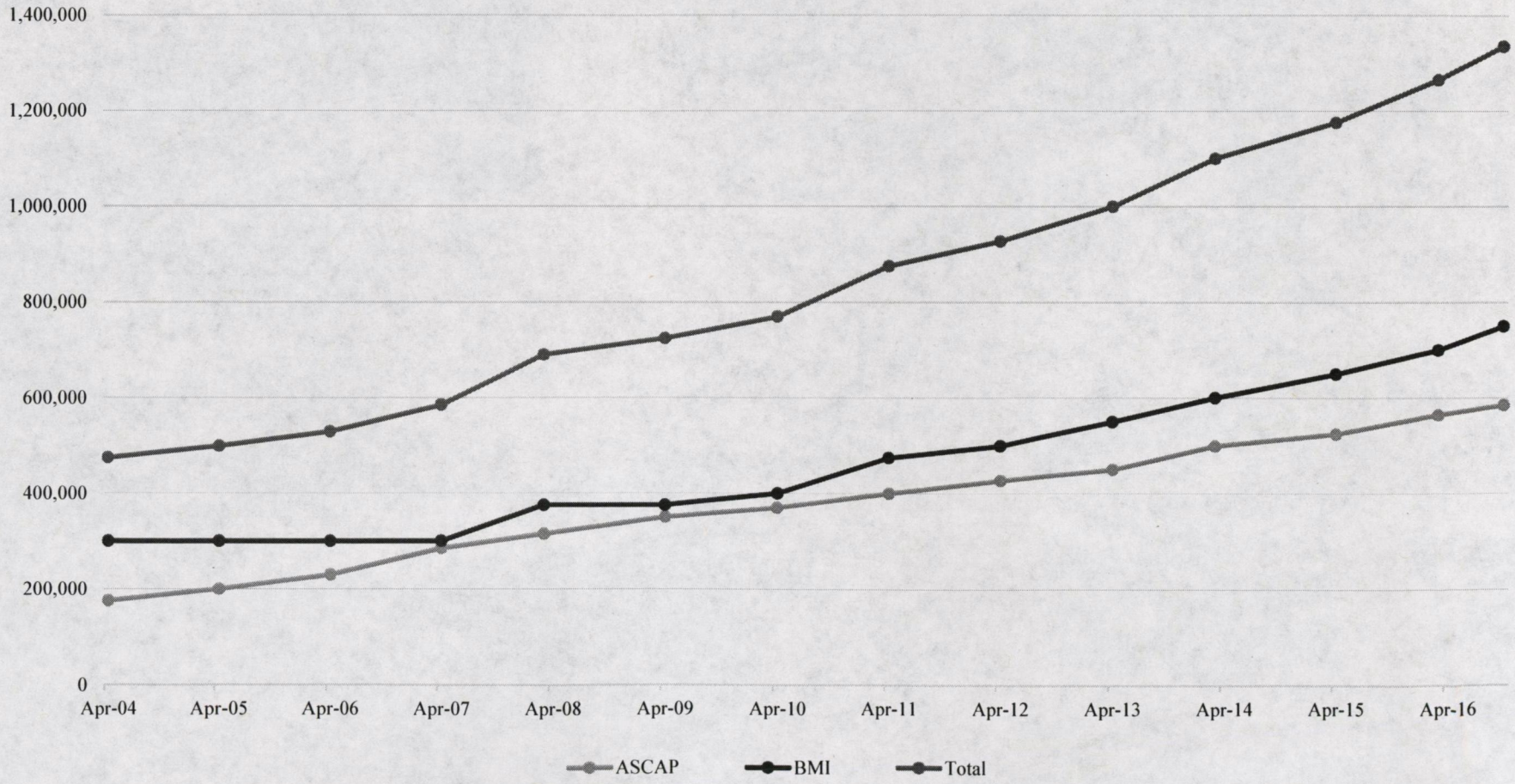
Sources: 37 CFR § 385.3.

"U.S. Sales Database," The Recording Industry Association of America, https://www.riaa.com/u-s-sales-database/. Last accessed on September 14, 2016.

"RIAA Accepts Streams for Gold and Platinum Certifications," Billboard, February 1, 2016, http://www.billboard.com/articles/business/6859551/riaa-streaming-gold-platinum-certification-methodology.

Data Generated in Response to a Request Made by Edgeworth Economics to Google.

Exhibit 9
Number of Affiliated Songwriters, Composers, and Music Publishers
2004-2016



Note: Historical data for ASCAP and BMI retrieved from https://archive.org/web/.
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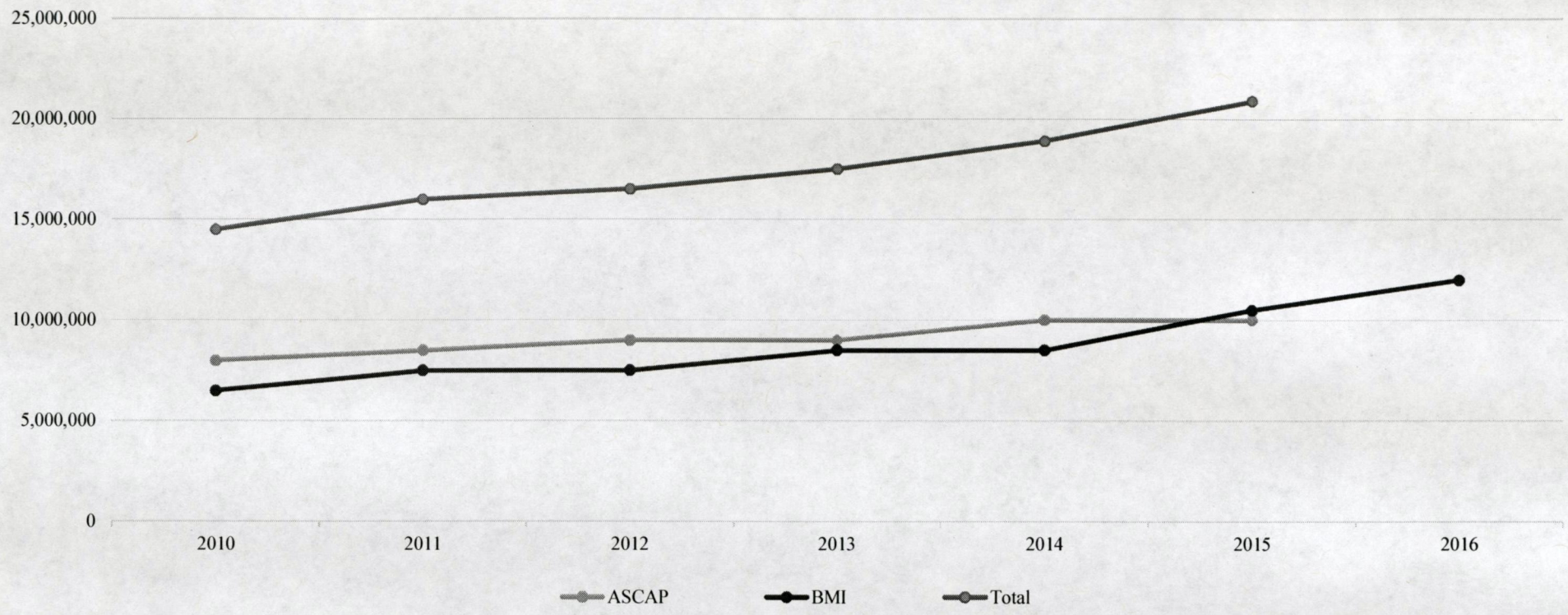
Exhibit 10
Number of Compositions Represented by Major U.S. PROs

2010-2016



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2011 Annual Report, ASCAP.
2010 Annual Report, ASCAP.

Before the
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In the Matter of: Determination of Rates and Terms for Making and Distributing Phonorecords (Phonorecords III)	Docket No. 16-CRB-0003-PR (2018-2022)

AMENDED EXPERT WITNESS STATEMENT OF DR. GREGORY K. LEONARD

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I. QUALIFICATIONS AND ASSIGNMENT

1. I am an economist and partner at Edgeworth Economics, 333 Bush Street, Suite 1450, San Francisco, CA 94104. I received a Bachelor of Science degree in Applied Mathematics-Economics from Brown University in 1985 and a Ph.D. in Economics from the Massachusetts Institute of Technology in 1989. Prior to joining Edgeworth Economics, I was, at various times, a senior vice president with NERA Economic Consulting, a senior vice president with Lexecon Inc., a founding member and director of Cambridge Economics, Inc., and an assistant professor of economics at Columbia University.

2. My specialties within economics are applied microeconomics, which is the study of the behavior of consumers and firms, and econometrics, which is the application of statistical methods to economics data. I have published over sixty papers in scholarly and professional journals. My publications are listed on my curriculum vitae, attached as Appendix A. A number of these papers address issues in industrial organization, demand for products, intellectual property and the calculation of damages in patent infringement litigation, and econometrics, including publications in the *Journal of Industrial Economics*, the *RAND Journal of Economics*, the *Journal of Econometrics*, the *Berkeley Journal of Technology and Law*, and *les Nouvelles*.

3. For example, a paper in the *Journal of Econometrics* addresses econometric approaches to estimating patent value for use in patent litigation and licensing negotiations; a recent paper in *Antitrust* focuses on methodologies for determining "reasonable and non-discriminatory royalties" for standard-essential patents; and a paper in the *Columbia Science and Technology Review* discusses the concept of apportionment in patent valuation.

4. I am a senior editor of the *Antitrust Law Journal* and have served as a referee for numerous economics and other professional journals. I have given invited lectures on intellectual property and antitrust issues at the Federal Trade Commission (FTC), the United States Department of Justice (DOJ), the Directorate General for Competition of the European Commission, the Fair Trade Commission of Japan, and China's Supreme People's Court and Ministry of Commerce. I have been retained by the DOJ to consult on antitrust matters.

5. In 2009, I was invited to speak at a session of the FTC's hearings on the "Evolving IP Marketplace" concerning the calculation of patent damages. In the report that the FTC subsequently issued, my views on damages calculation were cited extensively.[1] In 2007, I served as a consultant to and testified before the Antitrust Modernization Commission, which was tasked by Congress and the President of the United States to make recommendations for revising U.S. antitrust laws. In its *Uniloc* decision, the U.S. Court of Appeals for the Federal Circuit cited one of my publications in support of its conclusion that a method of calculating reasonable royalty damages in a patent case (the so-called "25% Rule") is an unreliable and flawed methodology.[2]

6. I have served as an expert witness in a number of litigation matters before U.S. District Courts, the (U.S.) International Trade Commission, state courts, and arbitration panels. A list of cases in which I have testified (in deposition or at trial) in the last four years is provided in my curriculum vitae, attached as Appendix A to this Written Direct Statement. One of those cases was *Oracle v. Google*, where I analyzed damages for alleged copyright infringement as well as

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[1] Federal Trade Commission, *The Evolving IP Marketplace: Aligning Patent Notice and Remedies with Competition*, March 2011.

[2] *Uniloc USA, Inc. v. Microsoft Corp.*, Nos. 2010-1035, 2010-1055, 2011 WL 9738 (Fed. Cir. Jan. 4, 2011).

factors related to whether use of a copyright was fair use. My hourly rate for this matter is $900. My fee is not contingent on the outcome of this proceeding.

7. The Judges of the Copyright Royalty Board ("CRB") have commenced this proceeding to set the rates and terms of the 17 U.S.C. § 115 ("Section 115") compulsory license for making and distributing phonorecords of nondramatic musical works for the period from January 1, 2018 through December 31, 2022. I understand that the Copyright Royalty Judges received requests to participate in this proceeding from Amazon Digital Services, Inc. ("Amazon"); Apple, Inc. ("Apple"); American Society of Composers, Authors and Publishers ("ASCAP"); Broadcast Music, Inc. ("BMI"); Church Music Publishers Association ("Church Music"); David Powell; Deezer S.A. ("Deezer"); Digital Media Association ("DiMA"); Gear Publishing Co ("Gear"); George Johnson; Google Inc. ("Google"); Music Reports, Inc. ("Music Reports"); Nashville Songwriters Association International ("NSAI"); National Music Publishers Association ("NMPA"); Harry Fox Agency ("Harry Fox"); Omnifone Group Limited ("Omnifone"); Pandora Media, Inc. ("Pandora"); Recording Industry Association of America, Inc. ("RIAA"); Rhapsody International, Inc. ("Rhapsody"); Songwriters of North America ("SONA"); Sony Music Entertainment ("SME"); SoundCloud Limited ("SoundCloud"); Spotify USA Inc. ("Spotify"); Universal Music Group; and Warner Music Group.[3] I note that Universal Music Group, Warner Music Group, and Sony Music Entertainment have entered into a settlement agreement with participating Copyright Owners covering the rates and terms for 37 C.F.R. § 385 ("Section 385"), Subpart A, and are thus no longer participating in the proceeding. Several other

[3] 37 CFR Part 385, *Determination of Rates and Terms for Making and Distributing Phonorecords* (Phonorecords III), Federal Register 48371 Vol. 81 No. 142, July 25, 2016.

participants have also withdrawn from the proceeding. Amazon, Apple, George Johnson, Google, NSAI, NMPA, Pandora, and Spotify remain as participants.

8. I have been asked by Google to review the relevant economic evidence in this matter and to provide my opinions on the appropriate range of rates and terms for the Section 115 compulsory license for the period from January 1, 2018, through December 31, 2022, specifically those pertaining to services providing interactive streaming and limited downloads covered by Section 385, Subpart B, and limited offerings, mixed service bundles, music bundles, paid locker services, and purchased content locker services covered under Section 385, Subpart C. My opinions regarding the appropriate rates and terms have been undertaken in accordance with the factors described in 17 U.S.C. § 801(b)(1) ("the Section 801(b)(1) factors").

9. I filed my original Expert Witness Statement in this matter on November 1, 2016, where I presented my opinions on the appropriate range of rates and terms for the Section 115 compulsory license based on the information that was currently available at that time. I have prepared this Amended Expert Witness Statement as a result of additional data that has been produced by Google as described in further detail below.

10. In the course of my analysis, I have reviewed the documents and other information listed in Appendix B to this Written Direct Statement. Specific documents and other information cited as support in this testimony are not meant to be an exhaustive listing of all such documents or information.

11. My analysis and this report are based on information currently available to me. I reserve the right to augment or update opinions based on information learned in ongoing discovery.

II. SUMMARY OF OPINIONS

12. I understand that Google has proposed the following rate for Section 385, Subpart B: the greater of (i) 10.5% of service revenue and (ii) the lesser of (a) 13.5% of the total amount expensed by the service provider for sound recording rights, and (b) the existing per-subscriber per-month minima set forth in 37 C.F.R. 385.13(a). Similarly, for Section 385, Subpart C, Google proposes that the rate be the greater of (i) the existing Subpart C topline rates, and (ii) 13.5% of the total amount expensed by the service provider for sound recording rights. Google also proposes maintaining the per subscriber minima for the two service categories that contain such minima in Subpart C. For both subparts, the resulting royalty pool would be subject to a deduction for payments made for public performance rights.[4] I also understand that Google has proposed amending the definitions of Service Revenue in 37 C.F.R. 385.11 and Subpart C Service Revenue in 37 C.F.R. 385.21 to allow for deduction of certain costs of revenue, such as credit card transaction fees, carrier billing fees, and app store commissions, up to a maximum of 15 percent.

13. Google's proposals for Subpart B and Subpart C are economically reasonable. Based on my review of the relevant economic evidence produced in this matter, my opinions regarding the appropriate rates and terms for the Section 115 compulsory license for the period from January 1, 2018, through December 31, 2022, for the services covered under Section 385, Subparts B and C are as follows:

- 37 C.F.R. § 385, Subpart B – Interactive Streaming and Limited Downloads
    - The economically reasonable range for the all-in topline royalty rate for all of the service offering categories under Section 385, Subpart B is 10.2% to 11.3%, assuming the service revenue definitions proposed by Google. This range is based on newly-produced

[4] Google's proposal also includes a carve-out for compositions that have been directly licensed.

track purchase and track length data from Google that I used to calculate an effective Subpart A royalty rate of $0.095 per permanent digital download ("PDD"). The lower end of this range, 10.2%, is calculated by dividing (1) Google's effective Subpart A royalty rate of $0.095 per PDD, by (2) the most current (2015) average retail price of a PDD of $1.10, after deducting up to 15% of revenue for certain costs of revenue under Google's proposed service revenue definitions. The upper end of the range, 11.3%, is calculated by dividing $0.095 per PDD by the historical (2006) average retail price of a PDD of $0.99, after deducting up to 15% of revenue based on Google's proposed service revenue definitions. Google's proposed all-in royalty rate of 10.5% is within this range.

- The overall rate structure proposed by Google is also supported by [redacted] The parties to these agreements have demonstrated a preference for a structure in which the licensee pays an all-in royalty rate for the package of rights. To be consistent with this structure, the Section 115 statutory rate should continue to provide for deduction of a service's musical composition public performance royalty payments; and the application of mechanical-only per-subscriber royalty floors should be removed from the Section 385, Subpart B royalty calculation.
- Amending the definition of service revenue to allow for deduction of up to 15% of revenue for certain costs of revenue, such as app store fees, credit card transaction fees, and carrier billing fees, is reasonable. These costs are analogous to deductions allowed for ad-supported services under 37 C.F.R. 385.11. [redacted] Further, as discussed below, application of the Section 801(b) factors from an economic perspective suggests that a decrease in the payments under the compulsory license is appropriate. That decrease can be accomplished in part by allowing for certain deductions to service revenue associated with services' costs directly incurred to expand the revenue base. Lastly, Google's maintenance of the 10.5% all-in rate and the greater-of structure with the lesser of percentage-of-sound-recording and existing per-subscriber minima, in addition to the 15% cap on the proposed deduction, ensures that the effect of such a change to the definition of service revenue will be limited.
- The economically reasonable minimum to apply under Section 385, Subpart B is the lesser of a percentage of the service's payments for sound recording rights and a per-subscriber minimum, as follows:
  - Percentage of service payments for sound recording rights – A minimum of 13.5% of service payments for sound recording rights is economically reasonable. This percentage is supported by dividing (1) the effective Section 385, Subpart A royalty rate of $0.095 per PDD for musical works rights by (2) the royalties paid to record

[5] [redacted]

labels for sound recording rights, which are equal to 70% of the retail price of a PDD less the musical works royalty.[6]

- All-in per-subscriber minimum royalty rate – Maintenance of the existing per-subscriber per-month minima is economically reasonable, provided that they remain part of a lesser-of formulation with sound recording royalty payments.[7]

- 37 C.F.R. § 385, Subpart C – Limited Offerings, Mixed Service Bundles, Music Bundles, Paid Locker Services, and Purchased Content Locker Services
  - The economically reasonable range for the all-in topline royalty rates for all of the service offering categories under Section 385, Subpart C is 10.2% to 11.3% based on the same analysis as that described for Subpart B. Google's proposal to maintain the existing all-in topline rates of up to 12% subject to its proposed definition of service revenue is conservatively high.
  - The overall rate structure proposed by Google is also supported by [redacted] and the prior settlements in Phonorecords I and II. The parties to these agreements have demonstrated a preference for a structure in which the licensee pays an all-in royalty rate for the package of rights. To be consistent with this structure, the Section 115 statutory rate should continue to provide for deduction of a service's musical composition public performance royalty payments; and the application of mechanical-only per-subscriber royalty floors should be removed from the Section 385, Subpart C royalty calculation.
  - Amending the definition of Subpart C Service Revenue to allow for deduction of up to 15% of revenue for certain costs of revenue, such as app store fees, credit card transaction fees, and carrier billing fees is reasonable. These costs are analogous to deductions allowed for ad-supported services under 37 C.F.R. 385.21. [redacted] Further, as discussed below, application of the Section 801(b) factors from an economic perspective suggests that a decrease in the statutory rate is appropriate. That decrease can be accomplished in part by allowing for certain deductions to service revenue associated with services' costs directly incurred to expand the revenue base. Lastly, Google's maintenance of the existing topline all-in rates and the greater-of structure with the percentage-of-sound-recording and existing per-subscriber minima, in

[6] In the instance of pass-through percentages applicable to record company revenues when the record company clears mechanical rights, this minimum should be adjusted accordingly.

[7] I understand that the current regulations are unclear on how to treat family plans, annual subscriptions, and student discounts with regard to the all-in per-subscriber minimum royalty rate. It is my opinion that when calculating a minimum for the purposes of family plans, the minimum should follow the economics of how the plans are priced; e.g., if a $10 per subscriber plan has an $0.80 all-in per-subscriber minimum, then a $15 per-family plan should have a $1.20 all-in per-family minimum. Alternatively, the per-subscriber minimum for family plans could be fixed at 150% of the per-subscriber minimum for individual plans, to conform to existing industry pricing practices. See "Choose the Best Music Streaming Service for Your Family", CNET, October 14, 2016 (discussing prevailing on-demand streaming service price of $14.99 per month).

addition to the 15% cap on the proposed deduction, ensures that the effect of such a change to the definition of service revenue will be limited.

- The economically reasonable minimum to apply under Section 385, Subpart C is:
  - Percentage of service payments to record companies for sound recording rights – Consistent with my analysis for Section 385, Subpart B (see above), for all of the service offering categories under Section 385, Subpart C, this minimum should be 13.5% of service payments for sound recording rights.[8]
  - All-in per-subscriber minimum royalty rate – Maintenance of the existing per subscriber per month minima is economically reasonable.

III. BACKGROUND

A. Key Players in the Music Licensing Landscape

14. A songwriter is the author of a musical work, contributing music or lyrics. The Songwriters Guild of America ("SGA") and NSAI, a participant in this proceeding, are trade organizations that represent songwriters.[9]

15. Music publishers are entities that enter into publishing agreements with songwriters, under which the publishers in part finance songwriters' efforts in exchange for future royalty collections. Music publishers usually license songwriters' musical works and collect royalties from licensees of the musical works; and publishers in return receive from songwriters an ownership percentage in the musical work or the royalty streams that they collect from licensees.[10] There are three major music publishers: (1) Sony/ATV Music Publishing ("Sony/ATV"); (2) Warner/Chappell Music ("Warner/Chappell"); and (3) Universal Music Publishing Group ("Universal Music Publishing"). These firms hold a significant combined

[8] In the instance of pass-through percentages applicable to record company revenues when the record company clears mechanical rights, this minimum should be adjusted accordingly.

[9] "About NSAI," Nashville Songwriters Association International, August 3, 2016; "SGA Professional Services," Songwriters Guild of America, March 12, 2007.

[10] Donald S. Passman, "Publishing Companies and Major Income Sources," (Chapter 16), *All You Need to Know about the Music Business*, Eighth Edition, Simon and Schuster, 2013, pp. 219-220.

position, controlling the majority of the U.S. music publishing market.[11] There are also a number of mid-sized music publishers, including Kobalt Music Group ("Kobalt") and BMG Chrysalis ("BMG"), followed by thousands of smaller music publishers and self-published songwriters.[12] NMPA, a participant in this proceeding, and the Association of Independent Music Publishers ("AIMP"), are two trade organizations in the music publishing industry.[13]

16. The licensing of mechanical rights for musical works is often handled by mechanical rights administrators, such as Harry Fox — the largest such administrator — and Music Reports, due to the administrative burdens associated with a Section 115 compulsory license, which include serving notice on the copyright holder and the reporting of royalties on a song-by-song basis every month. Mechanical rights licensing for musical works is also often handled directly by music publishers.[14]

17. Performing rights organizations ("PROs") are organizations that license the public performance rights in musical works on behalf of songwriters and publishers, which typically align themselves with a particular PRO. ASCAP and BMI are the two largest PROs and represent the majority of songs publicly performed in the United States. ASCAP and BMI are not-for-profit businesses that must operate according to certain antitrust consent decrees that constrain their membership and licensing practices. SESAC, Inc. ("SESAC"), and Global Music

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[11] "Publishers Quarterly: Sony/ATV Rules Again But Warner/Chappell Gets a Big Boost from Lukas Graham," Billboard, July 28, 2016.

[12] "Publishers Quarterly: Sony/ATV Rules Again But Warner/Chappell Gets a Big Boost from Lukas Graham," Billboard, July 28, 2016.

[13] "About," National Music Publishers Association, June 18, 2015; "About Us," Association of Independent Music Publishers, December 21, 2011.

[14] Al Kohn & Bob Kohn, "Licensing Music in Sound Recordings (Mechanical Licenses)," (Chapter 13), *Kohn on Music Licensing*, Fourth Edition, 2010, pp. 808-809.

Rights ("GMR") are two smaller, for-profit PROs that are involved in licensing public performance rights in musical works outside of government control.[15]

18. A record company (or label) typically finances the production of sound recordings, which are the result of a contractual relationship between the recording artists and record company. Record companies also promote the sound recording and recording artists, and arrange for the physical and digital distribution of the sound recording. Record companies own and generally handle the licensing of the reproduction and public performance rights for their sound recordings themselves. An exception is the licensing of incidental reproductions and public performances of sound recordings for digital, non-interactive streaming services, which are the subject of Section 112 and 114 statutory licenses, respectively, and where the industry collective, SoundExchange, is responsible for collecting and paying out royalties to recording artists, non-featured artists, and record companies.[16] There are major record labels and independent record labels. Universal Music Group, Sony Music Entertainment, and Warner Music Group are the primary major record labels. These major record labels share common corporate ownership with the major music publishers discussed above — e.g., Sony Corporation owns SME (record company) and half of Sony/ATV (music publisher); Universal Music Group (record company) owns Universal Music Publishing (music publisher); and Warner/Chappell (music publisher) is a division of Warner Music Group (a record company). Independent labels are those that are not wholly owned by one of these three major record labels.

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[15] "Music in the Marketplace," Better Business Bureau; "Music Publishing Groups Have New Competitor," Ernie Smith, Associations Now, October 31, 2014.

[16] Donald S. Passman, "Broad-Strokes Overview of the Record Business," (Chapter 7), *All You Need to Know about the Music Business*, Eighth Edition, 2013, p. 63.

19. Music service providers represent the channels of distribution for musical works and sound recordings, including radio and television stations, digital music companies, and physical and online record stores. In this matter, the music service providers relevant to the Section 115 compulsory license include companies that provide digital, interactive streaming services. Digital interactive streaming, also known as on-demand streaming, enables listeners to select and play songs on demand. Examples of digital interactive streaming service providers include Spotify, Google, Apple, and Rhapsody. In contrast, I understand that non-interactive digital streaming services, also known as internet radio, have not been subject to the Section 115 compulsory license. These types of services enable listeners to play music without the ability to select the specific songs that are played. Pandora historically has been an example of a digital, non-interactive streaming service provider.[17] The National Association of Broadcasters ("NAB"), Radio Music License Committee, and Television Music License Committee are the primary organizations representing terrestrial radio and television broadcasters.[18] DiMA is the national organization that represents the interests of digital music and media companies such as, for example, Apple, Pandora, Spotify, and Google.[19]

B. Section 115 – Compulsory License for Making and Distributing Phonorecords

20. Under Section 115, the exclusive rights to make and distribute phonorecords (including digital phonorecords) of nondramatic musical works (i.e., mechanical rights) are subject to a

[17] "The 2 Types of Streaming Royalties and How You Can Collect Both," Songtrust, August 4, 2014.

[18] "About Us," National Association of Broadcasters, November 6, 2009; "Homepage," Radio Music License Committee, February 24, 2010; "About Us," Television Music License Committee, October 14, 2013.

[19] "About DiMA," Digital Media Association, June 13, 2009.

compulsory license.[20] The process of obtaining a compulsory license under Section 115 begins by serving a notice of intention ("NOI") on the copyright owner.[21] Once an NOI has been served, the licensee must provide statements of account and pay the statutory royalties on a monthly basis. The CRB is the administrative body consisting of three Copyright Royalty Judges appointed by the Librarian of Congress that is responsible for establishing the statutory royalty rates and terms under the Section 115 compulsory license for mechanical rights associated with musical works, a process that by statute takes place every five years.[22] The statutory royalty rates for the compulsory license are established under a standard set forth in Section 801(b)(1),[23] which requires the CRB to weigh several factors and to seek to achieve the following policy-oriented objectives:

> (A) To maximize the availability of creative works to the public.
>
> (B) To afford the copyright owner a fair return for his creative work and the copyright user a fair income under existing economic conditions.
>
> (C) To reflect the relative roles of the copyright owner and the copyright user in the product made available to the public with respect to relative creative contribution, technological contribution, capital investment, cost, risk and contribution to the opening of new markets for creative expression and media for their communication.
>
> (D) To minimize any disruptive impact on the structure of the industries involved and on generally prevailing industry practices.[24]

21. The current royalty rates and terms of the compulsory license for mechanical rights in musical works are presented in Section 385, and are discussed in the following sections. In this

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[20] 17 U.S.C. § 115.

[21] 17 U.S.C. § 115(b).

[22] 17 U.S.C. § 804(b)(4).

[23] 17 U.S.C. § 115(c)(3)(A).

[24] 17 U.S.C. § 801(b)(1).

matter, the relevant rates and terms for the use of musical works under a Section 115 compulsory license for mechanical rights for Google are covered under: Subpart B — interactive streaming and limited downloads; and Subpart C — limited offerings, mixed service bundles, music bundles, paid locker services, and purchased content locker services.

22. As an alternative to the compulsory license, copyright owners and users are free to negotiate voluntary licenses that may depart from the Section 115 statutory rates and terms. According to Section 115: "License agreements voluntarily negotiated at any time between one or more copyright owners of nondramatic musical works and one or more persons entitled to obtain a compulsory license under subsection (a)(1) shall be given effect in lieu of any determination by the Librarian of Congress and Copyright Royalty Judges."[25] Mechanical rights licensing is predominantly accomplished through voluntary licenses between music service providers and mechanical rights administrators (e.g., Harry Fox) or music publishers.[26]

C. Section 385 – Rates and Terms for Use of Musical Works under Compulsory License for Making and Distributing of Physical and Digital Phonorecords

1. Subpart A [§ 385.1 – 385.4] – Physical Phonorecord Deliveries, Permanent Digital Downloads, and Ringtones

23. Under Section 385, the current royalty rates for licensing mechanical rights for physical phonorecord deliveries, PDDs, and ringtones are as follows:

- Physical phonorecord deliveries and PDDs – maximum of $0.091 and $0.0175 per minute of playing time or fraction thereof.

[25] 17 U.S.C. § 115(c)(3)(E)(i).

[26] W. Jonathan Cardi, "Über-Middleman: Reshaping the Broken Landscape of Music Copyright", Iowa Law Review, Vol. 92, p. 835 (2007), pp. 841-42.

- Ringtones - $0.24 per ringtone.[27]

I understand that, under historical industry practice, record labels generally secure and pass through the mechanical rights to physical and digital music stores.[28] I also understand that it is industry practice that a song length less than or equal to five minutes would generate a royalty of $0.091; while a song length of greater than five minutes would generate a royalty equal to $0.0175 per minute, rounded up to the nearest minute.[29] For example, I understand that a song greater than five minutes and less than or equal to six minutes in length would generate a total royalty of $0.105 (= 6 * $0.0175).[30] In my original Expert Witness Statement, based on the limited amount of data available to me at the time, I performed a more basic estimate of an effective Subpart A royalty rate using average track length data from only one month. In that calculation, I assumed that a song length less than 5.2 minutes would generate a royalty of $0.091, which is the exact song length where 5.2 minutes multiplied by $0.0175 equals $0.091. For songs greater than 5.2 minutes, I assumed that the royalty would be equal to the song length times $0.0175. I note that from an economic perspective, calculating the Subpart A royalty in the manner that I did in my original Expert Witness Statement makes sense because the royalty increases for each additional second of song length above the 5.2 minute threshold. In contrast, under historical industry practice I understand that a song that is exactly five minutes in length generates a total royalty of $0.091, while a song that is five minutes and one second in length, for

[27] 37 C.F.R. § 385.1-4.

[28] [redacted]

[29] https://harryfox.com/license_music/what_mechanical_royalty_rates.html.

[30] Consistent with this understanding, a song length of greater than six minutes and less than or equal to seven minutes would generate a total royalty of $0.1225 (= 7 * $0.0175); a song length of greater than seven minutes and less than or equal to eight minutes would generate a total royalty of $0.14 (= 8 * $0.0175); and so forth.

example, generates a total royalty of $0.105, which is an approximately 15% larger royalty for only one additional second of a song.

24. Since the submission of my original Expert Witness Statement, Google has produced more granular data including the number of tracks purchased from the Google Play Music Store and their track lengths, rounded up to the nearest minute.[31] I am, therefore, able to calculate a per PDD Subpart A royalty in the manner consistent with my understanding of industry practice; i.e., with an automatic trigger for the $0.0175 per minute royalty payment at greater than five minutes and every minute thereafter. I am also able to calculate the Subpart A royalty more accurately using actual song lengths bucketed for each minute interval, as opposed to calculating an average royalty for all songs greater than 5.2 minutes in length, which is what I did based on Google's original data.

2. Subpart B [§ 385.10 – 385.17] – Interactive Streaming and Limited Downloads

25. Under Section 385, the current royalty rates for licensing mechanical rights for interactive streams and limited downloads of musical works are calculated based on the following steps:[32]

- Calculate the All-In Publishing Royalty for the Service Offering[33]
  - Maximum of 10.5% of service revenue and the following specified all-in minimum royalties based on the type of service:
    - (1) Standalone Non-Portable Subscription, Streaming Only:[34] Lesser of 22% of service payments for sound recording rights and $0.50 per subscriber per month.[35]

[31] GOOG-PHONOIII-00003910.

[32] See 37 C.F.R. § 385.10-17, and "Rate Charts," Harry Fox Agency.

[33] "All-In Publishing Royalty" refers to the royalties for licenses covering both mechanical and public performance rights for musical works.

(2) Standalone Non-Portable Subscription, Mixed Use:[36] Lesser of 21% of service payments for sound recording rights and $0.50 per subscriber per month.

(3) Standalone Portable Subscription, Mixed Use:[37] Lesser of 21% of service payments for sound recording rights and $0.80 per subscriber per month.

(4) Bundled Subscription Services:[38] 21% of service payments for sound recording rights.

(5) Free Non-Subscription/Ad-Supported Services:[39] 22% of service payments for sound recording rights.

- Subtract Applicable Performance Royalties
  - Subtract from the result in the previous step the "total amount of royalties for public performance of musical works that has been or will be expensed pursuant to public performance licenses in connection with uses of musical works through such offering."[40]

- Determine the Payable Royalty Pool
  - Maximum of the result in the previous step and the following mechanical-only per-subscriber royalty floors based on the type of service:

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[34] Standalone Non-Portable Subscription, Streaming Only is defined as a "subscription service through which an end user can listen to sound recordings only in the form of interactive steams and only from a non-portable device to which such streams are originally transmitted while the device has a live network connection." (37 C.F.R. § 385.13.)

[35] I understand that only the higher of the percentages of service payments for sound recording rights is relevant for all of the Subpart B service offerings as it is the recording industry's practice not to pass through mechanical royalties for subscription services.

[36] Standalone Non-Portable Subscription, Mixed Use is defined as "a subscription service through which an end user can listen to sound recordings either in the form of interactive streams or limited downloads but only from a non-portable device to which such streams or downloads are originally transmitted." (37 C.F.R. § 385.13.)

[37] Standalone Portable Subscription, Mixed Use is defined as "a subscription service through which an end user can listen to sound recordings in the form of interactive streams or limited downloads from a portable device." (37 C.F.R. § 385.13.)

[38] Bundled Subscription Services are defined as "a subscription service providing licensed activity that is made available to end users with one or more other products or services (including products or services subject to other subparts) as part of a single transaction without pricing for the subscription service providing licensed activity separate from the product(s) or service(s) with which it is made available (e.g., a case in which a user can buy a portable device and one-year access to a subscription service providing licensed activity for a single price)." (37 C.F.R. § 385.13.)

[39] Free Non-Subscription/Ad-supported Services are defined as "a service offering licensed activity free of any charge to the end user." (37 C.F.R. § 385.13.)

[40] 37 C.F.R. § 385.12.

(1) Standalone Non-Portable Subscription, Streaming Only: $0.15 per subscriber per month.

(2) Standalone Non-Portable Subscription, Mixed Use: $0.30 per subscriber per month.

(3) Standalone Portable Subscription, Mixed Use: $0.50 per subscriber per month.

(4) Bundled Subscription Services: $0.25 per active subscriber per month.

(5) Free Non-Subscription/Ad-Supported Services: NA.

- Calculate the Per-Work Royalty Allocation for Each Relevant Work
  - Divide the result in the previous step by the total number of plays of all musical works through the service offering to calculate a per-play figure. Then multiply this figure by the total number of plays for each musical work through the service offering.

3. Subpart C [§ 385.20 – 385.26] – Limited Offerings, Mixed Service Bundles, Music Bundles, Paid Locker Services, and Purchased Content Locker Services

26. Under Section 385, the current royalty rates for licensing mechanical rights for limited offerings, mixed service bundles, music bundles, paid locker services, and purchased content locker services are calculated based on the following steps: [41]

- Calculate the All-In Publishing Royalty for the Service Offering
  - Maximum of the applicable percentage of service revenue based on the type of service:

    (1) Mixed Service Bundle:[42] 11.35% of service revenue.

    (2) Music Bundles:[43] 11.35% of service revenue.

    (3) Limited Offering:[44] 10.5% of service revenue.

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[41] See 37 C.F.R. § 385.20-26, and "Rate Charts," Harry Fox Agency.

[42] Mixed Service Bundle is defined as "an offering of one or more of permanent digital downloads, ringtones, locker services or limited offerings, together with one or more of non-music services (e.g., Internet access service, mobile phone service) or non-music products (e.g., a device such as a phone) of more than token value, that is provided to users as part of one transaction without pricing for the music services or music products separate from the whole offering." (37 C.F.R. § 385.21.)

[43] Music Bundles is defined as "an offering of two or more of physical phonorecords, permanent digital downloads or ringtones provided to users as part of one transaction (e.g., download plus ringtone, CD plus downloads). A music bundle must contain at least two different product configurations and cannot be combined with any other offering containing licensed activity under subpart B of this part or subpart C of this part." (37 C.F.R. § 385.21.)

(4) Paid Locker Service:[45] 12% of incremental service revenue.

(5) Purchased Content Locker:[46] 12% of service revenue.

and the applicable all-in minimum based on the type of service:

(1) Mixed Service Bundle: 21% of service payments for sound recording rights.[47]

(2) Music Bundles: 21% of service payments for sound recording rights.

(3) Limited Offering: 21% of service payments for sound recording rights (subject to a further minimum payment of $0.18 per subscriber per month).

(4) Paid Locker Service: 20.65% of service payments for sound recording rights (subject to a further minimum payment of $0.17 per subscriber per month).

(5) Purchased Content Locker: 22% of any incremental service payments to record companies for sound recording rights (above the otherwise applicable payments for permanent digital downloads and ringtones).

- Subtract Applicable Performance Royalties

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[44] Limited Offering is defined as "a subscription service providing interactive streams or limited downloads where - (1) An end user is not provided the opportunity to listen to a particular sound recording chosen by the end user at a time chosen by the end user (i.e., the service does not provide interactive streams of individual recordings that are on-demand, and any limited downloads are rendered only as part of programs rather than as individual recordings that are on-demand); or (2) The particular sound recordings available to the end user over a period of time are substantially limited relative to services in the marketplace providing access to a comprehensive catalog of recordings (e.g., a service limited to a particular genre or permitting interactive streaming only from a monthly playlist consisting of a limited set of recordings)." (37 C.F.R. § 385.21.)

[45] Paid Locker Service is defined as "a locker service that is a subscription service." Locker service is defined as "a service providing access to sound recordings of musical works in the form of interactive streams, permanent digital downloads, restricted downloads or ringtones, where the service has reasonably determined that phonorecords of the applicable sound recordings have been purchased by the end user or are otherwise in the possession of the end user prior to the end user's first request to access such sound recordings by means of the service." (37 C.F.R. § 385.21.)

[46] Purchased Content Locker is defined as "a locker service made available to end-user purchasers of permanent digital downloads, ringtones or physical phonorecords at no incremental charge above the otherwise applicable purchase price of the permanent digital downloads, ringtones or physical phonorecords, with respect to the sound recordings embodied in permanent digital downloads or ringtones or physical phonorecords purchased from a qualified seller…whereby the locker service enables the purchaser to engage in one or both of the qualifying activities." "Qualifying activity for purposes of this definition of 'purchased content locker service' is enabling the purchaser to – (i) Receive one or more additional phonorecords of such purchased sound recordings of musical works in the form of permanent digital downloads or ringtones at the time of purchase, or (ii) Subsequently access such purchased sound recordings of musical works in the form of interactive streams, additional permanent digital downloads, restricted downloads or ringtones." (37 C.F.R. § 385.21.)

[47] I understand that only the higher of the percentages of service payments for sound recording rights is relevant for all of the Subpart C service offerings as it is the recording industry's practice not to pass through mechanical royalties for subscription services

- Subtract from the result in the previous step the "total amount of royalties for public performance of musical works that has been or will be expensed pursuant to public performance licenses in connection with uses of musical works through such subpart C offering."[48]

- Calculate the Per-Work Royalty Allocation for Each Relevant Work
  - Calculate the per-work royalty allocation based on the type of service:
    (1) Limited Offering: Divide the result in the previous step by the total number of plays of all musical works through the service offering to calculate a per-play figure. Then multiply this figure by the total number of plays for each musical work through the service offering.
    (2) Mixed Service Bundle, Paid Locker Service, and Purchased Content Locker: Divide the result in the previous step by the total number of plays of all musical works through the service offering, which is equal to the sum of the total number of interactive streams, the total number of plays of restricted downloads, and 5 times the total number of downloads, to calculate a per-play figure. Then, multiply this figure by the sum of the total number of interactive streams, restricted downloads, and 5 times the total number of downloads, for each musical work through the service offering.
    (3) Music Bundles: Separate the result in the previous step by the product types in the music bundle using the relative prices of each product type in the bundle. Then divide each product-type total by the total number of sound recordings of musical works of that product type included in the music bundle.

D. Digital Interactive Streaming Services Subject to Section 385, Subparts B and C

27. In this section, I provide an overview of some of the digital interactive streaming services that are subject to Subparts B and C of Section 385 provided by companies that are a part of this proceeding.

1. Google Play Music

28. Google Play Music includes a music store from which users can purchase music content ("Google Play Music Store") that is subject to Subpart A of Section 385, an online storage

[48] 37 C.F.R. § 385.22.

service for a user's music collection ("Google Play Locker Music Service") subject to Subpart C, and a music subscription service ("Google Play Subscription Service") subject to Subpart B that integrates with the online storage service and the music store.[49]

29. The Google Play Music Store is a music store from which users can purchase music content. The purchased content can be placed in the user's Google Play Locker Music.[50] A music store was first added to Google's Android Market on November 16, 2011.[51]

30. The Google Play Music locker service provides users with access to store music and associated data files, as well as software applications and related services that allow users to update, manage, access, and play the user's stored music, including songs the user purchases from the Google Play Store.[52] Specifically, the service offers a digital locker that scans and matches users' music collections up to 50,000 songs, with songs purchased from the Google Play Store excluded from the storage limit, and allows users to stream them to their Android devices or computers in the U.S. for free.[53]

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[49] [redacted] The "Google Locker Music Service" used to be referred to as "Google Play Music Library."

[50] [redacted]

[51] "Google Music Is Open for Business," Google Official Blog, November 16, 2011.

[52] "Google Play Terms of Service," Google, July 27, 2016; GOOG-PHONOIII-00000090. Purchased Music Locker makes available digital downloads, cache copies, and interactive streams of purchased files via single server copies to users who have purchased such files via the Google Play Music Store.

[53] "Google Play" Google+, December 18, 2012; "Comparing Music Storage Services from Apple, Amazon, Google," CNET, March 10, 2015.

31. Google Play Music subscription service provides interactive streams and conditional downloads.[54] Google launched its new subscription on-demand interactive streaming music service, called Google Play Music All Access, on May 15, 2013.[55] The service was later rebranded Google Play Music.

32. The current Google Play Music service offers both a free service and subscription plan to its users. Its free service enables users to upload up to 50,000 songs to personal cloud libraries and the ability to stream customized radio stations on an ad-supported basis.[56] Free users may also listen to "Upsell Plays" that provide interactive streams to non-subscribers for the purpose of upselling such users to Google's subscription-based service or purchase opportunities.[57] Google Play Music's subscription tier allows subscribers to stream 35 million commercially-available songs on-demand, access offline playback, and access YouTube Red, which is YouTube's ad-free subscription service.[58] The Google Play Music subscription plan is available to users for $9.99 a month. The platform is available through Apple and Android apps as well as web browsers.[59]

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[54] [redacted] Conditional Download means a digital transmission of a digital file available to users for off-line playback on an authorized device for up to thirty-one (31) consecutive days.

[55] "Google Unveils Streaming Music Subscription Service," Mashable, May 15, 2013; "Google Launches 'Google Play Music All 'Access' On-Demand $9.99 a Month Subscription Service," TechCrunch, May 15, 2013.

[56] "Apple Music, Spotify and a Guide to Music Streaming Services," The New York Times, April 5, 2016.

[57] [redacted]

[58] "Apple Music vs. Spotify vs. Google Play Music," Android Authority, July 20, 2016; "Apple Music, Spotify and a Guide to Music Streaming Services," The New York Times, April 5, 2016.

[59] "Apple Music, Spotify and a Guide to Music Streaming Services," The New York Times, April 5, 2016.

2. Amazon Prime Music

33. Amazon Prime Music is available with a $99 annual Amazon Prime subscription.[60] The service launched in June 2014.[61] Amazon Prime Music gives users access to a catalog of more than 1 million songs. The ad-free service enables users to access on-demand music as well as customizable radio stations and playlists. Additionally, mobile users can save songs to their devices for offline listening. Amazon Prime is available through Apple, Android, Windows, BlackBerry, and Roku apps.[62] In October 2016, Amazon launched an on-demand music streaming service called Amazon Music Unlimited. The subscription service is priced at $9.99 per month, with Amazon Prime and Echo users paying a respective $7.99 and $3.99 per month. Amazon Music Unlimited provides access to a larger catalog of music compared to the Amazon Prime Music service, with access to tens of millions of tracks.[63] Further, Amazon Music Unlimited also provides its subscribers access to curated music playlists and personalized stations.[64]

2. Apple Music

34. Apple Music launched in 2015.[65] Apple Music provides a free service and a paid subscription plan with access to more than 30 million songs. Apple's free service provides users with access to Beats 1, which is an internet radio station. Its subscription service is available for $9.99 a month or $14.99 for a family account. Paying subscribers are able to play songs on

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[60] "Apple Music, Spotify and a Guide to Music Streaming Services," The New York Times, April 5, 2016.

[61] "Amazon Launches Streaming Music Service for Prime Members," The Verge, June 12, 2014.

[62] "Apple Music, Spotify and a Guide to Music Streaming Services," The New York Times, April 5, 2016.

[63] "Now Streaming: Amazon Music Unlimited," Amazon, October 12, 2016; "Amazon Pairs Its Speaker With Streaming Music, at a Bargain Price," The New York Times, October 12, 2016.

[64] "Now Streaming: Amazon Music Unlimited," Amazon, October 12, 2016.

[65] "Apple Music vs. Spotify vs. Google Play Music," Android Authority, July 20, 2016.

demand and use offline playback.[66] Apple Music has 15 million paid subscribers.[67] Apple Music is available through Apple and Android mobile devices as well as Mac and Windows desktop applications.[68]

3. Pandora

35. Pandora provides a free ad-supported, non-interactive streaming service as well as an ad-free version called Pandora One for $4.99 per month.[69] Pandora, which launched its radio service in 2004, has approximately 78 million users of which 4 million are paying subscribers.[70] In 2016, Pandora expects to launch an on-demand music service.[71]

4. Spotify

36. Spotify has more than 100 million users, including 30 million paying subscribers as of July 2016.[72] Spotify offers both a free and paid subscription service enabling users to access its catalog of more than 30 million songs. Spotify's advertising-based free service option enables users to play songs on demand through its desktop version and playlists on its mobile version.[73] Spotify's $9.99 monthly subscription plan allows users to play songs on demand, download music directly, use playback offline, and listen to music without advertisements.[74] Its service is

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[66] "Apple Music, Spotify and a Guide to Music Streaming Services," The New York Times, April 5, 2016.

[67] "Spotify Has 100 Million Users But Apple Music Remains a Threat," Macworld, June 20, 2016.

[68] "Apple Music, Spotify and a Guide to Music Streaming Services," The New York Times, April 5, 2016.

[69] "Apple Music, Spotify and a Guide to Music Streaming Services," The New York Times, April 5, 2016.

[70] Pandora Media, Inc. 10-Q, 2016 Quarterly Report, October 27, 2016.

[71] "Pandora's New Strategy: It's Going On-Demand," Media Life Magazine, August 23, 2016; "Amazon and Pandora to Gauge Music's Value in the Internet Age," The New York Times, September 11, 2016.

[72] "Spotify Wants to Go Public Despite a History of Losses," Fortune, July 20, 2016.

[73] "Apple Music, Spotify and a Guide to Music Streaming Services," The New York Times, April 5, 2016.

[74] "Spotify," TechCrunch, September 20, 2016; "Go Premium," Spotify, September 20, 2016.

available through Apple and Windows mobile and desktop computer applications, Android phones, PlayStation, Roku, and web browsers.[75]

IV. OVERVIEW OF THE SECTION 801(b)(1) FACTORS USED TO DETERMINE THE RATES AND TERMS FOR THE SECTION 115 COMPULSORY LICENSE

37. As previously discussed, the statutory rates for the Section 115 compulsory license are established under a standard set forth in Section 801, which I understand requires the CRB to weigh several policy objectives (i.e., the Section 801(b)(1) factors). To determine the appropriate rates and terms for the Section 115 compulsory license in this matter, I first identify market-based benchmarks for the Section 115 rates — these benchmarks are derived from economic evidence including, for example, the current Section 385 Subpart A royalty rates for PDDs, the recent proposed settlement pertaining to future Subpart A rates, and the terms of Google's and other music service providers' agreements involving licenses to mechanical rights in musical works for digital interactive music streaming services. Then, I analyze additional economic evidence pertaining to each of the four 801(b)(1) factors to determine if the market-based benchmarks should be adjusted to reflect the policy objectives and economic considerations under each of these factors.

V. BENCHMARK ANALYSIS FOR THE RATES AND TERMS FOR THE SECTION 115 COMPULSORY LICENSE

A. Continuation of the Current Rates in Section 385, Subpart A – Physical Phonorecord Deliveries, Permanent Digital Downloads, and Ringtones

38. The Copyright Royalty Judges ruled on November 24, 2008 that the statutory rates payable under a Section 115 compulsory license for musical works in physical phonorecords and

[75] "Apple Music, Spotify and a Guide to Music Streaming Services," The New York Times, April 5, 2016.

PDDs would be the greater of $0.091 or $0.0175 per minute of playing time for the period until successor rates and terms become effective.[76] The rate for ringtones was set at $0.24 per download.[77] These are the rates that licensees had been paying under a Section 115 compulsory license for physical phonorecord deliveries, PDDs, and ringtones since 2006.[78]

39. On November 13, 2013, the Copyright Royalty Judges issued the final regulations that set the rates and terms for a Section 115 compulsory license, including the rates and terms for services covered under Section 385, Subpart A, which would become effective January 1, 2014. The rates for physical phonorecords and PDDs were kept the same at the greater of $0.091 or $0.0175 per minute of playing time; the rates for ringtones were also kept the same at $0.24 per download.[79]

40. On June 15, 2016, the Copyright Royalty Judges received a motion stating that the participants listed below had reached a partial settlement regarding the rates for services covered

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[76] Final Determination of the Rates and Terms, Mechanical and Digital Phonorecord Delivery Rate Determination Proceeding, Docket No. 2006-3 CRB DPRA (November 24, 2008), p. 1. For the effective dates of these rates, see U.S.C. § 803(d)(2)(b): "In other cases where rates and terms do not expire on a specified date, successor rates and terms shall take effect on the first day of the second month that begins after the publication of the determination of the Copyright Royalty Judges in the Federal Register, except as otherwise provided in this title, or by the Copyright Royalty Judges, or as agreed by the participants in a proceeding that would be bound by the rates and terms. Except as otherwise provided in this title, the rates and terms, to the extent applicable, shall remain in effect until such successor rates and terms become effective."

[77] Final Determination of the Rates and Terms, Mechanical and Digital Phonorecord Delivery Rate Determination Proceeding, Docket No. 2006-3 CRB DPRA (November 24, 2008), p. 1.

[78] Final Determination of the Rates and Terms, Mechanical and Digital Phonorecord Delivery Rate Determination Proceeding, Docket No. 2006-3 CRB DPRA (November 24, 2008), p. 17.

[79] See 37 CFR Part 385, *Adjustment of Determination of Compulsory License Rates for Mechanical and Digital Phonorecords*, Federal Register 67938 Vol. 78 No. 219, November 13, 2013. No changes were made to Section 385, Subpart A.

under Section 385, Subpart A for the period from 2018 to 2022, and seeking approval of that partial settlement.[80]

- Copyright Owners
  - Church Music
  - NSAI
  - NMPA
  - Harry Fox
  - SONA
- Licensees
  - Universal Music Group
  - Warner Music Group

41. The settlement proposes "that the royalty rates and terms presently set forth in 37 C.F.R. Part 385 Subpart A should be continued for the rate period at issue in the proceeding."[81] A2IM, an independent label group (though not a participant in the proceeding), submitted a comment to the CRB in support of the partial settlement on August 24, 2016.[82] On October 28, 2016, Sony Music Entertainment and Copyright Owners NMPA and NSAI filed a joint motion to adopt the terms of the proposed settlement with Universal Music Group and Warner Music Group on an industrywide basis.[83]

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[80] 37 CFR Part 385, *Determination of Rates and Terms for Making and Distributing Phonorecords* (Phonorecords III), Docket No. 16-CRB-0003-PR (2018-2022), Federal Register 48371 Vol. 81 No. 142, July 25, 2016.

[81] 37 CFR Part 385, *Determination of Rates and Terms for Making and Distributing Phonorecords* (Phonorecords III), Docket No. 16-CRB-0003-PR (2018-2022), Federal Register 48371 Vol. 81 No. 142, July 25, 2016.

[82] Comments of A2IM in Support of Proposed Settlement, *Determination of Royalty Rates and Terms for Making and Distributing Phonorecords (Phonorecords III),* Docket No. 16-CRB-0003-PR (2018-2022), August 24, 2016.

[83] See Mot. Adopt Settlement Industry-Wide, filed Oct. 28 2016 (joint mention of the NMPA, NSAI, and SME; "The Parties have agreed that the royalty rates and terms provided in the UMG/WMG Settlement should be applied industry-wide to all licensees under Section 115. The UMG/WMG Settlement calls for continuation of the rates and terms presently set forth in 37 C.F.R. Part 385 Subpart A . . . .").

42. In summary, from 2006 to the present, and likely through 2022, the royalty rates paid under the Section 115 compulsory license for Section 385 Subpart A have remained, and will remain, constant. Specifically, for physical phonorecords and PDDs the rates have remained constant at the greater of $0.091 or $0.0175 per minute of playing time per download. During this same time period, the weighted average price per digital download — based on the price per download for singles and the price per song for albums — has steadily increased. In Amended Exhibit 7, I present the weighted average price per download from 2006 to 2015, which has increased from $0.99 per download in 2006 to $1.10 per download in 2015, an increase of approximately 11%. Using recently-produced granular track purchase and track length data from the Google Play Music store, which spans from November 2011 through October 2016, I have calculated Google's effective Subpart A royalty rate. Specifically, using these data, I calculated the effective Section 385, Subpart A royalty rate to be (1) the number of tracks less than or equal to five minutes multiplied by 9.1 cents, added to (2) for each bucket of rounded up minutes (e.g., 6 minutes, 7 minutes, etc.) the number of tracks in the particular bucket multiplied by the appropriate royalty (i.e., 1.75 cents per minute), all divided by (3) the total number of tracks. This results in an effective Subpart A royalty rate for Google of $0.095.[84] Comparing Google's effective Subpart A royalty rate to the weighted average price per download shows that the

[84] I note that this calculation is conservative because I have chosen to include in my calculation the Subpart A royalties for songs [redacted] present in the Google data [redacted]. These [redacted]s result in mechanical royalty calculations comparing, for example, a [redacted] mechanical royalty (i.e., [redacted]) to a $0.99 or $1.10 average retail price of a track. See, e.g., the tracks available for sale on Google Play at the following URLs: https://play.google.com/store/music/album?id=Bcwdezlqkdjya2d7c7c2lmvzx4m&tid=song-Ta2becqbmhb7ewa4anhn3u6o25m (a Tamil album with a play length of over 9 hours and track lengths as high as an hour); and https://play.google.com/store/music/album?id=B3utsvb76qjzjsl3kz53627vmru&tid=song-Tvferjegfimfdikjichiucyrbkq (a religious track with a length of 49 minutes selling for $1.29). Also, I have not removed from the calculation songs for which no royalty would be owed, such as recordings of non-musical works or of works in the public domain. The inclusion of such songs is another reason that my calculations of an implied rate based on available Subpart A data will be conservatively high. I reserve the right to update my calculations if additional data are produced that relate to this point.

Subpart A effective royalty rate as a percentage of the weighted average price per download has actually decreased from 9.6% in 2006 to 8.7% in 2015.

43. Using the royalties paid in connection with PDDs as a benchmark is conservative because the contribution of the service relative to that of the copyright owner is larger in the case of interactive streaming than in the case of PDDs.

44. After adjusting for the fact that deductions of up to 15% of revenue would be permitted under Google's proposed service revenue definitions for Subpart B (and assuming hypothetically that this would also be the case for sellers of PDDs under Subpart A, who pay download store commissions of 30%), the 2006 percentage of revenue after deductions would be 11.3%. This is similar to the current 10.5% Subpart B rate, which accounts for all necessary publishing rights. Using the 2015 weighted average price per PDD of $1.10, and adjusting for the fact that deductions of up to 15% of revenue would be permitted under Google's proposed service revenue definitions for Subpart B, the corresponding 2015 effective Subpart A percentage of revenue royalty rate is 10.2%.

45. Furthermore, there is some evidence that interactive streaming may supplant download sales,[85] which suggests there should be consistency between the effective percentage of revenue reflected in the Subpart A rate and the Subpart B rate. As also demonstrated above, the

[85] See, e.g., the decision of the Second Circuit in *Arista Records, LLC v. Launch Media, Inc.*, 578 F.3d 138 (2nd Cir. 2009). In that case, the Court explained, "[i]f the user has sufficient control over the interactive service such that she can predict the songs she will hear, much as she would if she owned the music herself and could play each song at will, she would have no need to purchase the music she wishes to hear. *Launch Media*, 578 F.3d at 161. I also understand that the copyright owners in this proceeding have consistently made the argument that on-demand streaming substitutes for download sales, and that this understanding explains the industry's prior Section 115 settlements' licensing of on-demand streaming services and exemption of non-interactive services. See also *Digital Performance Right in Sound Recordings Act of 1995, House of Representatives* No. 104- 274, at 14 (1995) ("Of all the new forms of digital transmission services, interactive services are most likely to have a significant impact on traditional record sales, and therefore pose the greatest threat to the livelihoods of those whose income depends upon revenues derived from traditional record sales.").

percentage of revenue rate derived from the effective Subpart A rate of $0.095 per download, has declined over time as the price per download has consistently increased (i.e., from 11.3% in 2006 to 10.2% in 2015, adjusted for the proposed 15% of revenue cost deduction). This economic evidence supports a corresponding decrease in the current Subpart B percentage-of-revenue rate.

46. I have also compared the effective Subpart A rate of $0.095 per download paid to publishers for musical works rights under Section 385, Subpart A to the royalties paid to record companies for sound recording rights on the same sale of a PDD. [redacted] Additionally, according to several sources, Apple also pays royalties to record labels equal to 70% of the retail price for sales of digital downloads through the iTunes Music Store.[87] I understand that the royalties paid by both Google and Apple to record companies are inclusive of the $0.095 per download effective royalty owed to music publishers, and that the record companies pass through the $0.095 payment to the music publishers. As discussed above, the weighted average retail price per digital download has increased from $0.99 in 2006 to $1.10 in 2015; which means that the royalties that companies such as Apple [redacted] have been paying to record labels for sales of PDDs based on the 70% royalty rate have been increasing over time. As a result, the ratio of musical works-to-sound recordings royalties on sales of PDDs covered under Section 385, Subpart A has decreased from approximately 15.8% to 14.2% from 2006 to 2015. These ratios are lower than the current ratios of musical works-to-sound recordings royalties contained in

[86] [redacted]

Section 385, Subparts B and C (e.g., musical works royalties are between 17.36% and 21% of the service payment to record companies for sound recordings for Standalone Portable Subscription, Mixed Use services covered under Subpart B). This analysis supports a reduction in the current Section 385, Subparts B and C minimum payments based on percentages of service payments paid for sound recording rights to bring them in line with the implied Subpart A musical works-to-sound recordings percentages.[88]

B. Existing Agreements Involving Licenses to Mechanical Rights in Musical Works for Digital Interactive Music Streaming Services

47. In general, in the absence of any constraints, the outcome of an arm's-length negotiation between unrelated parties represents a "fair" outcome for both parties as contemplated under Section 801(b)(1)(B). Additionally, it may also represent an outcome that appropriately divides the value created by the combination of the two parties' assets as contemplated under Section 801(b)(1)(C). Therefore, existing licenses negotiated in the open market can potentially be used to form a benchmark for setting rates for the Section 115 compulsory license that provide both a "fair" return to the copyright owner and leave the copyright user with a "fair" income, while also properly reflecting the relative contributions of the copyright owner and the copyright user in the product made available to the public.

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[87] "The New Economics of the Music Industry," Rolling Stone, October 25, 2011; "More Artists Steer Clear of iTunes," The Wall Street Journal, August 28, 2008. For further support for the 70% of the sales price figure, see Testimony of David B. Pakman, November 1, 2016, FN 6.

[88] The 13.5% of label payments proposed by Google is close to the 14.2% figure calculated here. Additionally, the 14.2% number represents the latest in a downward trend. The number is subject to change—likely downward—if I obtain industry wide data and data on additional time frames. For example, the average retail price (and the corresponding [redacted] wholesale price paid to record labels) of a track download has trended upward while we know that the Copyright Owners have agreed to fix the Subpart A royalty rate at current levels through the end of the license period at issue here. Also, as noted above, the 14.2% calculation is necessarily conservative given the inclusion of a number of songs with very large track lengths, and songs for which no royalty would be owed, in the data contained in GOOG-PHONOIII-00003910.

48. Only existing licenses that are "comparable" to the Section 115 compulsory license should be used in a benchmark analysis. In the context of intellectual property licensing, an existing agreement is a valid comparable for a prospective license if the economic conditions that surrounded the agreement are similar to the economic conditions surrounding the prospective license. Such conditions include the economic positions of the parties (including, e.g., the products or services sold by the licensee) and the rights being licensed. In the event that there are differences in economic conditions between a potential comparable agreement and the prospective license being assessed, it may be possible to make adjustments to account for those differences.

49. Comparable licenses are commonly used in analysis by financial economists as benchmarks for the valuation of companies and their assets, including intellectual property.[89] Comparable licenses are also commonly used by damages experts in intellectual property litigation to determine the "reasonable royalty" that would have resulted from a hypothetical licensing negotiation between the patent owner and the alleged infringer.[90] When evaluating licenses as potential benchmarks, it is important to consider the circumstances surrounding the negotiation of the licenses.

50. I have reviewed a number of existing agreements produced by the parties in this matter, including agreements involving licenses to various rights in musical works and sound recordings.

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[89] See, e.g., Robert F. Reilly and Robert P. Schweihs, The Handbook of Business Valuation and Intellectual Property Analysis, Chapter 23: Research Techniques for an Intellectual Property Economic Analysis, 2004, pp. 615-616. ("The identification of comparative sale/license transactions should reflect the industry and economic environment in which the subject intellectual property operates." See also Aswath Damodaran, Damodaran on Valuation, Security Analysis for Investment and Corporate Finance, 2006, p. 238-254.

[90] See, e.g., Christine Meyer and Bryan Ray, "A Critique of Noneconomic Methods of Reasonable Royalties," Economic Approaches to Intellectual Property, pp. 90-93. See also *VirnetX, Inc. v. Cisco Systems, Inc.*, September 16, 2014.

A summary of these agreements is provided in Exhibits 1a-1j. In the following sections, I focus my discussion and analysis on the agreements that include, among other things, licenses covering mechanical rights in musical works for digital interactive music streaming services, and address their relevance in terms of establishing a benchmark for the rates for the Section 115 compulsory license. A detailed summary of my review of these agreements (and their related amendments) is provided in Exhibits 2a-2h.

1. Google's Publishing Agreements Involving Licenses for Mechanical Rights in Musical Works for Digital Interactive Music Streaming Services

51. Google has entered into publishing agreements that include a license for mechanical rights in musical works covering its digital interactive music streaming services subject to the Section 115 compulsory license. These Google licenses cover Google Play Subscription Services, Google Locker Music Services, or YouTube.

52. I have compared the terms of the Google mechanical rights licenses with those of the current Section 115 statutory license, with a focus on the actual rights being licensed under the Google licenses, the services covered under these licenses, and the corresponding royalty calculation terms of these licenses as compared to the royalty calculation methodologies currently presented in Subparts B and C of Section 385. In general, the terms outlined in the Google publisher agreements are consistent with the Section 385 terms with several exceptions, which I address in the following sections.

a. Google Play Subscription Services Licenses

53. I have reviewed a number of Google licenses with music publishers covering mechanical rights in musical works, [redacted]

I note that these Google licenses cover of mechanical rights for the Google Play Subscription Service, and that for Google the Section 115 compulsory license is only necessary to obtain mechanical rights for the small remaining portion of the service.[92] The most notable difference between these Google direct licenses with music publishers covering Google Play Subscription Services and the Section 115 statutory mechanical license is that the Google licenses are "all-in" licenses. In other words, the licenses granted to Google by the music publishers convey both mechanical and public performance rights. I understand that such all-in licenses are consistent with the fact that, historically, the 10.5% of service revenue "starting point" for the Section 385, Subpart B royalty calculation has been viewed by music service providers (and music publishers)[93] as a rate that covers the costs of all publishing rights associated with Subpart B activities.[94]

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[91] See Exhibit 2a. I understand that Google has entered into this form license with a number of licensors. I note that the terms of this agreement pertaining to the Google Play Subscription Service are generally consistent with those of Google's agreements with other music publishers.

[92] I understand that Google's direct publisher licenses cover of the total number of compositions in the Google Play Catalog. See Written Direct Testimony of Paul Joyce, November 1, 2016, ¶ 22.

[93] See Trial Tr. 1255:15–23, Pandora Media, Inc. v. Am. Soc'y of Composers, Authors & Publishers, No. 12-cv-8035 (S.D.N.Y. 2014)(testimony of then-UMPG chairman/CEO Zach Horowitz) ("THE COURT: So are you talking about ASCAP's public performance fee for an on-demand service? [Zach Horowitz]: In my mind I blur it, I merge it. It doesn't make any difference to me how Spotify's income to the publishers are designated. It doesn't matter to me if they're called digital royalties or performance royalties. It's a service that offers value to

54. In terms of the actual royalty calculation methodology presented in Google's direct licenses with music publishers covering mechanical and public performance rights in musical works pertaining to Google Play Subscription Services, [redacted] However, the royalty calculation methodology in Google's direct licenses with music publishers has several differences [redacted] including:

- [redacted]
- [redacted]
- [redacted]

As a result, the royalty calculation methodology in Google's direct licenses with music publishers conveying all necessary publishing rights for the Google Play Music subscription service is effectively simplified to [redacted]

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the consumers and a certain amount of money is paid to the publishers as a result. And so I looked at it in a holistic way in terms of the total amounts paid.")

[94] Testimony of David B. Pakman, November 1, 2016, ¶ 21; Written Direct Testimony of Zahavah Levine, November 1, 2016, ¶¶ 35, 40-41.

[95] [redacted]

[96] Note that this last difference is not included in all of the relevant Google license agreements pertaining to Google Play Subscription Services.

[97] [redacted]

55. I note that although these Google Play Subscription Services licenses are voluntary licenses, the negotiations leading to the agreements may have been influenced by the existence of the Section 115 compulsory license. Specifically, neither the licensor nor the licensee has any incentive to agree to terms different from those in the Section 115 compulsory license (because, in the absence of an agreement, they could each fall back on the statutory license) unless it was made better off by doing so. The economic evidence suggests that the influence of the Section 115 compulsory license was favorable to the copyright owners (i.e., compared to if there was no Section 115 compulsory license to fall back upon). First, as discussed below, the services have not been profitable at the current statutory rates, a factor likely to result in lower negotiated rates absent any influence from the Section 115 compulsory license. Second, Google's Zahavah Levine described [redacted] that is, it has been the copyright owners, not Google, that have used the Section 115 compulsory license as leverage in the negotiations. Third, as discussed above, the effective percentage royalty rate for musical works rights for digital downloads under Subpart A has decreased over time, whereas the royalty rate for musical works rights under Subpart B has remained constant over time.

56. The Google Play Subscription Services licenses confirm that Google and the publishers intended for there to be a fixed all-in rate that Google would pay to publishers for whatever rights were necessary, so that any fluctuations in the public performance rights marketplace would not result in any change to Google's total payments to publishers. This makes economic sense. To the extent streaming requires both mechanical and public performance rights, they are complementary rights, with one having little or no value absent the other. This creates a "Cournot complements" problem, whereby independent sellers of complementary products may

each price inefficiently high because each does not take into account the negative externality on the other of increasing its price. When the Cournot complements problem exists, joint selling of a package consisting of the complementary products leads to a lower overall price, greater output, and increased economic efficiency. The analogous action here is to sell a package of the mechanical and public performance rights for an all-in rate. If the sum of the rates for separately negotiated mechanical and public performance rights was greater than the all-in rate, that would represent a relatively inefficient outcome. Thus, it makes sense to limit the total payments to the publisher to the all-in rate and eliminate the mechanical-only floor fees.

b. Google Locker Music Services Licenses

57. I have reviewed a number of Google licenses with music publishers covering mechanical rights in musical works, [redacted] Like the subscription agreements discussed in the previous section, these Google licenses cover the vast majority of mechanical rights for the Google Locker Music Service. Additionally, as with the subscription agreements, the most notable difference between Google's direct licenses with music publishers covering Google's Locker Music Services and the Section 115 statutory mechanical license is that the Google licenses are "all-in" licenses. In other words, the licenses granted to Google by the music publishers convey

[98] See Exhibit 2a. [redacted]

all necessary publishing rights. I understand that such all-in licenses are consistent with the fact that, historically, the 12% of service revenue "starting point" for the Section 385, Subpart C royalty calculation for locker services has been viewed by music service providers (and music publishers) as a rate that covers the costs of all publishing rights associated with Subpart C activities.[99]

58. In terms of the actual royalty calculation methodology presented in Google's direct licenses with music publishers covering mechanical and public performance rights in musical works pertaining to Google Locker Music Services, [redacted]

As a result, the royalty calculation methodology in Google's direct licenses with music publishers conveying all necessary publishing rights for the Google Locker Music Services is effectively simplified to [redacted] Because Google's music locker service is offered free to the consumer (i.e., there is no service revenue), this reduces [redacted]. Google incurs the cost of operating this service in part because it funnels users towards Google's revenue

[99] Testimony of David B. Pakman, November 1, 2016, ¶ 21; Written Direct Testimony of Zahavah Levine, November 1, 2016, ¶¶ 35, 40-41.

[100] [redacted]

generating music services (e.g., the Google Play Store and the Google Play subscription service).[101]

59. As discussed in the previous section, any influence of the Section 115 compulsory license on these negotiated agreements was likely in favor of the copyright owners. Moreover, again the agreements demonstrate the intention of the parties that Google's publishing payments would be [redacted] and would not increase due to fluctuations in the public performance rights marketplace.

c. YouTube Licenses

60. The most notable difference between Google's direct licenses with music publishers covering YouTube and the Section 115 statutory license is that the YouTube licenses are designed primarily to cover audiovisual works, which makes these licenses less relevant as benchmarks for purposes of the current analysis. Unlike the Section 115 statutory license or the Google Play Subscription Services and Google Locker Music Services agreements discussed above, these licenses also include additional types of rights, including synchronization rights and the rights covering derivative works.

61. In terms of the actual royalty calculation methodology presented in YouTube's direct licenses with music publishers pertaining to audio-only tracks [redacted]

[101] See Written Direct Testimony of Paul Joyce, November 1, 2016, ¶ 8.

[102] [redacted]

[redacted][103]

2. Other Music Service Providers' Agreements Involving Licenses to Mechanical Rights in Musical Works for Digital Interactive Music Streaming Services

62. I have also reviewed agreements from other music service providers that include a license for mechanical rights in musical works for their digital interactive music streaming services. I have compared the terms of these mechanical rights licenses with those of the Section 115 statutory license; with a focus on the actual rights being licensed under these licenses, the services covered under these licenses, and the corresponding royalty calculation terms of these licenses as compared to the royalty calculation methodologies currently presented in Subparts B and C of Section 385. In the following sections, I focus on the notable differences between the terms of these music service providers' licenses and Section 385.

a. Amazon Agreements

63. I have reviewed several Amazon agreements that license mechanical rights for musical works.[104] The rights licensed cover Amazon Prime Music.[105] The ad-free service is part of an

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[103] [redacted]

[104] See Exhibit 2c. One of these licenses—the Amazon Digital Services LLC Music Publishing Rights Agreement, AMZN00000147—does not identify a specific music publisher as the licensor. However, I understand that Amazon has entered into this form license with a number of licensees. [redacted]

[105] Prior to June 12, 2014, Amazon's music service was called Amazon Cloud Player. See "Amazon Launches Music Service, Adds Another Element to Prime," Mashable, June 12, 2014; "Amazon Launches Smartphone Music Streaming in U.S.," Computerworld, March 29, 2011.

annual Amazon Prime subscription,[106] and enables users to access on-demand music as well as customizable radio stations and playlists. Additionally, mobile users can save songs to their devices for offline listening.[107]

64. [redacted] I note that Amazon

[106] "Apple Music, Spotify and a Guide to Music Streaming Services," The New York Times, April 5, 2016.

[107] "Apple Music, Spotify and a Guide to Music Streaming Services," The New York Times, April 5, 2016.

[108] [redacted]

[109] [redacted]

would have had no economic incentive to negotiate how the publisher allocates its revenues among mechanical and public performance royalties.

65. [redacted]

b. Loudr Agreement

66. I have reviewed an agreement that licenses mechanical rights in musical works covering Loudr Store, a music provider owned by re:Discover, Inc.[112] Loudr Store is a segment of Loudr,[113] and enables consumers to preview, purchase, download, stream, and share store content.[114] [redacted]

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[110] [redacted]

[111] [redacted]

[112] See Exhibit 2g.

[113] Loudr is a platform that specializes in the licensing and distribution of cover songs. See "Distribution Features," Loudr, April 9, 2014.

[114] "Terms of Use," Loudr, March 30, 2015.

[115] [redacted]

c. Pandora Agreements

67. I have reviewed several Pandora License Agreements [redacted]

d. Microsoft Agreement

68. I have reviewed two Microsoft agreements that license mechanical rights in musical works.[119] [redacted]

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[116] See Exhibit 2f.

[117] [redacted]

[118] [redacted]

[119] See Exhibit 2e.

[120] [redacted] Microsoft has since rebranded this music service to Groove Music on July 6, 2015. See "Updates to Entertainment in Windows 10," Microsoft, July 6, 2015.

[121] "What is the Microsoft Groove Music app?," Microsoft, August 18, 2016.

e. Spotify Agreements

69. I have reviewed several Spotify agreements

f. Apple Agreements

70.

[122] Additionally, this agreement specifies a minimum payment guarantee of $450,000.

[123] See Exhibit 2h.

[124]

[125] See Exhibit 2d.

[126]

71.

[127]

[128]

[129]

[130]

72.

[131]

[132]

[133]

C. Results of the Benchmark Analysis for the Rates and Terms for the Section 115 Compulsory License

1. Benchmark All-In Topline Royalty Rate

73. I have reached the following conclusions regarding the appropriate all-in topline rate for the service offering categories under Section 385, Subparts B and C suggested by the available benchmarks:

- The economically appropriate all-in topline royalty rate for a Section 115 license, accounting for musical work public performance royalties, for all of the service offering categories under Section 385, Subpart B suggested by the available benchmarks ranges from 10.2% to 11.3%.
  - The lower end of this range, 10.2%, is based on a comparison of Google's effective Section 385, Subpart A royalty rate of $0.095 per PDD to the most current (2015) average retail price of a PDD of $1.10, adjusted to reflect Google's proposed deductions of up to 15% of revenue. As discussed above, given the relationship between PDDs and streams and the, if anything, greater relative contribution of the services in the case of streams, the effective percentage of revenue rate derived from the $0.095 per stream Subpart A rate should be consistent with the Subpart B percentage of service revenue rate.
  - The upper end of this range, 11.3%, is based on a comparison of the effective Section 385, Subpart A royalty rate of $0.095 per PDD to the historical (2006) average retail price of a PDD of $0.99, adjusted to reflect that deductions of up to 15% of revenue are permitted under Google's proposed service revenue definitions.
  - Google's proposal for the all-in topline royalty rate of 10.5% is within this range.
  - Google's and other music service providers' voluntary licenses provide an upper bound on the payments that should be set in this proceeding. Moreover, in terms of its structure, Google's proposal is consistent with these agreements.
    - Google's voluntary licenses with music publishers for its Google Play Subscription Service — classified in the Standalone Portable Subscriptions, Mixed Use service offering category for Section 385, Subpart B — involve parties, services of the licensee, and rights licensed that are similar to those of the Section 115 license.
    - Pandora's voluntary licenses [redacted]

[redacted]

- Spotify's voluntary licenses with music publishers for its free and paid subscription interactive streaming services involve parties, services of the licensee, and rights licensed that are similar to those of the Section 115 license.
- Google's voluntary licenses with music publishers covering YouTube are less comparable to the Section 115 license that I am addressing in this proceeding because they are designed to primarily cover audiovisual works and not the interactive streaming and limited download services covered under the Section 115 license; and they include a license to additional types of rights, including synchronization rights and the rights covering derivative works, which are not subject to the Section 115 license.
- Microsoft's voluntary [redacted]
- Apple's voluntary licenses [redacted]
- Finally, Amazon's more recent voluntary licenses [redacted]

- The economically appropriate all-in topline royalty rate for a Section 115 license, accounting for musical work public performance royalties, for all of the service offering categories under Section 385, Subpart C suggested by the available benchmarks ranges from 10.2% to 11.3%.
  - The upper and lower ends of this range are based on the same Subpart A benchmark analysis described above for Subpart B. Given this range, Google's proposal to retain the current all-in rates of up to 12% is conservatively high.
  - Google's and other music service providers' voluntary licenses and the Phonorecords II settlement support the rate structure proposed by Google.
    - Google's voluntary licenses with music publishers for its Google Locker Music Service — classified in the Purchased Content Locker service offering category for Section 385, Subpart B — involve parties, services of the licensee, and rights licensed similar to those of the Section 115 license.
    - Pandora's voluntary licenses [redacted]

- Amazon's historical voluntary licenses

74. Other conclusions can be drawn from the voluntary agreements. The parties to these agreements therefore have a revealed preference for royalties based on a percentage of revenue. A percentage of revenue structure has a number of advantages over, for example, a per-stream royalty structure. For example, the same revenue percentage can be applied to a wide variety of plans, under the reasonable assumption that the relative contributions of the musical work and the service are roughly constant across plans, with the subscription fees varying with the willingness to pay ("WTP") of consumers who choose the plans.[134] In contrast, using the same per-stream royalty for different plans assumes that the absolute contribution of the plan is constant, across all plans and consumer WTP. In addition, as discussed in more detail below, the percentage of revenue structure likely encourages more musical consumption than a per-stream structure because the latter penalizes consumption.

[134] A structure based on a percentage of an appropriate measure of profits would be theoretically preferable to a structure based on percentage of revenues, but measurement and verification of profits is difficult. For this reason, revenues, rather than profits, form the royalty base in virtually all of the intellectual property licenses I have reviewed over the course of my career that specify a percentage royalty rate.

75. For Purchased Content Lockers that are free-to-the-user, like Google's, the license fee under the existing agreements is equal to [redacted] Establishing the rate structure proposed by Google would not foreclose Google and other services from negotiating corresponding alternative rate structures in voluntary licenses where appropriate.

76. Another implication of the voluntary agreements, and in particular, the widespread adoption of an all-in rate that covers both mechanical and performance rights, is that the parties view these two rights as a single bundle to be licensed at the same time. Indeed, in the context of streaming, there is no apparent economic reason why a service would seek a license to either the mechanical right, but not the performance right, or vice-versa. A service is only concerned with securing whatever rights in musical works are necessary for streaming.

77. The definition of service revenue in the agreements and in the current Section 115 compulsory license allows for the deduction of expenses required to obtain such revenue up to a maximum of 15% of revenue, in some cases.[135] The business rationale for defining the "royalty base" in this way is that such costs should be shared between the licensor and licensee because they pay for activities that expand the subscriber base to the benefit of both parties. However, there are other costs, such as credit card processing fees, that play a similar role in expanding the subscriber base, but are not considered to be allowable deductions from revenue under the existing Section 115 compulsory license. Given, as discussed above, that the existing statutory

[135] See 37 C.F.R. §§ 385.11 and 385.21 for the definition of "service revenue" and "Subpart C service revenue," including allowable deductions.

rates weigh somewhat to the favor of copyright owners, I conclude that Google's proposal to allow costs such as credit card processing fees to be deducted from revenue (subject to the same 15% maximum) is a reasonable way to address this concern. In the case of Google, this would have only a small effect on the royalty base because credit card fees are generally only [redacted] of revenue and app store fees are limited.

2. Benchmark Minimum

a. Percentage of the Service Payments for Sound Recording Rights

78. I have reached the following preliminary conclusions regarding the economically appropriate all-in minimum royalty, based on a percentage of service payments for sound recording rights, to apply for the service offering categories under Section 385, Subparts B and C suggested by the Subpart A benchmark:

- The economically appropriate all-in minimum royalty for a Section 115 license, accounting for musical work public performance royalties, for all service offering categories under Section 385, Subparts B and C suggested by the available benchmarks ranges from 14.2% to 15.8% of service payments for sound recording rights.
  - The lower end of this range, 14.2%, is based on a comparison of the effective rate paid by Google based on the current Section 385, Subpart A royalty rate of the greater of $0.091 or $0.0175 per minute of playing time per download, or $0.095 per PDD, to the royalties paid to record labels for sound recording rights, which is based on 70% of the most current (2015) average retail price of a PDD of $1.10.
  - The upper end of this range, 15.8%, is based on a comparison of the effective Subpart A royalty rate of $0.095 per PDD to the royalties paid to record labels for sound recording rights, which is based on 70% of the historical (2006) average retail price of a PDD of $0.99.
  - Google's proposal of 13.5% is reasonable, given that it is close to the low end of the reasonable range described above, with the low end of the range decreasing over time.

b. All-In Per-Subscriber Minimum Royalty Rate

79. For a typical subscription streaming plan, the all-in per-subscriber minimum royalty rate does not come into play because, for example, the revenue percentage (10.5%) times the

subscriber fee (typically $10) is greater than the $0.80 all-in per-subscriber minimum royalty rate (for the Subpart B Standalone Portable Subscription, Mixed Use service offering category), which is less than the 21% of payments for sound recording rights for $10 per month services. Thus, a reduction in the all-in per-subscriber minimum would have no effect on the mechanical royalties paid on typical subscription plans under the proposed rate structure.

80. Although Google has not proposed a reduction in the applicable all-in per-subscriber minima, as discussed below under the "availability" 801(b)(1) factor, the $0.80 all-in per-subscriber minimum may deter service providers from offering additional subscription plans with a lower per-subscriber price. A reduction in the all-in per-subscriber minimum would give service providers the flexibility to offer new types of plans that have the potential to expand the set of subscribers.[136] An expanded set of subscribers would benefit both music service providers and copyright owners.[137] While a service provider could attempt to negotiate separate agreements with each copyright owner that allowed a lower per-subscriber minimum for such plans, the transactions costs for doing so would be high, and one of the economic rationales for the compulsory license is to save on such transactions costs. As such, it would be useful to build flexibility into the compulsory license terms. That said, to the extent that all-in per-subscriber minima are part of a lesser-of comparison with 13.5% of sound recording fees, as Google has proposed, it is likely that the percentage-of-sound-recording royalties prong will be lower than the all-in per-subscriber prong.

[136] Offering a menu of plans is a means by which service providers can separate out users into groups with different willingness to pay for the service and charge them different prices. To the extent overall output (measured by subscribers) expands, economic efficiency likely has increased as a result.

[137] Service providers would prefer to minimize the extent to which any new plans "cannibalize" existing subscribers on existing plans. This means the service providers' incentives in this regard would be aligned roughly with the interests of the copyright owners.

81. Different types of plans may be designed to attract subscribers with different levels of willingness to pay for streaming (or other services). Basing the royalty on a percentage of subscriber revenue makes sense when the relative contributions of the publishing rights and the music service providers to attracting a subscriber is roughly the same regardless of the plan the subscriber chooses. If anything, the contribution of the publishing right may be relatively smaller for a subscriber who was enticed only by a new limited plan and would not otherwise have subscribed to the existing unlimited plan (because such a subscriber is a less "intense" music listener with lower WTP for streaming). Changing the all-in per-subscriber minimum royalty to be equal to 10.5% of the lowest reasonable subscription plan price would provide for a reasonable all-in per-subscriber minimum that would protect copyright owners from arguably too-low per-subscriber royalties. Consistent with this concept, under the existing statutory royalty structure, the per-subscriber minima for lower-priced services like locker services are set to lower levels than for streaming.

c. Mechanical-Only Per-Subscriber Royalty Floor

82. Many of the music service provider licenses that I have reviewed in this matter were all-in licenses that conveyed all required rights in musical works. For example, all of Google's Google Play Subscription and Locker Music Services licenses were all-in licenses. When mechanical and public performance rights are bundled together, as they were in these licenses, the deduction of the public performance royalties in the Section 385 Subparts B and C royalty calculations become unnecessary. Similarly, the application of a mechanical-only per-subscriber royalty floor for certain services covered in the Section 385, Subpart B royalty calculation also becomes unnecessary since the licenses do not cover only mechanical rights and the publishers are free to allocate as they see fit.

83. As discussed above, the agreements reflect the parties' revealed preference for a fixed all-in rate that the service pays to publishers/songwriters for the combination of mechanical and public performance rights, regardless of how the publishers/songwriters divide the all-in rate between the two types of rights. In particular, the all-in rate in these agreements does not change depending on what happens in the public performance rights marketplace. Accordingly, the exclusion of the mechanical–only per-subscriber royalty floor from the royalty calculation for Subpart B is economically appropriate.

VI. ANALYSIS OF THE RELEVANT ECONOMIC EVIDENCE PERTAINING TO § 801(b)(1)(A): TO MAXIMIZE THE AVAILABILITY OF CREATIVE WORKS TO THE PUBLIC

84. To an economist, "maximizing the availability of [musical] works to the public" has two aspects. First, the availability of existing musical works to consumers will be greater if there are a wider set of providers and mechanisms (including plans with different characteristics) through which consumers can access the works. Second, the availability of musical works to consumers will be greater to the extent that there are more musical works.

A. Greater Variety of Product Offerings and a Greater Number of Competing Service Providers

85. Consumers vary in their preferences not only over musical works themselves, but also in the methods by which they gain access to musical works. For example, some consumers prefer to listen to CDs, some prefer to download and listen to MP3s, some prefer to stream musical works, and so on. Many consumers use a mix of these methods. Consumers also vary in the devices through which they listen to music, including mobile devices, PCs, and stereo equipment, and again many consumers use a mix of devices. Finally, consumers vary in the amount of time in which they listen to music.

86. The economics of "product differentiation" suggests that, when consumers vary in their preferences over product attributes, producers have the incentive to offer a variety of products with different sets of product attributes that appeal to different subsets of consumers.[138] Product variety is beneficial to consumers because each consumer has a number of different products from which to choose and thus can find a good match among the different products to his or her preferences.[139]

87. Music service providers have developed a number of different "product offerings" (often called "business models") that appeal to different types of consumers.[140] CDs are available from retailers, companies such as Pandora provide non-interactive streaming services, companies such as Spotify provide interactive streaming services, and companies like Google offer digital downloads as well as streaming services. Even within these broad categories, there is variety in product offerings. Spotify, for example, offers two types of streaming services — a free service with advertisements and a subscription service without advertisements.

88. Growth in the set of product offerings in the music service provider space appears likely to continue in the future. For example, Pandora will soon offer an interactive streaming service in addition to its non-interactive streaming service, and Amazon has forthcoming interactive streaming service that it plans to introduce. Providers may choose to offer additional types of

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[138] See, generally, Jean Tirole, "Product Differentiation: Price Competition and Non-Price Competition," (Chapter 7), *The Theory of Industrial Organization*, MIT Press, 1988.

[139] If there are fixed costs associated with offering a product, it is possible that producers provide "too much" product variety from a social welfare point of view (the fixed costs incurred by the producers do not justify the gains to consumers from the additional variety). Id. However, consumers benefit from the overprovision of variety.

[140] From the music service provider's point of view, the offering of different products can also allow the sorting of customers into groups based on their WTP for, e.g., streaming. Different prices can be charged to the different groups of customers, which can increase the revenue that the music service provider can extract. This in turn can benefit the copyright owners.

subscription plans, such as a lower-priced subscription that may be limited in the amount of music that can be streamed or the number of devices used.

89. The substantial variety in the product offerings of musical service providers benefits consumers and leads to a greater availability of musical works because each consumer is more likely to find a product offering that is to his liking and therefore worth paying for. A consumer that prefers a free, advertising-supported non-interactive streaming service has several different options. A consumer that is willing to pay a fee for interactive streaming has a number of options. A consumer that prefers to one-stop shop at Amazon can do so. As a result, consumers consume more music.

90. The substantial variety in product offerings is the result of service providers determining that investing in developing greater product variety is worthwhile, i.e., that the expected returns from the investment are greater than the costs. The expected returns depend in part on the incremental total royalty costs associated with providing greater product variety to customers. As a general matter, higher royalty costs would be expected to cause a decrease in the number of product offerings (either through a decreased number of service providers that are able to pay the royalty costs and remain profitable, fewer product offerings from each service provider, or both) and, conversely, lower royalty costs would be expected to increase the number of product offerings. I understand that under the current rates (and the rates proposed by the copyright owners in this proceeding) it is likely that some interactive music streaming service providers will have to exit the market due to an inability to achieve profitability.[141] Furthermore, I

[141] Testimony of David B. Pakman, November 1, 2016, ¶¶ 29-30.

understand that many digital music services have already exited the market under the existing rate structure.[142]

91. Thus, from the point of view of "maximizing the availability of musical works to the public," an important consideration in setting the royalty rates are that they not be set at a level that would overly limit product variety by foreclosing reasonable product offerings.

92. The "availability" of a product is also greater when its price is lower, as more consumers will be willing to pay a lower price to obtain the product. Prices in a market tend to be lower the more competitors participate in the market. As noted above, at higher royalty rates, the number of musical service providers that can operate profitably may be lower. In addition to the adverse effects on product variety, a smaller set of competing music service providers may lead to higher prices. For example, Spotify likely places a competitive constraint on other music service providers, such as Apple. If royalty rates were set in a way such that Apple could pay the rates and remain in business while Spotify could not, consumers likely would be harmed, not only because of the loss of the Spotify product offerings, which some consumers may find preferable, but also because Apple may be able to increase the prices of its product offerings once it no longer faced competition from Spotify.

93. The evidence suggests that an increase in royalty payments for musical works would result in a decrease in the variety of product offerings. Thus, overall I conclude that consideration of the "availability" factor weighs against any increase from the current payment levels.

[142] Written Direct Testimony of Zahavah Levine, November 1, 2016, ¶¶ 16-17.

94. On the other hand, the current rates, and in particular the per-subscriber minimums, may render new types of product offerings economically infeasible. For example, a subscriber plan offered at a lower price, but with limitations on usage or devices, may not be economically feasible for service providers because the per-subscriber minimums would apply and would represent a large percentage of the subscriber fee. For a $5 per-subscriber plan, 10.5% of revenue would be less than the $0.80 per-subscriber minimum (for Subpart B Standalone Portable Subscriptions, Mixed Use), and a $0.80 royalty would represent 16% of revenue. Thus, a reduction in the $0.80 per-subscriber minimum likely would result in an increase in the variety of plan offerings. In this respect, Google's proposal to leave the per-subscriber minimum at current rates is conservative.

B. Set of Existing Musical Works

95. The second consideration with respect to the "availability of musical works" is the size of the set of existing musical works. A musical work has to have been created to be "available." Financial rewards, of which royalty payments are one form, likely play a role in songwriters' decisions to create compositions. This is one of the principal justifications for the recognition of copyrights in the United States.[143]

96. However, there is no evidence that the existing royalty structure has adversely affected the creation of compositions. The total number of affiliated songwriters, composers, and music publishers for the two largest PROs, ASCAP and BMI, increased steadily from 2004 to 2016 as shown in Exhibit 9. Additionally, the total number of musical compositions in the repertories of

[143] *Feist Publ'ns, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340, 349 (1991) ("The primary objective of copyright is not to reward the labor of authors, but '[t]o promote the Progress of Science and useful Arts.'").

ASCAP and BMI has similarly increased from 14.5 million in 2010 to over 20 million in 2015, as shown in Exhibit 10.

VII. ANALYSIS OF THE RELEVANT ECONOMIC EVIDENCE PERTAINING TO § 801(b)(1)(B): TO AFFORD THE COPYRIGHT OWNER A FAIR RETURN FOR HIS OR HER CREATIVE WORK AND THE COPYRIGHT USER A FAIR INCOME UNDER EXISTING ECONOMIC CONDITIONS

A. Benchmark Analysis for the Rates and Terms for the Section 115 Compulsory License

97. As previously discussed, I performed a benchmark analysis for the rates and terms for the Section 115 compulsory license that examined certain economic evidence including the current Section 385 Subpart A royalty rates for PDDs and existing license agreements. This type of evidence provides evidence useful in assessing "fair" outcomes for both the copyright owner and copyright user as contemplated under this Section 801(b)(1) factor. See Section IV for my conclusions from the benchmarking analysis. As discussed in the next section, the payment terms in the current compulsory license and the existing agreements may be overly favorable to the copyright owners given the lack of profitability for music service providers (and the decline in the Subpart A benchmark rate over time).

B. Digital Interactive Streaming Service Providers Have Had a History of Not Being Profitable

98. I understand, that since its inception, Google Play Music has not been profitable. This is despite the fact that its user base and its corresponding subscription revenue has grown continuously. For example, both Google Play Music's U.S. subscriber base and monthly subscription revenues have [redacted]. However, Google Play Music has incurred significant costs as well; these include, for example: investments to build the infrastructure

behind the Google Play Music service; variable costs such as music royalties paid to record companies and publishers; credit card fees, carrier fees, and customer support efforts; and other Google Play-related operating expenses that are not directly allocated down to a specific product such as the Google Play Subscription Service—such as payroll and marketing expenses—but are necessary for the music service to operate. As a result, I understand that the U.S. operations of Google Play Music have historically generated operating losses of [redacted] per quarter.[144]

99. It is also significant that despite its success and popularity, steadily increasing revenue, and overall reputation in the digital interactive music streaming industry, Spotify has not generated a profit. Costs have exceeded revenues, and a substantial portion of costs are made up by the licensing fees that Spotify pays to record labels and music publishers. In 2015, Spotify generated $2.2 billion in revenue and paid $1.8 billion, or 82% of its revenue, in licensing fees.[145] Spotify's overall losses were $206 million in 2015 compared to $184 million in 2014[146] (see Exhibit 4 for Spotify's historical revenues and net losses (in Euros) from 2009 to 2015). In an effort to increase profitability, Spotify has expanded into new businesses such as short videos and concert ticket promotions.[147]

100. It is still not clear whether the market can support the existing set of interactive music streaming companies, in part, due to the existing high licensing fees relative to revenues.[148]

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[144] Written Direct Testimony of Elliot Alyeshmerni, November 1, 2016, ¶¶ 17-18.

[145] "Spotify Wants to Go Public Despite a History of Losses," Fortune, July 20, 2016.

[146] "Spotify's Financial Results Reinforce Just How Broken the Music Business Is," Fortune, May 24, 2016.

[147] "Spotify Wants to Go Public Despite a History of Losses," Fortune, July 20, 2016.

[148] Testimony of David B. Pakman, November 1, 2016, ¶¶ 25-26, 28-30; see also, "Massive Losses in Music Streaming Leave Industry Giants on Low Note," In The Black, June 1, 2016.

Tidal reportedly lost $28 million in 2015, despite a 30% year-over-year increase in revenue and reaching over 4 million paid subscribers.[149] Deezer, a growing European interactive streaming service provider with approximately 6 million subscribers, paid 84% of its revenue in licensing fees, is currently not profitable, and had to recently cancel a planned IPO.[150] Rhapsody, branded as Napster outside of the United States, had revenue of $202 million but lost $35.5 million in 2015. Samsung's Milk Music and JB Hi-Fi's Now streaming services in Australia have already closed down in 2016.[151] Furthermore, I understand that other music streaming services have recently shut down (e.g., Rara.com closed in March 2015 and in November 2015 Rdio filed for bankruptcy before being eventually acquired by Pandora).[152]

101. The lack of profitability among music service providers suggests that, if anything, the current statutory rates are overly favorable to copyright owners and that lower rates may be "fair."[153]

C. Profitability of the Music Publishers

102. I have analyzed the profitability of music publishers based on the financial documents received from the following music publishers: BMG. EMI, Sony/ATV, Kobalt, Universal, and Warner/Chappell.[154] These financial statements report data from 2010 to Q3 2016.[155]

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[149] "Jay Z's Music Streaming Service Tidal Posts Huge Loss in 2015," Wall Street Journal, September 13, 2016.

[150] "Deezer prospectus makes one thing clear: Streaming Music is a Terrible Business," Fortune, September 25, 2015; "Music Streaming Service Deezer Abandons IPO," Financial Times, October 28, 2015.

[151] "Massive Losses in Music Streaming Leave Industry Giants on Low Note," In The Black, June 1, 2016.

[152] Written Direct Testimony of Zahavah Levine, November 1, 2016, ¶ 17.

[153] An argument may be made that the services expect to be profitable eventually, otherwise they would go out of business and Spotify, for example, would not have positive market value. However, when considering the appropriate royalty rates for the next five years, the lack of current profitability is relevant and suggests that profitability is not imminent. This situation can, of course, be reevaluated in five years.

[154] I note that my analysis considers the U.S. operations of these music publishers, except for Kobalt, whose financial statements are on a worldwide basis.

Profitability was analyzed by operating margin and earnings before interest, taxes, depreciation, and amortization ("EBITDA").[156] Average EBITDA for each music publisher ranges from [redacted] with exception of [redacted] which reports an average EBITDA of [redacted] Average operating margin for each music publisher ranges from [redacted] except for [redacted] which reports an average operating margin of [redacted]

VIII. Analysis of the Relevant Economic Evidence Pertaining to § 801(b)(1)(C): To Reflect the Relative Roles of the Copyright Owner and the Copyright User in the Product Made Available to the Public With Respect To Relative Creative Contribution, Technological Contribution, Capital Investment, Cost, Risk, and Contribution to the Opening of New Markets for Creative Expression and Media for Their Communication

A. Benchmark Analysis for the Rates and Terms for the Section 115 Compulsory License

103. As previously discussed, I performed a benchmark analysis for the rates and terms for the Section 115 compulsory license. This type of evidence provides an appropriate division of the value created by the combination of the copyright owner's and copyright user's assets between the two parties as contemplated under this Section 801(b)(1) factor. See Section IV for my conclusions from the benchmark analysis. In general, the benchmarks, together with the lack of profitability of music service providers, tend to suggest that rates lower than the prevailing rates would appropriately divide the value between the copyright owner and user.

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[155] See Exhibits 5a-5f.

[156] Profitability for BMG was analyzed only by EBITDA as information on the company's depreciation and amortization expense was not reported.

B. Contributions of the Digital Interactive Streaming Service Providers

104. There have been a number of important developments in the music industry that have led to the rise of streaming in general, and digital interactive streaming services more specifically. In this section, I provide a timeline addressing some of the key events, product launches, and innovations that have contributed to the current success of digital interactive streaming services in terms of their use (e.g., number of streams) and popularity (e.g., number of users of streaming services).

105. In June 1999, Napster, the first widely used peer-to-peer ("P2P") file-sharing site, launched.[157] The service had 70 million users at its peak, before filing for bankruptcy in 2002. Napster shut down on July 1, 2001, after losing a protracted legal battle with the RIAA over copyright infringement. The music streaming site, Rhapsody, bought what was left of Napster in 2012, and now runs its (legal) business under the Napster brand.[158]

106. Napster was one of the first companies to use the P2P business model, with subsequent P2P examples being Uber and Airbnb.[159] It also offered an alternative to the established business model for music distribution: users could download songs they wanted (for free) on their computers instead of buying them from retailers; users could download individual tracks instead of buying whole albums; users could also find old songs that were no longer in production; and musicians could promote their work while bypassing record company gatekeepers.[160]

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[157] "15 Years After Napster: How the Music Service Changed the Industry," The Daily Beast, June 6, 2014; "Ashes to Ashes, Peer to Peer: An Oral History of Napster," Fortune, September 5, 2013.

[158] "Ashes to Ashes, Peer to Peer: An Oral History of Napster," Fortune, September 5, 2013; "Napster Files for Bankruptcy," CNN Money, June 3, 2002.

[159] "Ashes to Ashes, Peer to Peer: An Oral History of Napster," Fortune, September 5, 2013.

[160] "15 Years After Napster: How the Music Service Changed the Industry," The Daily Beast, June 6, 2014.

107. In April 2003, Apple launched the iTunes Music Store, which began the next year that Napster went bankrupt, with a relatively small catalogue of 200,000 songs. Unlike Napster, the iTunes Music Store had the support of the major record companies at that time. Unbundled singles sold for $0.99, and albums for $9.99. Buying songs on the iTunes Music Store quickly became a significant method to obtain music online, legally. The iTunes Music Store sold one million songs in the first week, and 50 million songs in its first year. By 2008, the iTunes Music Store had become the largest music retailer in the United States, and the largest worldwide just two years later in 2010.[161]

108. Apple broke up the record industry's long-standing, preferred product bundle, the album, and allowed customers to legally buy just the songs they wanted.[162]

> Indeed iTunes hacked away at the dominance of the album as a sales unit and simultaneously tapped into consumer desire to be more selective about the music they owned. Apple's business model brought back the single, which up until the early 1990s was one of the primary formats for the recording industry. The single all but vanished with the rise of the CD, and music fans were forced to pay for the entire albums to get the songs they wanted. Apple unbundled songs, sold them for less than a buck – and paved the way for the CD's eventual extinction.[163]

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[161] "iTunes Store at 10: How Apple Built a Digital Media Juggernaut," The Verge, April 26, 2013; "Who Killed the Music Industry," Pando, August 5, 2013.

[162] "iTunes Store at 10: How Apple Built a Digital Media Juggernaut," The Verge, April 26, 2013.

[163] "iTunes Store at 10: How Apple Built a Digital Media Juggernaut," The Verge, April 26, 2013. "Jobs fought music executives hard on pricing. But in the end, the industry caved, desperate to convince a new generation raised on Napster to start paying for music, even if it was on Apple's terms. But by ceding pricing, the record companies lost control of their product. Now albums were back down to an affordable $9.99. Singles were $0.99. On top of that, virtually any song was available as a 'single,' not just the tracks chosen by the record label. Gone were the days of dropping $15 on one album for only a couple songs you liked…The data supports this consumer shift: Since 2004, when the RIAA began calculating digital sales, digitally-downloaded singles have outsold albums in terms of both revenue and units sold." ("Who Killed the Music Industry," Pando, August 5, 2013.)

109. After revenues for the music industry reached its apex in 1999, total music industry revenues fell sharply over the subsequent decade.[164] As illustrated in Exhibit 6a, between 2005 and 2010 total U.S. music industry revenues declined dramatically from $12.3 billion to $7.0 billion, a decline of approximately 43%. This decline in revenues was predominantly driven by the decline in revenues from CD sales, which were $10.5 billion in 2005 but decreased to $3.4 billion in 2010, a decline of approximately 68%. Exhibit 6a shows that between 2005 and 2010, CD unit sales declined from 705.4 million shipments to 253.0 million shipments, while Download Single unit sales increased from 366.9 million shipments to 1,177.4 million shipments. Therefore, between 2005 and 2010, the decline in total U.S. music industry revenues was a result, in large part, of consumers switching from purchasing more expensive CDs (albums) to relatively lower cost singles due to the unbundling of album sales and the rise of digital download services such as iTunes. Services such as iTunes enabled consumers to easily download single song tracks rather than purchase full CD albums, a factor which resulted in declining music industry revenue as the increased sales of single track songs were unable to offset losses from full album sales.[165] Furthermore, this decline in total U.S. music industry revenues occurred before on-demand music streaming services took off in the marketplace.

110. As also illustrated in Exhibit 6b, since 2010 total U.S. music industry revenues have remained relatively flat despite revenues from CD sales continuing to decline and revenues from Download Single sales remaining relatively flat. The reason that total U.S. music industry revenues have remained relatively constant since 2010 is because revenues from music streaming

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[164] "U.S. Recorded Music Revenues by Format," The Recording Industry Association of America.

[165] Elberse, Anita, "Bye-Bye Bundles: The Unbundling of Music in Digital Channels," *Journal of Marketing* 74, no. 3 (May 2010), p. 108; "More Artists Steer Clear of iTunes," The Wall Street Journal, August 28, 2008; "Who

services—captured in categories including Paid Subscriptions, payments to SoundExchange, and free On-Demand Streaming[166]—have all increased substantially since 2010.[167]

111. Founded in 2006, Spotify is a commercial music streaming service. The Sweden-based startup launched in October 2008, enabling users to browse or search by artist, album, genre, playlist, or record label. With premium membership, users are able to remove advertisements, download music directly, listen offline, have unlimited skips, and enjoy higher quality audio.[168] The company has over 100 million users, of which 30 million are premium subscribers.[169] By comparison, Apple Music has 15 million paid subscribers and Pandora has 4 million paying subscribers and 80 million active users.[170]

112. In July 2011, Spotify launched in the United States.[171] Within one month of its release, Spotify had gained 1.4 million U.S. users.[172] Spotify has become the most successful interactive music streaming service (as measured by number of users) in the United States.[173] Spotify's inventive interface, allowing users to stream music instantaneously, and social media integration are both credited as reasons for its success. Spotify allows users to integrate their existing Facebook and Twitter accounts, enabling access to their friend's music and sending tracks and

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Killed the Music Industry," Pando, August 5, 2013; "A Decade of iTunes Singles Killed the Music Industry," CNN Money, April 25, 2013.

[166] "News and Notes on 2015 Mid-Year RIAA Shipment and Revenue Statistics," The Recording Industry Association of America, 2015.

[167] Exhibit 6c.

[168] Spotify," TechCrunch, September 20, 2016; "Go Premium," Spotify, September 20, 2016.

[169] "Spotify Wants to Go Public Despite a History of Losses," Fortune, July 20, 2016.

[170] "Spotify Wants to Go Public Despite a History of Losses," Fortune, July 20, 2016; "Spotify Has 100 Million Users But Apple Music Remains a Threat," Macworld, June 20, 2016.

[171] "Hello America. Spotify Here," Spotify News, July 14, 2011.

[172] "Spotify Gained 1.4 Million Users in a Month," Mashable, August 8, 2011.

[173] "Spotify's Financial Results Reinforce Just How Broken the Music Business Is," Fortune, May 24, 2016.

playlists.[174] Although other streaming services, such as MOG and Rhapsody, were available before Spotify's launch in the United States, these services had not garnered significant traction with consumers. Spotify, however, gave users complete control and access to songs on-demand along with free options to more than simple radio streaming. In addition, Spotify's ability to upload local tracks and its launch of a Pandora-style radio service positioned Spotify as a viable replacement for both iTunes as well as Pandora.[175] In 2012, the MIT Technology Review named Spotify as one of the 50 most "disruptive"[176] companies due to its success in negotiating with record labels to allow users access to a large music library and ability to download music for offline use.[177] Furthermore, in July 2015, Spotify launched its Discover Weekly feature enabling users to receive new 30-track playlists each week tailored to each user based on a machine-learning algorithm.[178] Discover Weekly quickly became one of Spotify's most successful features with over 40 million listeners in May 2016.[179] In 2015, Spotify's Android and iOS apps became the most popular music streaming apps in the world, according to information mobile app analytics company, App Annie.[180]

113. Companies such as Google and Amazon are striving to differentiate themselves from companies such as Spotify.[181]

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[174] "Spotify: The Next Step in Digital Music Innovation," Northwestern Business Review, January 3, 2012.

[175] "How Spotify Turned Free Music into a $10+ Billion Valuation," GrowthHackers.

[176] The term "disruptive" in this context has positive connotations for social welfare. A "disruptive" firm is one that introduces a new business model that displaces an older business model as a result of being more attractive to customers.

[177] "50 Disruptive Companies 2012," The MIT Technology Review, 2012.

[178] "Spotify's Discover Weekly: How It Works," The Guardian, August 1, 2016.

[179] "Why Spotify's Discover Weekly Is So Addictive," Vogue, May 30, 2016.

[180] "Spotify Has Become the World's Most Popular Music Streaming App," Variety, December 1, 2015.

[181] "Global Music Report: State of the Industry Overview 2016," IFPI, April 12, 2016.

114. One of Google Play Music's unique advantages is its human playlist curation. Google Play Music is arguably the best music-streaming service at predicting what listeners want to hear and personalizing playlist recommendations.[182] Google Play Music offers human-curated playlists based on your mood, activity, or the time of day.[183]

115. Google acquired Songza in July 2014 for [redacted].[184] Songza is a context-based music curation service and its technology was integrated into Google Play Music and rolled out on October 21, 2014. Songza co-founder and CEO, Elias Roman, and Google Play Music Project Manager, Brandon Bilinski, stated: "Each station has been handcrafted – song by song – by our team of music experts (dozens of DJs, musicians, music critics and ethnomusicologists) to give you the exact right song for the moment."[185]

116. Another unique feature of Google Play Music is its integration with other Google services. Google Play Music subscribers can store 50,000 tracks for free in the cloud as part of Google's locker service.[186] Google Play Music subscribers also get access to YouTube Red, which allows them to watch videos without ads, offline, in the background, and audio only through the YouTube Music app.[187]

117. Google makes substantial capital investments in its Google Play Music subscription service to differentiate its service offering from its competitors and to grow its music subscription service. These investments include: (1) investments in its free tier (including the

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[182] "Google Might Have the Best Music App in the World," Business Insider, April 27, 2016.

[183] "It's Tuesday Morning, Play Music for a Bright, Sunshiny Day," Android Blog, October 21, 2014.

[184] Written Direct Testimony of Paul Joyce, November 1, 2016, ¶ 7.

[185] "It's Tuesday Morning, Play Music for a Bright, Sunshiny Day," Android Blog, October 21, 2014; "Google Might Have the Best Music App in the World," Business Insider, April 27, 2016.

[186] "Google Might Have the Best Music App in the World," Business Insider, April 27, 2016.

purchase of Songza) to grow the subscription funnel, which consists of the group of free users most likely to become future paying subscribers; (2) investments to grow the music catalog for the subscription service; (3) advertising resources to promote and market the subscription service and to build brand awareness, including using advertising inventory on other Google sites; and (4) investments in curation and playlist capabilities.[188]

118. Amazon's key advantage is the integration of its streaming music service, Amazon Prime Music, into Amazon Prime, the company's $99-per-year premium bundle of services.[189] Amazon's strategy has been to win over casual listeners with smaller WTP for music, who do not highly value having access to 30 million songs (Amazon's catalog is roughly 1 million songs), by offering bundled services at a lower price.[190] Over 63 million people in the United States have Amazon Prime memberships in 2016.[191] That gives Amazon's music service access to potential users that number more than double the 30 million subscribers to the current market leader, Spotify.[192]

119. One of Amazon's contributions to streaming is its bundling of services, which offers value to consumers.[193] For just $8.25 per month with annual subscription, Prime members get free two-day shipping (same day in over 20 cities), unlimited on-demand movies and TV shows

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[187] "What is YouTube Red?," YouTube Red FAQ, last accessed October 31, 2016.

[188] Written Direct Testimony of Paul Joyce, November 1, 2016, ¶¶ 7, 10-11.

[189] "Why You Should Give Amazon Prime Music a Second Chance," Make Use Of, February 17, 2016.

[190] "Amazon's Streaming Music Aims for More Casual Listeners," The New York Times, November 10, 2015.

[191] "Every Day Is Prime Day at Amazon," Bloomberg Gadfly, July 12, 2016.

[192] "Apple Music, Spotify and a Guide to Music Streaming Services," The New York Times, April 5, 2016.

[193] "Why You Should Give Amazon Prime Music a Second Chance," Make Use Of, February 17, 2016.

from Amazon Prime Video, unlimited cloud photo storage, free Kindle e-books, and Audible audio books.[194]

120. Furthermore, as the largest retailer of CDs and vinyl albums in the United States, Amazon leverages its data to offer relevant suggestions to listeners based on their listening and shopping habits.[195] Prime members can upload 250,000 songs from their own library for $25 a year.[196] Music purchases from the Amazon store do not count against that limit, and customers who buy physical records from Amazon will get a digital version put in their account for no extra charge, even retroactively. Amazon Prime Music users can also download unlimited tracks to their mobile devices for offline play.[197]

121. When a consumer subscribes to a streaming service, it is not only to obtain music, but also to obtain the convenience of the resulting method of access to music, plus the other features of the service, such as listening suggestions, curated playlists, or bundling with other products or services. The method of access and features are provided by the services, which have and will continue to bear substantial costs in the necessary infrastructure as well as the development and improvement of features. Ultimately, the services must earn a return on these costs or they will exit the business. The copyright owners have benefited from the existence of the services, just as the services have benefited from having music to stream. The copyright owners on their own could not, for example, create their own streaming service from scratch that would match that of

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[194] "Why You Should Give Amazon Prime Music a Second Chance," Make Use Of, February 17, 2016. Amazon prime membership costs $10.99 per month with monthly subscription. "Amazon Prime," Amazon.com, last accessed October 5, 2016.

[195] "New Amazon Music Streaming Service Costs Echo Speaker Owners $4 a Month," Nasdaq, October 12, 2016.

[196] "Why You Should Give Amazon Prime Music a Second Chance," Make Use Of, February 17, 2016.

[197] "I'm Obsessed With a Music Streaming Service Millions of People Probably Don't Know They Can Use For Free," Business Insider, May 16, 2015.

Google or Spotify without incurring substantial time and expense. Yet, revenues from the streaming services have been an important source of revenue to copyright owners that were otherwise experiencing a decline in revenue streams (for reasons including piracy). By offering a wide variety of business models and plans, streaming services have been successful to expanding revenues and subscribers beyond what otherwise would have occurred.[198]

IX. ANALYSIS OF THE RELEVANT ECONOMIC EVIDENCE PERTAINING TO § 801(b)(1)(D): TO MINIMIZE DISRUPTIVE IMPACT ON THE STRUCTURE OF THE INDUSTRIES INVOLVED AND ON GENERALLY PREVAILING INDUSTRY PRACTICES

A. Meaning of "Disruption"

122. I understand that in the November 24, 2008 ruling for Section 385, Subpart A, the Copyright Royalty Judges noted that a new mechanical royalty rate may be considered to be disruptive "if it directly produces an adverse impact that is substantial, immediate and irreversible in the short-run because there is insufficient time for [the parties impacted by the rate] to adequately adapt to the changed circumstances produced by the rate change and, as a consequence, such adverse impacts threaten the viability of the music delivery system currently offered to customers under this license."[199]

B. Google's Proposal Is Not Disruptive

123. Google's proposal is not disruptive because it moves only incrementally from the terms of the existing Section 115 compulsory license. Under Google's proposal, the basic structure would remain the same, with all-in rates and all-in minimums remaining substantially the same

[198] See also Testimony of David B. Pakman, November 1, 2016, ¶ 39 for additional discussion of the technological contributions and service innovations made by service providers.

[199] Final Determination of the Rates and Terms, Mechanical and Digital Phonorecord Delivery Rate Determination Proceeding, Docket No. 2006-3 CRB DPRA (November 24, 2008), p. 58.

as current levels. Google proposes three changes. First, certain types of expenses, such as credit card processing fees, would be allowed to be deducted from revenues (while maintaining the 15% cap on such expenses), which would serve to address the existing imbalance in the size of the payments that favors copyright owners. Second, the percentage-of-sound-recording-fee minimum would be adjusted to bring it into line with the ratio suggested by the proposed Subpart A settlement. Third, the mechanical rights fee floor would be eliminated given that the division of the all-in rate between mechanical and public performance rights has no economic relevance and that voluntary agreements have negotiated an all-in rate that is fixed and not subject to changes in the public performance marketplace.

C. A Substantial Increase in Royalties Would Disrupt Streaming Services

124. As discussed above, the evidence demonstrates that streaming services, such as Google Music and Spotify, have not been profitable to date. While Spotify has been estimated to have an enterprise value of several billion dollars, this valuation is based on the assumption that Spotify will be profitable in the future despite its current lack of profitability. Other streaming services similarly remain in business despite a lack of current profitability because they expect to generate a profit in the future. Forecasts of future profitability, in turn, likely are based, either explicitly or implicitly, on the assumption that the structure and level of the compulsory license royalty rates will remain roughly the same (or perhaps decrease) over time.

125. Music copyright royalties represent the major component of the costs of providing a streaming service. Thus, if payments under Section 115 increased, forecasts of the future profitability of streaming services could be revised downward. With a large enough adverse effect on profitability forecasts, a service may decide to shut down. In fact, the evidence

(including the rates suggested by the digital download musical works rate and the lack of streaming service profitability) suggests that a lower level of rates would be justified.

D. A Shift to Per Stream Royalties Would Disrupt Streaming Services

126. A change to the structure of the royalties under the compulsory license, e.g., a shift from the current percentage of revenue with per-subscriber minimums to per-stream royalty rates, likely would also cause substantial disruption to streaming services. The subscription streaming services provided by companies such as Spotify and Google offer "all you can eat" plans, where subscribers pay a fixed monthly fee and then choose the desired amount of streaming. Under the current royalty structure, in which the royalty is based on a percentage of the subscriber fee (subject to minimums), the royalty, like the subscriber fee, is a fixed amount per subscriber. This gives the service certainty about both its revenues and a major cost component on a per-subscriber basis. If the royalty structure were changed to a per-stream basis, on the other hand, the royalty cost component on a per-subscriber basis would be uncertain because it would depend on the amount of usage of the subscribers. Moreover, with per-stream royalties, services would have the incentive to minimize their costs by taking measures to limit usage by each subscriber, including possibly imposing usage limits. This incentive could even result in services themselves starting to charge users on a per-stream basis, which would also tend to limit usage. Changes in service business models that led to reduced usage would be inconsistent with the 801(1)(A) "availability" factor. In any event, the result would likely be a substantial disruption to the way streaming services operate and to the consumers who use those services.

127. Streaming services that rely on advertisements to generate revenue likely would face similar disruption from a change to per-stream royalties. Currently, there is a direct link between

the generation of revenues (advertisements) and the royalty cost component (a percentage of advertising revenues). With per-stream royalties, that link would be broken and would create additional risks for the provider. Here also, a per-stream royalty structure would give providers the incentive to take measures to limit usage to decrease their royalty costs. These changes would disrupt both providers and users. Moreover, per-stream royalties would raise barriers to entry faced by new ad-based services, because a new entrant likely would have to incur substantial royalty costs over a period of time before they were able to gain enough subscribers to generate ad revenues.

E. Changing the Regulatory "Rules of the Game" Would Increase Uncertainty, Disrupting Service Providers' Future Investment Decisions

128. There are further implications of the fact that existing music service providers have previously made sunk cost investments in their businesses with the reasonable expectation that the regulatory "rules of the game" (i.e., the form and level of the royalty rates for the compulsory license) would not change substantially over time. By their nature, sunk cost investments cannot be undone, even if the "rules of the game" change and the investments would no longer make economic sense under the new rules. While a service provider in such a situation might choose to continue in the business despite the higher royalty rates (because the investments are already sunk), it would not earn the return it had expected on those investments. Moreover, service providers would be deterred from making future investments due to increased uncertainty regarding the regulatory rules of the game (having been changed once already) and the associated danger of having the rules change after sunk cost investments have been made.

129. Songwriters may have made investments in the development of their musical works. These investments would generally be time spent composing the works, and the cost would be

the opportunity cost of the composer's time. Songwriters may also have made their investment decisions on the basis of the existing regulatory framework.

130. As a general matter, the consideration of the "disruption" factor suggests that any departures from the status quo should be small. Google's proposal is consistent with this.

F. A Service Provider May Use the Regulatory Process to Disrupt and Weaken Its Rivals

131. A further consideration under the "disruption" factor is whether one service provider may attempt to manipulate the regulatory process to weaken its rivals. A service provider may propose a rate structure or level that would relatively disadvantage the particular type of business model used by its rivals. For example, Spotify, given its pure-play streaming business model, may find it difficult to achieve profitability under the per-stream rate structure proposed by Apple. Apple, on the other hand, given the fact that a user of its music streaming service may also use other Apple services, leading to several sources of revenue and profits for Apple, may be able to be profitable as a whole under the per-stream structure even if its music service is not profitable.[200] If Spotify were weakened, or even forced to exit, under a per-stream structure, Apple would benefit from the decrease in competition it faced. Consumers, on the other hand, would be harmed both from the reduction in product variety and, potentially, an increase in the prices charged by Apple and other remaining service providers.

132. The competition between Apple and Spotify over the past few years has become more direct and aggressive. In June 2013, Apple launched iTunes Radio, an ad-supported (ad-free for iTunes Match users) online streaming music radio service that is free for all users.[201] iTunes

[200] Testimony of David B. Pakman, November 1, 2016, ¶ 29, FN 17.

[201] "iTunes Radio vs. The Competition: Which One Should You Use?," iMore, June 11, 2013.

Radio directly challenged similar services such as Pandora and Spotify's custom radio feature and made rapid gains since its launch.[202] In June 2015, after acquiring Beats (which previously had acquired MOG), Apple Music made its worldwide debut, and shortly after that Apple ended access to iTunes Radio.[203] Apple Music and Spotify are differentiated in increasingly narrow ways, and both can be trialed for three months without much investment. Spotify may be preferred by many consumers, even iOS users.[204]

133. After Apple Music launched, Spotify became more aggressive about encouraging users to pay for the service outside of iTunes. In the fall of 2015, Spotify started a promotional campaign and offered new subscribers three months of music streaming for $0.99 if they signed up via Spotify's own site. In June 2016, Spotify stopped advertising the promotion due to Apple's threat to remove the Spotify app from the Apple Store unless Spotify stopped advertising the promotion to iPhone users, and Spotify also turned off its Apple Store billing option.[205] Spotify has recently accused Apple of blocking an update to its Spotify app unless Spotify uses Apple's billing system in order to push customers towards Apple.[206] Clearly, Apple would stand to gain if Spotify, or other pure-play services, were forced to leave the market.

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[202] "iTunes Radio: Apple Reveals Spotify Rival – And Says It Will Be Free to iPhone and iPad Users," The Guardian, June 11, 2013; "Media Review: Music Streaming Services Market Profile," Clearvoice Research (2014).

[203] "Introducing Apple Music – All The Ways You Love Music. All in One Place," Apple Press Info, June 8, 2015; "Free iTunes Radio Closes Shop," The International Business Times, January 29, 2016.

[204] "Apple Music or Spotify – Which Is Better?" iMore, July 1, 2016.

[205] "Spotify Says Apple Won't Approve A New Version of Its App Because It Doesn't Want Competition For Apple Music," Recode, June 30, 2016.

[206] "Spotify Accuses Apple of Stymying Competition by Halting App," Bloomberg Technology, June 30, 2016.

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Gregory K. Leonard

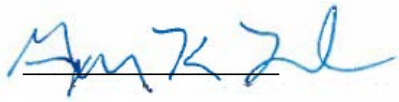
Dated: January 25, 2017

Before the
UNITED STATES COPYRIGHT ROYALTY JUDGES
The Library of Congress
Washington, D.C.

In the Matter of: **Determination of Royalty Rates and Terms for Making and Distributing Phonorecords (Phonorecords III)**	**Docket No. 16-CRB-0003-PR (2018-2022)**

Declaration of Gregory K. Leonard

I, Gregory K. Leonard, declare under penalty of perjury that the statements contained in my amended written direct statement in the above-captioned proceeding are true and correct to the best of my knowledge, information, and belief. Executed on January 25, 2017 in the United States.



Gregory K. Leonard

Appendix A

GREGORY K. LEONARD

Gregory K. Leonard is a Partner at Edgeworth Economics specializing in applied microeconomics and econometrics.

Dr. Leonard has written widely in the areas of antitrust, industrial organization, econometrics, intellectual property, class certification, and labor economics. His publications have appeared in the *RAND Journal of Economics*, the *Journal of Industrial Economics*, the *Journal of Econometrics*, the *International Journal of Industrial Organization*, the *Journal of Public Economics*, *Annales Economie et de Statistique*, the *Journal of Labor Economics*, the *International Journal of the Economics of Business*, *Antitrust Law Journal*, *Antitrust*, *Antitrust Source*, the *Journal of Economic Analysis & Policy*, *Journal of Competition Law and Economics*, the *Journal of Economic Surveys*, *法学家 (Jurists' Review)*, *Antitrust Chronicle*, the *Berkeley Technology Law Journal*, the *Columbia Science and Technology Law Review*, the *European Competition Law Review*, *les Nouvelles*, *Landslide*, *Managing Intellectual Property*, *Legal Issues of Economic Integration*, *Kokusai Shoji Houmu (International Business Law and Practice)*, and the *George Mason Law Review*. Dr. Leonard authored two chapters and co-authored another chapter in the American Bar Association Section of Antitrust Law (ABA) volume *Econometrics* (2nd Ed., 2014), co-authored two chapters in the ABA volume *Issues in Competition Law and Policy*, and co-authored the "Econometrics and Regression Analysis" chapter of the ABA volume *Proving Antitrust Damages* (2nd Ed., 2010). He co-edited *Economic Approaches to Intellectual Property: Policy, Litigation, and Management* and authored or co-authored three of its chapters. One of these chapters (co-authored with Lauren J. Stiroh) was cited by the Court of Appeals for the Federal Circuit in its *Uniloc* decision. Dr. Leonard is a Senior Editor of the *Antitrust Law Journal* and has served as a referee for numerous economics journals.

Dr. Leonard was invited to speak on merger simulation at the 2004 US Department of Justice and Federal Trade Commission (FTC) Merger Workshop, the econometrics of evaluating competition in local retail markets at the 2008 FTC Retail Mergers Workshop, and the calculation of patent damages at the 2009 FTC Hearings on the Evolving IP Marketplace. The 2011 FTC report resulting from the latter hearings cited Dr. Leonard extensively. In 2005, Dr. Leonard served as a consultant on the issue of immunities and exemptions to the Antitrust Modernization Commission (AMC), which was tasked by Congress and the President with developing recommendations for changes to the US antitrust laws. He testified before the AMC in December 2005. Dr. Leonard gave an invited presentation on the use of natural experiments in antitrust at the European Commission's Directorate General for Competition (DG Comp) in 2014.

Dr. Leonard has extensive experience with international antitrust and intellectual property issues, particularly in Asia. He has been retained by the Anti-Monopoly Bureau of China's Ministry of Commerce (MOFCOM) as an outside economics expert to assist in merger reviews. Dr. Leonard has given invited presentations at MOFCOM, the Supreme People's Court of China, Renmin University, the Chinese Academy of Social Sciences, and the University of Political Science and Law. He was a member of ABA and US Chamber of Commerce delegations to joint workshops with the Chinese antitrust agencies, MOFCOM, NDRC, and SAIC, and served on the working groups of the ABA's Sections of Antitrust Law and International Law that prepared comments on MOFCOM's and SAIC's draft regulations. Dr. Leonard has also given presentations to the Japan Fair Trade Commission and the India Competition Commission.

Dr. Leonard has experience in a broad range of industries, including pharmaceuticals, telecommunications, airlines, semiconductors, hedge funds, securities, commercial and recreational fishing, medical devices, professional sports, credit card networks, payment systems, information services, computer software, computer hardware, chemicals, plastics, flat glass, retailing, advertising, beef processing, fertilizers, printing, petroleum, steel, beer, cereals, cosmetics, athletic apparel, film, milk, canned fish, vitamins, animal feed supplements, tissue, paperboard, industrial gas, concrete, automobiles, contact lens cleaners, sports beverages, soft drinks, diapers, tobacco products, graphite and carbon products, and modems, among others.

Dr. Leonard has provided written and oral testimony and presentations before federal and state courts, government agencies, and arbitration panels on issues involving antitrust, damages estimation, statistics and econometrics, surveys, valuation, and labor market discrimination.

Prior to joining Edgeworth, Dr. Leonard was a Senior Vice President at NERA and Lexecon Inc., a founding member and Director of Cambridge Economics, Inc., and an Assistant Professor at Columbia University, where he taught statistics, econometrics, and labor economics.

Dr. Leonard received an Sc.B. in Applied Mathematics-Economics from Brown University and a Ph.D. in Economics from the Massachusetts Institute of Technology, where he was a National Science Foundation Graduate Fellow and an Alfred P. Sloan Foundation Fellow.

EDUCATION

Massachusetts Institute of Technology

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PROFESSIONAL EXPERIENCE

2012-	Partner, Edgeworth Economics
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2004-2008	Vice President, NERA Economic Consulting
2000-2004	Senior Vice President, Lexecon, Inc.
1991-2000	Director, Cambridge Economics, Inc.

1990-1991 Senior Analyst, NERA Economic Consulting

1989-1990 Assistant Professor, Columbia University (Teaching Areas: Econometrics, Statistics, Labor Economics)

PAPERS AND PUBLICATIONS

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Discussant, "Proving Damages in Difficult Cases: Mock Trial & Discussion," NERA Antitrust & Trade Regulation Seminar, July 10, 2004.

"Network Effects, First Mover Advantage, and Merger Simulation in Damages Estimation," LSI Workshop on Calculating and Proving Patent Damages, July 16, 2004.

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"Antitrust Issues in Standard Setting and Patent Pools," Advanced Software Law and Practice Conference, November 3, 2005.

"New Technologies for Calculating Lost Profits," LSI Workshop on Calculating & Proving Patent Damages, February 27, 2006.

"Estimating Antitrust Damages," Fair Trade Commission of Japan, April 21, 2006.

"Economic Analysis of Rule 23(b)(3)," LSI Litigating Class Action Suits Conference, May 11, 2006.

"Permanent Injunction or Damages: What is the Right Remedy for Non-Producing Entities?," San Francisco Intellectual Property Law Association/Los Angeles Intellectual Property Law Association Spring Seminar, May 20, 2006.

"Antitrust Enforcement in the United States" and "Economic Analysis of Mergers," Sino-American Symposium on the Legislation and Practice of Anti-Trust Law, Beijing Bar Association, Beijing, People's Republic of China, July 17, 2006.

"Economic Analysis in Antitrust," Chinese Academy of Social Sciences, Beijing, People's Republic of China, July 20, 2006.

"Issues to Consider in a Lost Profits Damages Analysis," Patent Litigation 2006, Practicing Law Institute, September 26, 2006.

"Comparison of the Almost Ideal Demand System and Random Coefficient Models for Use With Retail Scanner Data," Pacific Rim Conference, Western Economic Association, Beijing, People's Republic of China, January 12, 2007 (with F. Deng).

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"Balancing IPR Protection and Economic Growth in China," International Conference on Globalization and the Protection of Intellectual Property Rights, Chinese University of Political Science and Law, Beijing, People's Republic of China, January 20, 2007.

"The Use and Abuse of Daubert Motions on Damages Experts: Lessons from Recent Cases," LSI Workshop on Calculating & Proving Patent Damages, February 27, 2007.

"Will Your Licenses Ever be the Same? Biotechnology IP Strategies," BayBio 2007 Conference, April 26, 2007.

"Tension Between Antitrust Law and IP Rights," Seminar on WTO Rules and China's Antimonopoly Legislation, Beijing, People's Republic of China, September 1, 2007.

"Issues to Consider in a Lost Profits Damages Analysis," Patent Litigation 2007, Practicing Law Institute, September 25, 2007.

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"Opening Remarks," Seminar on China's Anti-monopoly Law and Regulation on Abuse of Intellectual Property Rights, Beijing, People's Republic of China, April 26, 2008.

"Issues to Consider in a Reasonable Royalty Damages Analysis," Patent Litigation 2008, Practicing Law Institute, October 7, 2008.

"Econometric Evaluation of Competition in Local Retail Markets," Federal Trade Commission and National Association of Attorneys General Retail Mergers Workshop, December 2, 2008

"Merger Review Best Practices: Competitive Effects Analysis," International Seminar on Anti-Monopoly Law: Procedure and Substantive Assessment in Merger Control, Beijing, People's Republic of China, December 15-17, 2008.

"The Use of Natural Experiments in Antitrust," Renmin University, Beijing, People's Republic of China, December 18, 2008.

"China's Antimonopoly Law: An Economist's Perspective," Bloomberg Anti-Monopoly Law of China Seminar, January 29, 2009.

Panelist, "Standards for Assessing Patent Damages and Their Implementation by Courts," FTC Hearings on the Evolving IP Marketplace, February 11, 2009.

"Economic Analysis of Agreements Between Competitors" and "Case Study: FTC Investigates Staples' Proposed Acquisition of Office Depot," Presentation to Delegation of Antitrust Officials from the People's Republic of China, Washington, DC, March 23, 2009.

"Reasonable Royalties in the Presence of Standards and Patent Pools," LSI Workshop, April 20, 2009.

Presentations on Unilateral Effects, Buyer Power, and the Intellectual Property-Antitrust Interface to Delegation from the Anti-Monopoly Bureau of MOFCOM of the People's Republic of China, Washington, DC, May 10-11, 2009.

Panelist, "The Use of Economic and Statistical Models in Civil and Criminal Litigation," Federal Bar Association, San Francisco, May 13, 2009.

"Trends in IP Rights Litigation and Economic Damages in China," Pursuing IP in the Pacific Rim, May 14, 2009.

Presentation on the Economics of Antitrust, National Judicial College of the People's Republic of China, Xi'an, People's Republic of China, May 25-26, 2009.

"Case Study: The Use of Economic Analysis in Merger Review," Presentation to the Anti-Monopoly Bureau of MOFCOM, Beijing, People's Republic of China, May 27, 2009.

"Economics and Antitrust Law," China University of Political Science and Law, Beijing, People's Republic of China, September 21, 2009.

"Case Study: Economic Analysis of Coordinated Interaction," Presentation to the Anti-Monopoly Bureau of MOFCOM, Beijing, People's Republic of China, September 22, 2009.

"Relevant Market Definition," 4th Duxes Antitrust Law Seminar, Beijing, People's Republic of China, September 26, 2009.

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"Antitrust and Intellectual Property," Supreme People's Court, Beijing, People's Republic of China, May 26, 2010.

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Panelist, "The Future of Books and Digital Publishing: the Google Book Settlement and Beyond," 2010 American Bar Association Annual Meeting, August 7, 2010.

"Coordinated Effects" and "Non-Horizontal Mergers," Presentations to Delegation from India Competition Commission, US Chamber of Commerce, Washington, DC, October 26, 2010.

"UPP and Merger Simulation," Annual Conference of the Association of Competition Economics, Norwich, UK, November 11, 2010.

"Uniloc v. Microsoft: A Key Ruling For Patent Damages," Law Seminars International Telebriefing, January 21, 2011.

"Correlation, Regression, and Common Proof of Impact," New York City Bar Association, January 19, 2011.

"Private Litigation Under China's New Antimonopoly Law," Bar Association of San Francisco, February 17, 2011.

"Competition Law and State Regulation: Setting the Stage and Focus on State-Owned Enterprises," Competition Law and the State: International and Comparative Perspectives, Hong Kong, People's Republic of China, March 18, 2011.

Panelist, “Booking it in Cyberspace: The Google Book Settlement and the Aftermath,” American Intellectual Property Law Association, San Francisco, May 13, 2011.

“Econometric Estimation of Cartel Overcharges,” ZEW Conference on Economic Methods and Tools in Competition Law Enforcement, Mannheim, Germany, June 25, 2011.

Panelist, “Antitrust and IP in China,” Antitrust and IP in Silicon Valley and Beyond, American Bar Association and Stanford University, Palo Alto, October 6, 2011.

Panelist, University of San Diego School of Law Patent Law Conference: The Future of Patent Law Remedies, January 18, 2013.

“Economics Framework,” US-China Workshop on Competition Law and Policy for Internet Activities, China’s State Administration for Industry and Commerce (SAIC) and the U.S. Trade and Development Agency (USTDA), Shenzhen, People’s Republic of China, June 4-5, 2013.

Panelist, “China Inside and Out,” American Bar Association, Beijing, People’s Republic of China, September 16-17, 2013.

Panelist, “Remedies in Patent Cases,” Fifth Annual Conference on The Role of the Courts in Patent Law & Policy, Berkeley and Georgetown Law Schools, November 1, 2013.

“Royalty Base,” LeadershIP Conference, Qualcomm Incorporated, March 21, 2014.

“Reflections on Natural Experiments,” DG Comp, April 8, 2014.

Panelist, “Antitrust in Asia: China,” American Bar Association Section of Antitrust Law, Beijing, People’s Republic of China, May 21-23, 2014.

Panelist, “Patent Damages Roundtable,” 2015 Intellectual Property Institute, University of Southern California Gould School of Law, Los Angeles, March 23, 2015.

Panelist, “IP and Antitrust - The Current State of Economic Analysis,” Global Competition Review Live 2nd Annual IP & Antitrust USA, Washington, DC, April 14, 2015.

Panelist, “FRAND Royalty Rates After Ericsson v. D-Link,” American Bar Association, May 15, 2015.

PROFESSIONAL ACTIVITIES

Member, American Economic Association

Member, Econometric Society

Member, American Bar Association

Contributor, www.antitrust.org

Contributor, ABA Section of Antitrust Law, *Econometrics*, 2005

Associate Editor, *Antitrust*, 2007-2010

Senior Editor, *Antitrust Law Journal*, 2012-; Associate Editor, 2010-2012

Co-Editor, ABA Section of Antitrust Law Economics Committee Newsletter, 2009-2012

Member, Economics Task Force, ABA Section of Antitrust Law, 2011-2012

Member, ABA Delegation to International Seminar on Anti-Monopoly Law: Procedure and Substantive Assessment in Merger Control, Beijing, People's Republic of China, December 15-17, 2008

Member, Working Group for drafting the "Joint Comments of the American Bar Association Section of Antitrust Law and Section of International Law on the MOFCOM Draft Guidelines for Definition of Relevant Markets," 2009

Member, Working Group for drafting the "Joint Comments of the American Bar Association Section of Antitrust Law and Section of International Law on the SAIC Draft Regulations on the Prohibition of Acts of Monopoly Agreements and of Abuse of Dominant Market Position," 2009.

Member, Working Group for drafting the "Joint Comments of the American Bar Association Section of Antitrust Law and Section of International Law on the SAIC Draft Regulations on the Prohibition of Acts of Monopoly Agreements and of Abuse of Dominant Market Position," 2010.

Referee: *Econometrica*, *Review of Economics and Statistics*, *International Journal of Industrial Organization*, *Review of Industrial Organization, Journal of Sports Economics*, *Journal of Environmental Economics and Management*, *Research in Law and Economics*, *Labour Economics*, *Eastern Economic Journal*, *Journal of Forensic Economics, Antitrust, Antitrust Law Journal, Journal of Competition Law and Economics, Advances in Econometrics.*

TESTIMONY IN THE LAST FIVE YEARS

In re: Budeprion XL Marketing and Sales Practices Litigation, Civil Action 2:09-CV-2811, MDL Docket No. 2017, 2011 (Deposition).

Convolve, Inc. v. Dell Inc., et al., United States District Court, Eastern District of Texas, Marshall Division, Case No. No. 2:08-cv-244, 2011 (Deposition, Trial Testimony).

In the Matter of CERTAIN WIRELESS COMMUNICATION DEVICES, PORTABLE MUSIC AND DATA PROCESSING DEVICES, COMPUTERS AND COMPONENTS THEREOF, before the United States International Trade Commission, Investigation No. 337-TA-745, 2011 (Deposition).

In the Matter of CERTAIN MOBILE DEVICES, ASSOCIATED SOFTWARE, AND COMPONENTS THEREOF, before the United States International Trade Commission, Investigation No. 337-TA-744, 2011 (Deposition).

Oracle America, Inc. v. Google, Inc., United States District Court, Northern District for California, Case No. 3:10-CV-03561-WHA, 2011 (Deposition), 2016 (Deposition, Trial Testimony).

In the Matter of CERTAIN GAMING AND ENTERTAINMENT CONSOLES, RELATED SOFTWARE, AND COMPONENTS THEREOF, before the United States International Trade Commission, Investigation No. 337-TA-752, 2011 (Deposition).

General Atomics v. Paul Banks and TetraVue, Inc., Superior Court of the State of California, Case No. 37-2009-00084081-CU-BC-CTL, 2011 (Deposition, Trial Testimony).

Apple Inc., v. Motorola, Inc., United States District Court, Western District of Wisconsin, Case No. 10-CV-662 (BBC), 2011 (Deposition).

Genentech, Inc. and City of Hope v. Glaxo Group, Limited, et al., United States District Court, Central District of California, Western Division, Case No. 2:10-CV-02764-MRP (FMOx), 2011 (Deposition).

In the Matter of CERTAIN HANDHELD COMPUTING DEVICES, RELATED SOFTWARE, AND COMPONENTS THEREOF, before the United States International Trade Commission, Investigation No. 337-TA-769, 2011 (Deposition, Trial Testimony).

In the Matter of CERTAIN EQUIPMENT FOR COMMUNICATIONS NETWORKS, INCLUDING SWITCHES, ROUTERS, WIRELESS ACCESS POINTS, CABLE MODEMS, IP PHONES, AND PRODUCTS CONTAINING SAME, before the United States International Trade Commission, Investigation No. 337-TA-778, 2012 (Deposition).

Plantronics, Inc. v. Aliph, Inc., United States District Court for the Northern District of California, San Francisco Division, Case No. C09-01714 BZ, 2012 (Deposition).

Commonwealth Scientific and Industrial Research Organization v. Lenovo, Inc., et al., United States District Court for the Eastern District of Texas, Tyler Division, Case No. 6:09-cv-00400-LED, 2012 (Deposition).

Bayer HealthCare LLC v. Pfizer Inc., United States District Court, Northern District of Illinois, Eastern Division, Civil Action No. 1:12-cv-00630, 2012-2013 (Deposition).

L-7 Designs, Inc. v. Old Navy, Inc., United States District Court, Southern District of New York, Civil Action No. 09 Civ. 1432 (DC), 2012 (Deposition).

Apple, Inc. v. Motorola, Inc., United States District Court, Northern District of Illinois, Case No. 11-c-08540, 2012 (Deposition).

ITT Manufacturing Enterprises, Inc. v. Cellco Partnership, et al., United States District Court, District of Delaware, Civil Action No. 09-190-LPS, 2012 (Deposition).

Shelbyzyme LLC v. Genzyme Corporation, United States District Court, District of Delaware, Civil Action No. 09-768 (GMS), 2012 (Deposition, Trial Testimony).

In the Matter of CERTAIN DEVICES FOR IMPROVING UNIFORMITY USED IN A BACKLIGHT MODULE AND COMPONENTS THEREOF AND PRODUCTS CONTAINING THE SAME, before the United States International Trade Commission, Investigation No. 337-TA-805, 2012 (Deposition, Trial Testimony).

Rachel Eastman, et al. v. First Data Corporation, et al., United States District Court, District of New Jersey, Case No. 2:10-cv-04860 (WHW) (MCA), 2012 (Deposition).

In the Matter of CERTAIN COMMUNICATIONS EQUIPMENT COMPONENTS THEREOF, AND PRODUCTS CONTAINING THE SAME, INCLUDING POWER OVER ETHERNET TELEPHONES, SWITCHES, WIRELESS ACCESS POINTS, ROUTERS AND OTHER DEVICES USED IN LANs, AND CAMERAS, before the United States International Trade Commission, Investigation No. 337-TA-817, 2012 (Deposition).

Fujitsu Limited v. Belkin, et al., United States District Court, Northern District of California, San Jose Division, Case No. 10-cv-03972-LHK(PSG), 2012 (Deposition, Trial Testimony).

Medivation, Inc. v. The Regents of the University of California, et al., Superior Court of the State of California, Case No. CGC-11-510715, 2012 (Deposition, Trial Testimony).

In Re Photochromic Lens Antitrust Litigation (Direct Purchaser Action), United States District Court for the Middle District of Florida, Tampa Division, MDL Docket No. 2173, 2012 (Deposition, Hearing Testimony).

In Re Photochromic Lens Antitrust Litigation (Indirect Purchaser Actions), United States District Court for the Middle District of Florida, Tampa Division, MDL Docket No. 2173, 2012 (Deposition, Hearing Testimony).

In the Matter of CERTAIN PRODUCTS CONTAINING INTERACTIVE PROGRAM GUIDE AND PARENTAL CONTROL TECHNOLOGY, before the United States International Trade Commission, Investigation No. 337-TA-845, 2012 (Deposition, Trial Testimony).

In the Matter of CERTAIN COMPUTERS AND COMPUTER PERIPHERAL DEVICES AND COMPONENTS THEREOF AND PRODUCTS CONTAINING THE SAME, before the United States International Trade Commission, Investigation No. 337-TA-841, 2012-2013 (Trial Testimony).

Gemalto SA v. HTC Corporation, et al., United States District Court for the Eastern District of Texas, Tyler Division, Civil Action No. 6:10-CV-561-LED, 2013 (Deposition).

Adobe Systems Incorporated v. Wowza Media Systems, LLC, et al., United States District Court for the Northern District of California, Oakland Division, Case No. cv 11-02243, 2013 (Deposition).

In the Matter of CERTAIN AUDIOVISUAL COMPONENTS AND PRODUCTS CONTAINING THE SAME, before the United States International Trade Commission, Investigation No. 337-TA-837, 2013 (Deposition).

Ericsson Inc., et al. v. D-Link Corporation, et al., United States District Court for the Eastern District of Texas, Tyler Division, Civil Action No. 6:10-cv-473, 2013 (Deposition, Trial Testimony).

Edwards Lifesciences v. Medtronic CoreValve, et al., United States District Court for the District of Delaware, Case No. 12-23 (GMS), 2013 (Deposition, Trial Testimony).

Intellectual Ventures I LLC v. Trend Micro Incorporated and Trend Micro, Inc. (USA), United States District Court for the District of Delaware, C. A. No. 12-cv-1581-LPS, 2013 (Deposition).

The Money Suite Company v. Insurance Answer Center, LLC, et al., United States District Court for the Central District of California, Southern Division – Santa Ana, Lead Case No. 11-SACV-01847 AG (JPRx), 2013 (Deposition).

ParkerVision Inc. v. Qualcomm Incorporated, United States District Court for the Middle District of Florida, Jacksonville Division, Case No.: 3:11-cv-719-J-37-TEM, 2013 (Deposition, Trial Testimony).

Medtronic, Inc. v. Edwards Lifesciences Corporation, et al., United States District Court for the Central District of California, Case No.: SACV 12-00327 JVS (JPRx), 2013 (Deposition).

Microsoft Corporation v. Motorola Inc., et al., United States District Court for the Western District of Washington, Seattle Division, Case No. C10-1823JLR, 2013 (Deposition, Trial Testimony).

In the Matter of CERTAIN INTEGRATED CIRCUIT CHIPS AND PRODUCTS CONTAINING SAME, before the United States International Trade Commission, Investigation No. 337-TA-859, 2013 (Deposition, Trial Testimony).

Realtek Semiconductor Corporation v. LSI Corporation and Agere Systems, Inc., United States District Court Northern District of California, San Jose Division, Case No. 5:12-cv-03451 RMW, 2013 (Deposition, Trial Testimony).

Acer Inc., Acer America Corporation, and Gateway Inc. v. Technology Properties Limited, Patriot Scientific Corporation, and Alliacense Limited, United States District Court for the Northern District of California, San Jose Division, Case No. 5:08-cv-00877 PSG, 2013 (Deposition).

Intervet Inc. d/b/a Merck Animal Health, The Arizona Board of Regents on behalf of The University of Arizona v. Boehringer Ingelheim Vetmedica, Inc., United States District Court for the District of Delaware, Case No. 11-595-LPS, 2013 (Deposition).

In Re Innovatio IP Ventures, LLC Patent Litigation, United States District Court for the Northern District of Illinois, Case No. 1:11-cv-09308, 2013 (Deposition, Trial Testimony).

In the Matter of CERTAIN OMEGA-3 EXTRACTS FROM MARINE OR ACQUATIC BIOMASS AND PRODUCTS CONTAINING THE SAME, before the United States International Trade Commission, Investigation No. 337-TA-877, 2013 (Deposition).

Open Text SA v. Box Inc., United States District Court for the Eastern District of Virginia, Norfolk Division, Civil Action No. 2:13-CV-00319-MSD-DEM, 2013-2015 (Deposition, Trial Testimony).

Apple Inc. and Apple Sales International v. Motorola Mobility LLC, United States District Court for the Southern District of California, Case No. 3:12-cv-00355-GPC-BLM, 2013 (Deposition).

iControl Networks, Inc. v. Alarm.com Incorporated and Frontpoint Security Solutions, LLC, United States District Court for the Eastern District of Virginia, Alexandria Division, Case No. 1:13cv834 (LMB-IDD), 2013 (Deposition).

Affinity Labs of Texas, LLC v. General Motors LLC, United States District Court for the District of Eastern District of Texas, Beaumont Division, C.A. No. 1:12-cv-00582-RC, 2014 (Deposition).

W.L. Gore & Associates, Inc. v. C.R. Bard, Inc. and Bard Peripheral Vascular, Inc., United States District Court for the District of Delaware, C.A. No. 11-515-LPS-CJB, 2014 (Deposition).

Richard Noll and Rhythm Motor Sports, LLC v. eBay Inc., eBay Europe S.A.R.L., and eBay International AG, Inc., United States District Court for the Northern District of California, San Jose Division, Case No. 5:11-CV-04585-EJD, 2014 (Deposition).

Bristol-Myers Squibb Company v. Genentech Inc. and City of Hope, United States District Court for the Northern District of California, Western Division, Case No. 2:13-CV-05400-MRP (JEMx), 2014 (Deposition).

Eli Lilly and Imclone v. Genentech Inc. and City of Hope, United States District Court for the Northern District of California, Western Division, Case No. 2:13-CV-07248-MRP, 2014 (Deposition).

Graftech International Ltd. and Graftech International Holdings Inc. F/K/A UCAR Carbon Company Inc. v. Carbone Savoie, Alcan France and Rio Tinto Alcan, International Chamber of Commerce, International Court of Arbitration, Case Ref.: 19798/AGF, 2014 (Hearing Testimony).

Samsung Electronics Co., Ltd. (Korea) v. Nokia Corporation (Finland), International Chamber of Commerce, International Court of Arbitration, Case Ref.: 19602/AGF/RD (c.19638/AGF), 2015 (Hearing Testimony).

In the Matter of CERTAIN NETWORK DEVICES, RELATED SOFTWARE, AND COMPONENTS THEREOF (I), before the United States International Trade Commission, Investigation No. 337-TA-944, 2015 (Deposition).

Broadband iTV, Inc. v. Hawaiian Telecom, Inc., Oceanic Time Warner Cable, LLC, and Time Warner Cable, Inc., United States District Court for the District of Hawaii, Case No. 14-00169 ACK-RLP, 2015 (Deposition).

In the Matter of CERTAIN NETWORK DEVICES, RELATED SOFTWARE, AND COMPONENTS THEREOF (II), before the United States International Trade Commission, Investigation No. 337-TA-945, 2015 (Deposition, Hearing Testimony).

SRI International, Inc. v. Cisco Systems, Inc., United States District Court for the District of Delaware, Case No. 13-1534 (SLR), 2016 (Deposition, Trial Testimony).

ChriMar Systems, Inc., et al. v. Cisco Systems, Inc., et al., United States District Court for the District of Northern California, Oakland Division, Case No. 4:13-cv-01300-JSW, 2016 (Deposition).

TCL Communication Technology Holdings, LTD., et al., v. Telefonaktiebolaget LM Ericsson, et al., United States District Court for the Central District of California, Southern Division, Case No. SACV14–00341 JVS (DFMx), 2016 (Deposition).

Chervon North America, Inc., Positec Tool Corporation, Positec USA, Inc. and Hilti, Inc. v. Milwaukee Electric Tool Corporation, United States Patent and Trademark Office Before the Patent Trial and Appeal Board, Case IPR2015-00595, Case IPR2015-00596, and Case IPR2015-00597, 2016 (Deposition).

Sanofi-Aventis U.S. LLC and Regeneron Pharmaceuticals, Inc. v. Genentech, Inc. and City of Hope, United States District Court, Central District of California, Western Division, Case No. 2:15-CV-05685, 2016 (Deposition).

Irori Technologies, Inc. v. Procopio, Cory, Hargreaves & Savitc, LLP, and Eleanor Musick, JAMS Arbitration Reference No. 1240022033, 2016 (Deposition).

SD3, LLC and SawStop LLC v. Black and Decker (U.S.), Inc., et al., United States District Court for the Eastern District of Virginia, Civil Action No.: 1:14-cv-00191, 2016 (Deposition).

Intellectual Ventures II LLC v. Nextel Operations, Inc., Sprint Spectrum L.P., Boost Mobile LLC, and Virgin Mobile USA, L.P., United States District Court for the District of Delaware, Civil Action No. 13-cv-1635-LPS, 2016 (Deposition).

In Re Lidoderm Antitrust Litigation, United States District Court for the District of Northern California, Case No. 14-MD-02521-WHO, 2016 (Deposition).

SELECTED MERGER EXPERIENCE

R.R. Donnelley/Meredith Burda (1990-1993): Merger of printing companies. Reviewed by the FTC. Preliminary Injunction Hearing. Part III Hearing.

Kimberly-Clark/Scott (1995): Merger of manufacturers of tissue products. Reviewed by the DOJ and the European Commission.

Staples/Office Depot (1996-1997): Proposed merger of office supply retailers. Reviewed by the FTC. Preliminary injunction hearing.

IMC/Western Ag (1997): Merger of mining companies. Reviewed by the DOJ.

Dow/Union Carbide (1999-2001): Merger of chemical manufacturers. Reviewed by the FTC.

Volvo/Scania (2000): Merger of truck manufacturers. Reviewed by the European Commission.

First Data/Concord (2003-2004): Merger of companies involved in merchant acquiring and payment networks. Reviewed by the DOJ.

Bumble Bee/Connors (2004): Merger of canned seafood manufacturers. Reviewed by the DOJ.

Sonaecom/Portugal Telecom (2006): Merger of telecommunications companies. Reviewed by the Portuguese Competition Authority.

Graphic Packaging/Altivity (2007-2008): Merger of paperboard manufacturers. Reviewed by the DOJ.

Inbev/Anheuser-Busch (2008): Merger of beer manufacturers. Reviewed by the DOJ, the UK Competition Commission, and MOFCOM.

Serta/Simmons (2009): Merger of mattress manufacturers. Reviewed by the FTC.

Coty/OPI (2010): Merger of nail polish manufacturers. Reviewed by the DOJ.

Knowles/NXP (2011): Knowles acquired the speaker/receiver business of NXP. Reviewed by MOFCOM.

AT&T/T-Mobile (2011): Consulted for the DOJ regarding the proposed deal between the two wireless service providers.

Confidential engagement for consumer product manufacturer (2012): Consulted for a consumer product manufacturer considering an acquisition with potential overlap in various jurisdictions around the world.

Confidential engagement for consumer product manufacturer (2012): Consulted for a consumer product manufacturer considering an acquisition with potential overlap in numerous product lines in the US.

UPS/TNT (2013): Consulted for the Ministry of Commerce of the People's Republic of China regarding the proposed deal between two package delivery services.

Thermo Fisher/Life Technologies (2014): Consulted for the Ministry of Commerce of the People's Republic of China regarding the proposed deal.

Seagate/Samsung (2014-2015): Consulted for Ministry of Commerce of the People's Republic of China regarding whether "hold separate" conditions should be lifted.

Western Digital/Hitachi (2014-2015): Consulted for Ministry of Commerce of the People's Republic of China regarding whether "hold separate" conditions should be lifted.

Confidential engagement for consumer product manufacturer (2016): Consulted for a consumer product manufacturer concerning possible acquisition in the US.

Appendix B

Amended Appendix B
Documents Considered

Bates Documents

AMZN00000001
AMZN00000031
AMZN00000062
AMZN00000115
AMZN00000117
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UMPG00001007
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UMPG00001371
UMPG00002118
UMPG00002119

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WC00000090
WC00000096
WC00000097
WC00000187
WC00000294
WC00000353
WC00000478
WC00000829
WC00001157
WC00001158
WC00001206

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Exhibits

Exhibit 4
Spotify Financial Performance
2009 - 2015

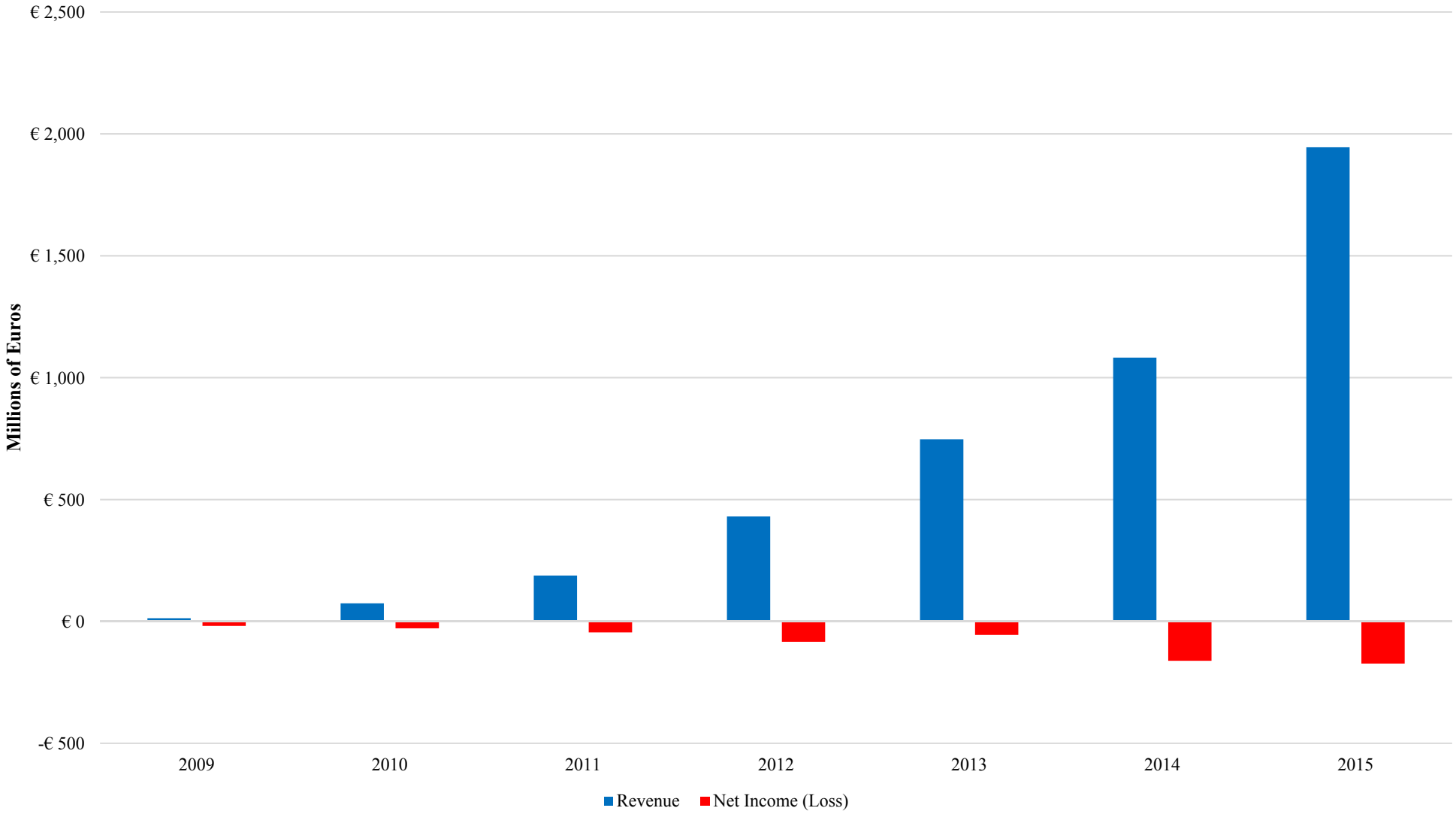

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Exhibit 6a
Total Revenue and Shipments for the U.S. Music Industry

2005 - 2015

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
Revenue ($M)											
LP/EP	$ 14.2	$ 15.7	$ 22.9	$ 56.7	$ 63.8	$ 88.9	$ 119.4	$ 160.7	$ 210.7	$ 314.9	$ 416.2
Vinyl Single	13.2	9.9	4.0	2.9	2.5	2.3	4.6	4.7	3.0	5.9	6.1
8-Track	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cassette	13.1	3.7	3.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cassette Single	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Tapes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CD	10,520.2	9,372.6	7,452.3	5,471.3	4,318.8	3,389.4	3,100.7	2,485.6	2,140.9	1,832.6	1,520.8
CD Single	10.9	7.7	12.2	3.5	3.1	2.9	3.5	3.2	2.5	3.8	1.2
Music Video	602.2	451.1	484.9	227.3	209.6	177.6	151.0	116.6	106.3	91.2	73.2
DVD Audio	11.2	2.4	2.8	1.2	1.6	0.9	0.3	0.2	-0.5	2.1	5.4
SACD	10.0	5.5	3.6	3.1	2.4	1.7	1.5	1.3	1.0	0.8	1.1
Download Single	363.3	580.6	811.0	1,032.2	1,172.0	1,336.4	1,522.4	1,623.6	1,567.6	1,407.8	1,226.9
Download Album	135.7	275.9	497.4	635.3	744.3	872.4	1,070.8	1,204.8	1,232.1	1,150.9	1,090.7
Kiosk	1.0	1.9	2.6	2.6	6.3	6.4	2.7	3.7	6.2	2.6	3.7
Download Music Video	3.7	19.7	28.2	41.3	40.9	36.6	32.4	20.8	16.7	13.6	6.4
Ringtones & Ringbacks	421.6	773.8	1,055.8	977.1	702.8	448.0	276.2	166.9	97.9	66.3	54.5
Paid Subscriptions	149.2	206.2	234.0	221.4	206.2	212.4	247.8	399.9	639.2	800.1	1,218.9
SoundExchange	20.4	32.8	36.2	100.0	155.5	249.2	292.0	462.0	590.4	773.4	802.6
Synchronization	0.0	0.0	0.0	0.0	201.2	188.7	196.5	190.6	189.7	189.7	202.9
On-Demand Streaming	0.0	0.0	0.0	0.0	0.0	0.0	113.8	170.9	220.0	294.8	385.1
Total Revenue	**$ 12,289.9**	**$ 11,759.5**	**$ 10,650.9**	**$ 8,776.8**	**$ 7,831.0**	**$ 7,013.8**	**$ 7,135.6**	**$ 7,015.5**	**$ 7,023.7**	**$ 6,950.5**	**$ 7,015.7**
Shipments (M)											
LP/EP	1.0	0.9	1.3	2.9	3.5	4.2	5.5	6.9	9.4	13.2	16.9
Vinyl Single	2.3	1.5	0.6	0.4	0.3	0.3	0.4	0.4	0.3	0.5	0.5
8-Track	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cassette	2.5	0.7	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cassette Single	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Tapes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CD	705.4	619.7	499.7	368.4	296.6	253.0	240.8	198.2	173.8	142.8	122.9
CD Single	2.8	1.7	2.6	0.7	0.9	1.0	1.3	1.1	0.6	1.0	0.4
Music Video	33.8	23.2	27.5	13.2	11.6	9.1	7.7	6.0	4.8	4.1	3.3
DVD Audio	0.5	0.1	0.2	0.0	0.1	0.0	0.0	0.0	-0.1	0.1	0.2
SACD	0.5	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0
Download Single	366.9	586.4	819.4	1,042.7	1,124.4	1,177.4	1,332.3	1,392.2	1,327.9	1,199.1	1,021.0
Download Album	13.6	27.6	49.8	63.6	74.5	85.8	103.9	116.7	118.0	117.6	109.4
Kiosk	0.7	1.4	1.8	1.6	1.7	1.7	1.3	2.0	3.7	1.6	2.2
Download Music Video	1.9	9.9	14.2	20.8	20.5	18.4	16.3	10.5	8.4	6.8	3.2
Ringtones & Ringbacks	170.0	315.0	433.8	405.1	294.3	188.5	115.4	69.3	39.3	26.6	21.9
Paid Subscriptions	1.3	1.7	1.8	1.6	1.2	1.5	1.8	3.4	6.2	7.7	10.8
Total Shipments	**1,303.2**	**1,590.1**	**1,853.3**	**1,921.2**	**1,829.7**	**1,741.0**	**1,826.8**	**1,806.8**	**1,692.3**	**1,521.1**	**1,312.7**

Notes: SoundExchange includes streaming radio services such as Pandora, SiriusXM and other internet radio. Paid subscriptions includes services such as Rhapsody and paid versions of Spotify. On-demand streaming includes services such as ad-supported Spotify. See "News and Notes on 2015 Mid-Year RIAA Shipment and Revenue Statistics."

The RIAA does not provide shipments information on SoundExchange, synchronization and on-demand streaming services.

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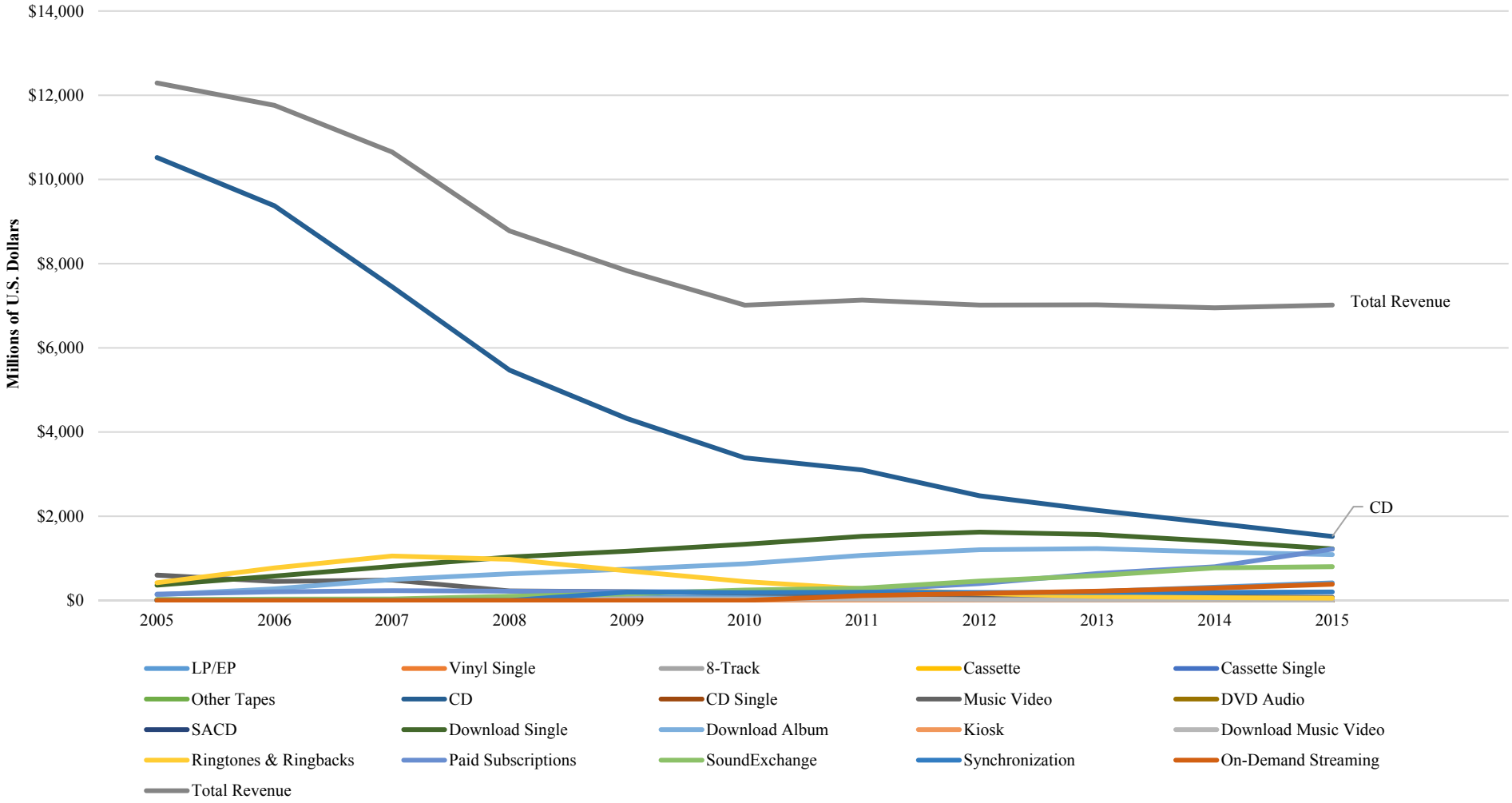
Exhibit 6b
U.S. Music Industry Revenue
2005 - 2015



Notes: SoundExchange includes streaming radio services such as Pandora, SiriusXM and other internet radio. Paid subscriptions includes services such as Rhapsody and paid versions of Spotify. On-demand streaming includes services such as ad-supported Spotify.

Sources: "U.S. Sales Database," The Recording Industry Association of America, https://www.riaa.com/u-s-sales-database/. Last accessed September 21, 2016.
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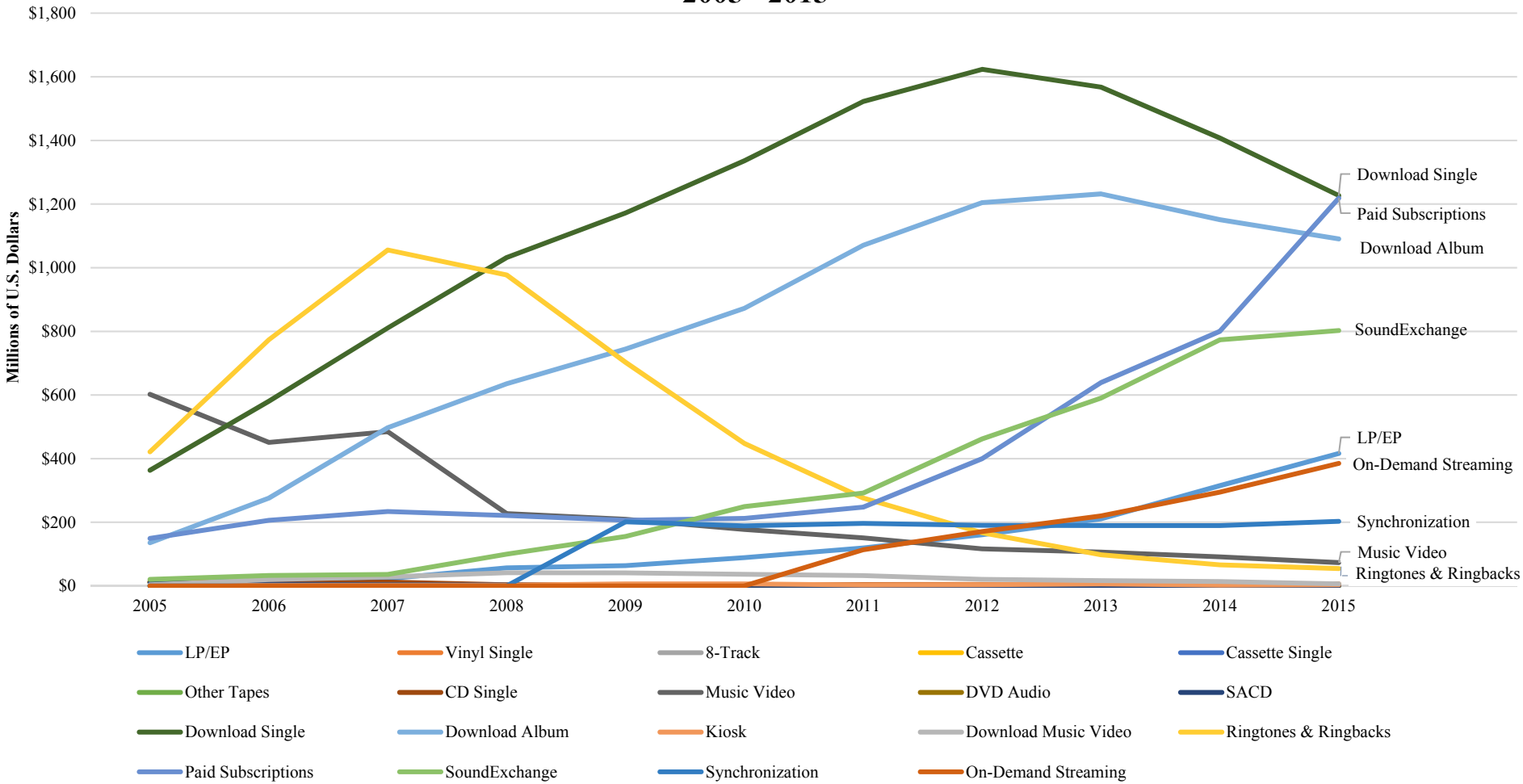
Exhibit 6c
U.S. Music Industry Revenue
Excluding Total Industry and CD Sales
2005 - 2015



Notes: SoundExchange includes streaming radio services such as Pandora, SiriusXM and other internet radio. Paid subscriptions includes services such as Rhapsody and paid versions of Spotify. On-demand streaming includes services such as ad-supported Spotify.

Sources: "U.S. Sales Database," The Recording Industry Association of America, https://www.riaa.com/u-s-sales-database/. Last accessed September 21, 2016.
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Amended Exhibit 7
Subpart A Effective Royalty Rate as a Percentage of the Price Per Song
2006-2015

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
U.S. Sales of Digital Downloads										
Singles										
Unit Shipments	586.4	819.4	1,042.7	1,124.4	1,177.4	1,332.3	1,392.2	1,327.9	1,199.1	1,021.0
Revenue	$ 580.6	$ 811.0	$ 1,032.2	$ 1,172.0	$ 1,336.4	$ 1,522.4	$ 1,623.6	$ 1,567.6	$ 1,407.8	$ 1,226.9
Price Per Song	$ 0.99	$ 0.99	$ 0.99	$ 1.04	$ 1.14	$ 1.14	$ 1.17	$ 1.18	$ 1.17	$ 1.20
Albums										
Unit Shipments	27.6	49.8	63.6	74.5	85.8	103.9	116.7	118.0	117.6	109.4
Revenue	$ 275.9	$ 497.4	$ 635.3	$ 744.3	$ 872.4	$ 1,070.8	$ 1,204.8	$ 1,232.1	$ 1,150.9	$ 1,090.7
Price Per Album	$ 10.00	$ 9.99	$ 9.99	$ 9.99	$ 10.17	$ 10.31	$ 10.32	$ 10.44	$ 9.79	$ 9.97
Songs Per Album	10	10	10	10	10	10	10	10	10	10
Implied Price Per Song	$ 1.00	$ 1.00	$ 1.00	$ 1.00	$ 1.02	$ 1.03	$ 1.03	$ 1.04	$ 0.98	$ 1.00
Singles and Albums										
Price Per Song	$ 0.99	$ 0.99	$ 0.99	$ 1.03	$ 1.09	$ 1.09	$ 1.11	$ 1.12	$ 1.08	$ 1.10
Subpart A Royalty Rate Per Song	$ 0.095	$ 0.095	$ 0.095	$ 0.095	$ 0.095	$ 0.095	$ 0.095	$ 0.095	$ 0.095	$ 0.095
Subpart A Effective Royalty Rate Per Song										
Effective Subpart A Royalty Rate	9.6 %	9.6 %	9.6 %	9.3 %	8.8 %	8.7 %	8.6 %	8.5 %	8.8 %	8.7 %

Average Price Per Song	**$ 1.07**
Effective Subpart A Royalty Rate	**8.9 %**

Notes: Unit Shipments and Revenue are in millions.

Based on the RIAA's assumption, one album contains 10 songs on average.

The Subpart A Royalty Rate Per Song is calculated using track download and song length data from Google, which spans the period of November 2011-October 2016.

The Subpart A Royalty Rate Per Song is calculated as (the number of tracks equal to or less than 5 minutes multiplied by 9.1 cents plus the number of tracks exceeding five minutes, rounded up to the nearest minute, multiplied by 1.75 cents) divided by the total number of tracks.

Subpart A Effective Royalty Rates are calculated as the Subpart A Royalty Rate Per Song divided by Price Per Song.

Implied Price Per Song in the Albums section is calculated as the Price Per Album divided by Songs Per Album.

Price Per Song in the Singles and Albums section is calculated as the weighted average price per song for singles and albums.

Average Price Per Song is calculated as the weighted average price per song over the 2006-2015 time period.

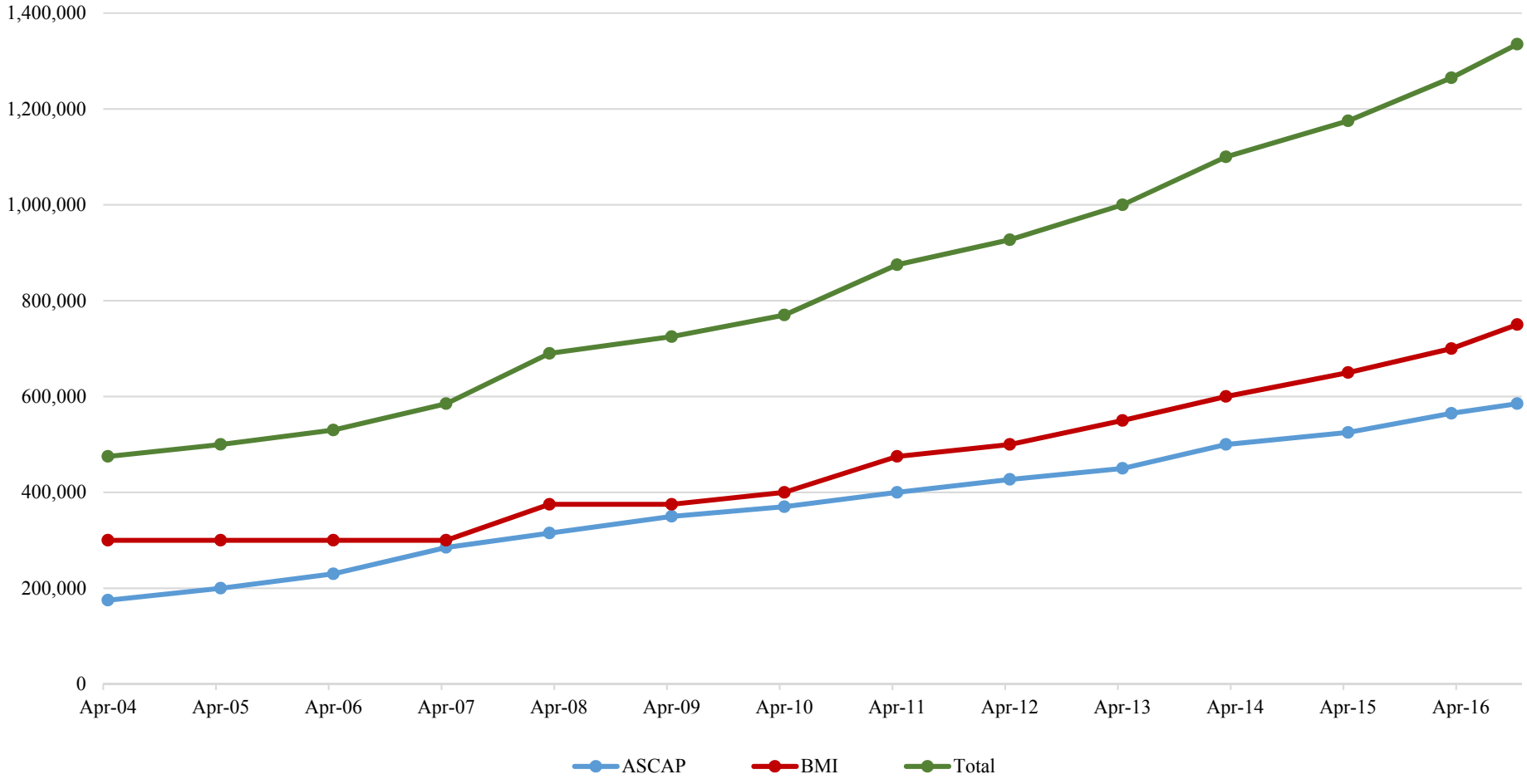
Sources: 37 CFR § 385.3.

"U.S. Sales Database," The Recording Industry Association of America, https://www.riaa.com/u-s-sales-database/. Last accessed on September 14, 2016.

"RIAA Accepts Streams for Gold and Platinum Certifications," Billboard, February 1, 2016, http://www.billboard.com/articles/business/6859551/riaa-streaming-gold-platinum-certification-methodology.

GOOG-PHONOIII-00003910.

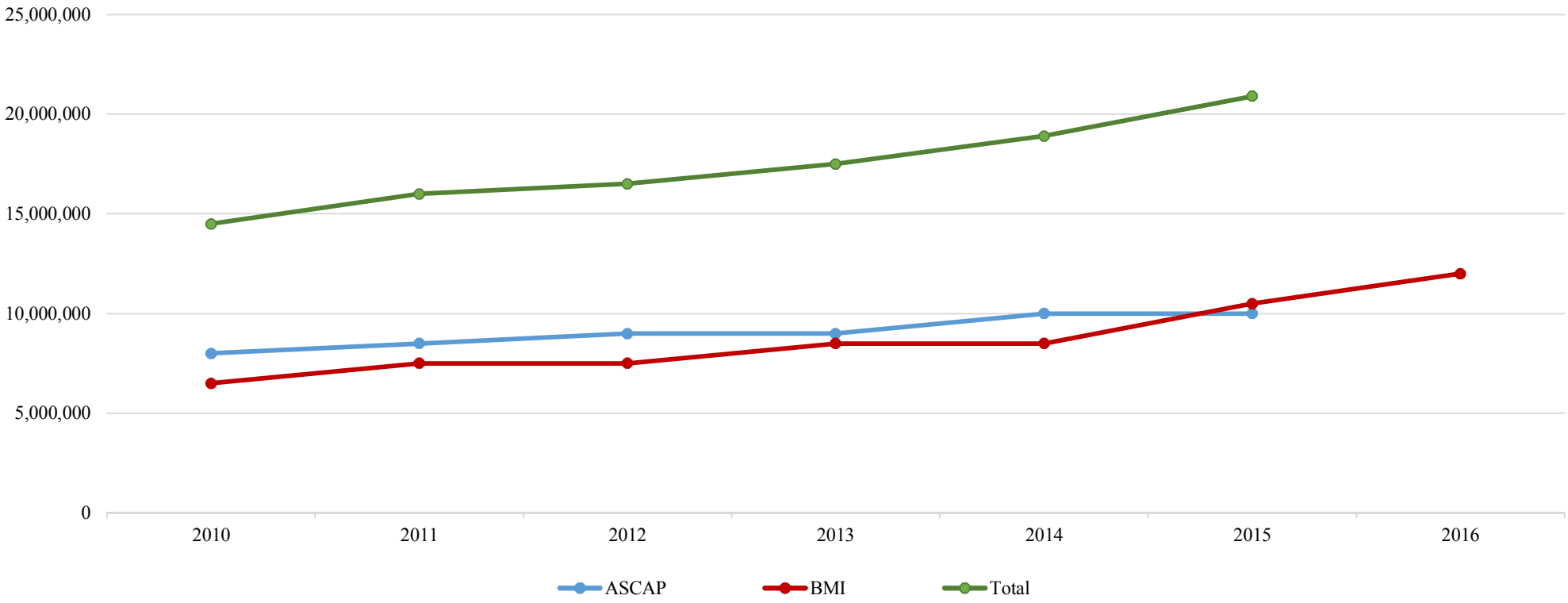
Exhibit 9
Number of Affiliated Songwriters, Composers, and Music Publishers
2004-2016



Note: Historical data for ASCAP and BMI retrieved from https://archive.org/web/.
Sources: "About ASCAP," ASCAP, http://www.ascap.com/about.
"About," BMI, http://www.bmi.com/about.

Exhibit 10
Number of Compositions Represented by Major U.S. PROs

2010-2016



Note: Historical data for BMI retrieved from https://archive.org/web/.
Sources: "About," BMI, http://www.bmi.com/about.
2015 Annual Report, ASCAP.
2014 Annual Report, ASCAP.
2013 Annual Report, ASCAP.
2012 Annual Report, ASCAP.
2011 Annual Report, ASCAP.
2010 Annual Report, ASCAP.

Before the
COPYRIGHT ROYALTY BOARD
LIBRARY OF CONGRESS
Washington, D.C.

In the Matter of: Determination of Rates and Terms for Making and Distributing Phonorecords (Phonorecords III)	Docket No. 16-CRB-0003-PR (2018-2022)

REBUTTAL EXPERT WITNESS STATEMENT OF DR. GREGORY K. LEONARD

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I. QUALIFICATIONS AND ASSIGNMENT

1. My name is Gregory K. Leonard. I am an economist and partner at Edgeworth Economics, 333 Bush Street, Suite 1450, San Francisco, CA 94104.

2. My qualifications are presented in the Expert Witness Statement of Dr. Gregory K. Leonard, dated November 1, 2016 (my "opening report"), and amended on January 25, 2017 (my "amended opening report") (collectively, my opening report and amended opening report are referred to as my "opening reports"), which I have previously submitted in this matter.

3. I have been asked by Google to review and comment upon the expert reports issued on behalf of the Copyright Owners including: (1) Expert Report of Jeffrey A. Eisenach, Ph.D., dated October 31, 2015 ("Eisenach Expert Report"); (2) Expert Report of Marc Rysman, Ph.D., dated October 28, 2016 ("Rysman Expert Report"); and (3) Expert Report of Joshua Gans, dated October 31, 2016 ("Gans Expert Report"). I have also been asked to review and comment upon the expert reports issued on behalf of Apple including: (1) Expert Report of Anindya Ghose, dated November 1, 2016 ("Ghose Expert Report"); and (2) Expert Report of Jui Ramaprasad, dated November 1, 2016 ("Ramaprasad Expert Report").

4. In the course of my analysis, I have reviewed the documents and other information listed in Appendix B to this Written Direct Statement. Specific documents and other information cited as support in this testimony are not meant to be an exhaustive listing of all such documents or information.

5. My analysis and this report are based on information currently available to me. I reserve the right to augment or update opinions based on information learned in ongoing discovery.

II. SUMMARY OF OPINIONS

6. I have reached the following opinions:

- The Copyright Owners' proposal would result in a significant increase in the level of royalty payments required from streaming services for both mechanical rights alone and all-in rights for musical works.
  - In their attempts to justify the Copyright Owners' proposed rates, Drs. Eisenach and Rysman claim to have performed calculations that show that historical mechanical rates paid by the streaming services are consistent with the Copyright Owners' proposal.
  - However, these calculations are badly flawed in that they omit, without justification, data on certain providers, plans, and time periods. For example, [redacted] When these omissions, and numerous others, are corrected the Copyright Owners' proposed rate of $0.0015 per play is shown to be inconsistent with historical mechanical per-play rates.
  - Drs. Eisenach's and Rysman's analysis on a per user basis suffers from many of the same errors and issues as their per-play analysis.
- The substantial increase in rates and the change to a per-play structure under the Copyright Owners' proposal would both reduce the consumption of music and be disruptive.
  - Services are currently unprofitable. An increase in royalties likely would result in the exit of some services.
  - Consumers who preferred the services that exited would be made worse off. Streaming services are not homogenous; instead, they are differentiated in their features and their target customers. For example, the Amazon Prime music service offers fewer songs in its catalog, but is bundled in Amazon Prime. Ad-supported services do not require a subscription fee, but users must endure ads. Google offers human curation of playlists. When a differentiated product exits the market, the consumers who had used that service would be harmed (even if they switched to another service because that service would be less preferred), and they may even leave the streaming market entirely (and move to other forms of music that may pay lower royalties, e.g., piracy). Either way, consumption of music likely would decrease.
  - With fewer services, competition would decrease and streaming services' prices would increase. This would be expected to lead to a decrease in consumption of music.
  - The royalty increases under the Copyright Owners' proposal would result in higher costs for services, which could result in higher prices and less music consumption.

- Currently, subscription streaming services generally offer "all you can eat plans." The services have the incentive to encourage usage by subscribers. The resulting "engagement" reduces churn. Given the zero marginal cost of a stream, this setup is economically efficient in that an access fee is charged, but no incremental price is charged for usage. The change in royalty structure to a per play basis would disrupt the industry. Services would have the incentive to switch away from "all you can eat plans" or to limit usage in order to limit their royalty costs. This would result in a decrease in music consumption.

- The Copyright Owners' experts largely ignore the 801(b)(1) factors.
  - They assert that the statutory rate should be a "market rate." However, a "market rate" (as they define it) is not consistent with the 801(b)(1) factors. In contrast, rates determined in the "shadow of regulation" that the Copyright Owners dismiss *do* account for the 801(b)(1) factors, a characteristic that makes them better comparables, all else equal.

- Dr. Eisenach's comparables analysis is unreliable.
  - The wide range of Dr. Eisenach's supposed "comparables" for the ratio of the sound recording rights royalty to the musical works rights royalty demonstrates that there is no single such ratio that applies broadly across all contexts and that, in fact, the ratio depends crucially on economic circumstances of a given context. For example, Dr. Eisenach (and other Copyright Owner experts) point to the [redacted] of sound recording royalties to musical work royalties for synchronization rates. However, this ratio differs substantially from the ratio that Dr. Eisenach and the other Copyright Owner experts claim to be appropriate for streaming. Thus, the economic conditions surrounding synchronization rights must be substantially different than the economic conditions surrounding streaming. However, the Copyright Owners' experts never address this.

  - Dr. Eisenach ultimately relies on the YouTube user uploaded video rates for his final conclusions. Dr. Eisenach's use and analysis of the YouTube user uploaded videos is flawed for several reasons including: (1) Dr. Eisenach inappropriately assumes that user-posted, audiovisual content is similar to interactive music streaming content subject to Section 115; (2) the ratio that Dr. Eisenach derives from user-posted, audiovisual content compares rates that do not account for the 801(b)(1) factors; and (3) further, Dr. Eisenach ignores the musical work rates paid by YouTube for interactive music streaming content subject to Section 115, and for record company videos, both of which result in sound recording to musical work ratios substantially greater than Dr. Eisenach's benchmark based on non-comparable user-posted, audiovisual content.

  - Dr. Eisenach also ultimately relies on the [redacted]s for his final conclusions. Dr. Eisenach's use and analysis of the [redacted]s with music publishers is flawed for several reasons including: (1) the ratios that Dr. Eisenach derives from these agreements compare regulated sound recording rates determined under

the willing buyer/willing seller standard with regulated musical work rates subject to the ASCAP/BMI consent decrees and, therefore, do not account for the 801(b)(1) factors; (2) I understand that the threat of further withdrawals by the music publishers from ASCAP and BMI and the uncertainty regarding the ongoing DOJ review of the consent decrees were used by music publishers to extract supracompetitive rates from [redacted] and (3) Dr. Eisenach's projection of sound recording to musical work ratios for 2018-2022 assumes, without basis, that the ratios are a function of only one factor, the time trend, the historical time trend from 2012 to 2018 would continue into the future, and the sound recording to musical work ratio will continue to decline into the future toward some hypothetical and unspecified equilibrium, market-based rate.

  - Dr. Eisenach inexplicably ignores the most appropriate benchmark—the musical work royalty determined under Subpart A. This is the best benchmark because (1) it was agreed to in a settlement involving the same parties, (2) it incorporates the 801(b)(1) factors, and (3) there are economic similarities between streaming and digital downloads.

- The Copyright Owners' experts claim that sound recording rights royalties provide an economically appropriate benchmark for determining the royalties for musical work mechanical rights. This claim is incorrect for several reasons.
  - First, sound recording rights are determined in a market setting not subject to the 801(b)(1) factors.
  - Second, the record labels have market power and thus sound recording rights royalties are above the competitive level.
  - Finally, under Copyright Owners' experts' claim that musical work royalties have been "suppressed," sound recording royalties are necessarily "too high" and thus do not provide a valid benchmark.

- The Copyright Owners' experts misleadingly focus on mechanical rights royalties when claiming that musical work copyright owners have lost royalties over time.
  - A streaming service requires both the mechanical right and the performance right for a musical work.
  - The rights are perfectly complementary—one right is worth nothing without the other. It makes no economic sense to look at the mechanical royalties in isolation. Instead, only the all-in rate is meaningful.
  - An analyst report relied on by Dr. Gans demonstrates that streaming has benefited musical works rights owners, when total royalty payments are considered.
  - In the case of a permanent digital download ("PDD"), the mechanical right is all that is needed and thus the mechanical royalty represents the all-in payment for the musical work.

- The Copyright Owners' experts and Apple's experts are incorrect when they claim that a per-stream royalty structure is preferable to a percentage of revenue royalty structure for streaming.
    - The marginal cost of a stream is essentially zero. Thus, economic efficiency, and the 801(b)(1) factors, suggests that the appropriate royalty structure is an "access fee" plus zero charge per stream. This is, of course, the model on which services charge subscribers for "all you can eat" plans.
    - Matching the royalty payments to the way in which revenues are generated also makes this large cost component more predictable for services.
    - Percentage of revenue royalty structures are common in intellectual property licenses.
    - A per-play rate is not consistent with how rights licenses work in other similar contexts. For example, Netflix pays a fixed lump sum to a rights holder for use of the content for a specified period of time, regardless of the number of times the content is streamed by Netflix customers.
    - The percentage of revenue royalty structure is flexible in that it automatically results in lower royalties for plans or services that target lower willingness to pay consumers. A lower royalty for such customers is appropriate because the musical work has less value in this context.
    - In contrast, a per-play royalty structure imposes a "one size fits all" royalty for all services and plans. This is not economically efficient because the musical work does not have the same value in all contexts.
    - The percentage of revenue royalty structure also reflects the idea that the relative contributions of the musical work and the service are roughly the same in *percentage terms* across services and plans.
    - There is no evidence that the services have manipulated revenue definitions. The Copyright Owners' experts only provide speculation on this point.
    - There is no evidence that the services are setting low prices today to build an installed base with the expectation of "recouping" the "investment" in the future. The Copyright Owners' experts provide only speculation on this point. However, even if that were the case, copyright owners would, along with the services, benefit from the recoupment and thus should properly share in the investment. A percentage of revenue royalty structure accomplishes this.
- Dr. Gans' "Shapley value" approach is badly flawed
    - Contrary to Dr. Gans' claim, Shapley values do not generally replicate "market outcomes"; instead, they provide an axiomatic basis for splitting surplus in a way that

satisfies a specific definition of "fairness." To the extent that Dr. Gans thinks that the statutory rate should reflect a market outcome, the Shapley value approach is not appropriate.

- There is no basis for Dr. Gans' crucial assumption that the contributions of the sound recording and musical works are of equal value. In fact, the contributions of artists are likely to be of greater value (particularly in the case of popular artists).

- Dr. Gans focuses on the publishers and labels and ignores the songwriters and artists. However, the profits to songwriters must be combined with the profits to publishers, for example, for a correct analysis. However, he has no data on profits to songwriters and artists.

- Dr. Gans ignores the fact that, under his own theory that the musical works royalties have been "suppressed," that implies that the sound recording rights have received royalties that are too high. Moreover, he ignores the record labels' market power. Finally, he ignores the services—under his approach, the service should also be entitled to an equal share of the surplus. When these corrections are made (and the other flaws of the approach are ignored), the musical work royalty is substantially lower than Dr. Gans calculated.

- It is important to understand the similarities and distinctions among PDDs, streaming, and bundled albums.
  - With a PDD, a user pays a price for access to a track (by purchasing the PDD), and then can listen to the track as often as desired over an unlimited time.

  - With subscription streaming service, a user pays a price for access to a library for a given time period (by purchasing a subscription), and then can listen to any track in the service's library as often as desired within that time period.

  - With streaming, a user is more likely to "experiment" and listen to a wider variety of tracks than if only PDDs were available because there is no cost to doing so. A user who streams a track would not necessarily have bought a PDD of the track if streaming were not available. Such a user would be even less likely to have bought a bundled album in the absence of streaming and PDDs.

  - Dr. Gans mistakenly assumes that the listening behavior of streaming users is the same as album purchasers.

- Apple's experts, Drs. Ghose and Ramaprasad, endorse Apple's Subpart B proposal of $0.00091 per play, which is based on an outdated streams-to-download ratio of 100:1. More current streams-to-download ratios ranging from 137:1 to 150:1 generate per-play rates considerably lower than Apple's proposal.

III. REVIEW AND CRITICISMS OF THE EXPERT REPORTS ON BEHALF OF THE COPYRIGHT OWNERS

A. The Copyright Owners' Proposal

7. I understand that for Subpart B interactive streaming and limited download services, and Subpart C locker and other services, the Copyright Owners are proposing a mechanical-only royalty equal to the greater of $0.0015 per play and $1.06 per user.[1] These rates are a major departure from the current statutory rates and structure and would result in royalty payments significantly higher than those paid under the current Section 115 rates, or that would be paid under Google's proposed rates.

8. I have calculated what Google's royalty payments would have been historically under the Copyright Owners' proposal, the current Section 115 regulations, and Google's proposal for Google's Subpart B interactive streaming services.[2] Applying the Copyright Owners' proposal to Google's actual historical subscriber interactive streams and subscribers would have resulted in total mechanical royalties for the period from June 2013 to June 2016 of [redacted].[3] To estimate the public performance royalties that Google paid for musical works during the same period, I assumed that Google paid public performance royalties equal to [redacted] of its service revenues for its Google Play subscription service, which equaled $[redacted].[4] In total,

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[1] "Copyright Owners' Proposed Rates and Terms," *In the Matter of Determination of Rates and Terms for Making and Distributing Phonorecords (Phonorecords III)*, November 1, 2016.

[2] These calculations assume that the number of streams and users would remain the same under all three scenarios. As discussed below, however, it is likely that the number of streams and perhaps the number of subscribers would have been lower than their historical levels under Copyright Owners' proposal due to the incentives created by the per-stream royalty structure and the higher royalty payments.

[3] I understand that the Copyright Owners' proposal applies to both Subpart B and Subpart C services. As a result, applying the Copyright Owners' proposal to Google's total streams and total users (subscribers and active locker users) would generate even greater hypothetical mechanical royalties.

[4] [redacted]

Google's all-in royalties (mechanical plus public performance) for musical works under the Copyright Owners' proposal from June 2013 to June 2016 would have equaled [redacted].[5]

9. I compared these hypothetical Google Subpart B all-in royalties based on the Copyright Owners' proposal to the Subpart B all-in royalties that Google has paid based on the current Section 115 regulations. Using Google's actual service revenues, subscribers, and payments for sound recording rights results in all-in royalties of [redacted] for the period from June 2013 to June 2016.[6] As a result, the Copyright Owners' proposal would have the disruptive effect of increasing Google's all-in royalties for Subpart B interactive streaming services from June 2013 to June 2016 by approximately [redacted].

10. In contrast, I also compared Google's Subpart B all-in royalties based on the current Section 115 regulations to the hypothetical Google Subpart B all-in royalties under Google's proposal.[7] Applying Google's proposal to Google's actual service revenues, subscribers, and payments for sound recording rights would have resulted in all-in royalties of [redacted] for the period from June 2013 to June 2016.[8] This is exactly equal to Google's Subpart B all-in royalties based on the current Section 115 regulations.

11. As demonstrated here, the Copyright Owners' proposal represents a significant departure from the existing Section 115 rates, while Google's proposal is consistent with the current rates.

Compositions by means of Streaming and transmissions from cache copies (to the extent a performance right is implicated) via the Licensed Service." See GOOG-PHONOIII-00000319-328 at 319-320. I understand that Google has not yet entered into any licenses with other PROs.

[5] Exhibit 1.

[6] Exhibit 1.

[7] I understand that Google's current proposal for Subpart B interactive streaming and limited download services is the greater of (i) 10.5% of service revenue and (ii) the lesser of (a) 13.5% of the total amount expensed by the service provider for sound recording rights, and (b) the existing per-subscriber per-month minima (e.g., $0.80 per subscriber for standalone portable subscriptions, mixed use).

B. Specific Criticisms of the Eisenach Expert Report

1. Overview of the Eisenach Expert Report

12. Dr. Eisenach contends that the current Section 115 rates were established when the interactive streaming music industry was embryonic and, thus, the rates were discounted in an attempt to jumpstart the then-novel music business models.[9] Furthermore, he states that these statutory rates constrain the market for publishing rights by acting as a ceiling, and not as a floor, on the ultimate rates that interactive music service providers pay.[10] Dr. Eisenach argues that preferable publishing royalty rates would be those freely negotiated in an unconstrained market, and then points to the market for sound recording rights as an example of such a market.

13. In his report, Dr. Eisenach pursues a benchmark analysis based on the rates paid for sound recordings. He focuses on the ratios of the royalties paid for sound recordings to the royalties paid for musical works in contexts that he claims are comparable to the services at issue in this proceeding, and he uses those ratios as a mechanism for converting sound recording rates to rates for musical works.

14. Dr. Eisenach's conversion ratios are calculated based on consideration of the following potential benchmarks: (1) the current Section 115 statutory rates and the rates from direct licenses entered under the Section 115 "regulatory shadow"; (2) rates paid for ringtones; (3) rates paid for synchronization rights; (4) rates paid for Google's YouTube service; and (5) rates paid by Pandora for its non-interactive service.[11] Dr. Eisenach relies most heavily on the sound

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[8] Exhibit 1.

[9] Expert Report of Jeffrey Eisenach, October 31, 2016, ¶ 19.

[10] Expert Report of Jeffrey Eisenach, October 31, 2016, ¶¶ 29-32.

[11] Expert Report of Jeffrey Eisenach, October 31, 2016, ¶¶ 81-130.

recording to musical work ratios derived from his YouTube and Pandora benchmarks. Specifically, for the YouTube benchmark he estimates a ratio of 2.67:1 based on the assumptions that YouTube pays 55% of its ad revenues to content providers, with record labels receiving 40% of ad revenues and publishers receiving 15% of ad revenues, for "User Video[s] with commercial sound recording," which Dr. Eisenach claims are comparable to YouTube's "audio-only" videos that are subject to the Section 115 interactive streaming statutory rates.[12] For the Pandora non-interactive service benchmark, based on Pandora's actual "opt-out" deals with publishers for musical works rights, Dr. Eisenach estimates the ratios of sound recording royalties to musical works royalties for 2012 through 2018 (i.e., 12.6:1 in 2012, dropping to 4.65:1 in 2018).[13] Then, Dr. Eisenach uses a linear regression to forecast the decline in the ratio of sound recording royalties to musical work royalties over the 2018 to 2022 period, with a forecasted ratio of 4.4:1 in 2018 declining to 3.2:1 in 2022.[14] Dr. Eisenach ultimately relies on his average forecasted ratio derived from this regression for 2018 to 2022 of 3.7:1.[15]

15. Based on the five aforementioned categories of benchmarks, Dr. Eisenach establishes an upper and lower bound for the relative value of sound recordings and musical works between [redacted][16] Dr. Eisenach ultimately concludes: "In my opinion, the YouTube and [redacted] agreements represent the most comparable and reliable benchmarks, implying ratios of [redacted]."[17]

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[12] Expert Report of Jeffrey Eisenach, October 31, 2016, ¶¶ 100-102.

[13] Expert Report of Jeffrey Eisenach, October 31, 2016, ¶ 125, Table 6.

[14] Expert Report of Jeffrey Eisenach, October 31, 2016, ¶¶ 127-128, Table 8.

[15] Expert Report of Jeffrey Eisenach, October 31, 2016, ¶ 128, Table 8.

[16] Expert Report of Jeffrey Eisenach, October 31, 2016, ¶ 75.

[17] Expert Report of Jeffrey Eisenach, October 31, 2016, ¶ 130, Table 9.

16. To calculate an implied rate for mechanical rights for musical works, Dr. Eisenach employs two different methods. Dr. Eisenach's Method 1 assumes that the difference between per-stream rates paid for "all-in" sound recordings rights for interactive streaming services and per-stream rates paid for public performance sound recordings rights for non-interactive streaming services represents an implicit per-stream rate for mechanical sound recording rights for interactive services. He then divides this difference by the ratios of sound recording to musical work royalty payments derived from his benchmarks to calculate an implied per-stream rate for mechanical rights for musical works. As discussed below, Dr. Eisenach's Method 1 and corresponding calculations are unreliable for a number of reasons.

17. Dr. Eisenach's Method 2 divides the per-stream rates paid for sound recordings for interactive streaming services by the ratios of sound recording to musical work royalty payments derived from his benchmarks to calculate an implied all-in per-stream rate for musical works. Then, he subtracts from this result the public performance per-stream rates paid for musical works to calculate an implied per-stream rate for mechanical rights for musical works. As discussed below, Dr. Eisenach's Method 2 and corresponding calculations are also unreliable.

18. Finally, Dr. Eisenach also uses his Method 2 to estimate implied rates for mechanical rights for musical works on a per-user basis. As discussed below, Dr. Eisenach's implementation of Method 2 on a per-user basis is unreliable for many of the same reasons as his implementation of Method 2 on a per-stream basis.

19. In the following sections, I provide specific criticisms of the Eisenach Expert Report.

2. Dr. Eisenach Ignores the Economic Evidence That a Shift to the Copyright Owners' Per-Play or Per-User Rate Would Significantly Disrupt Interactive Streaming Services and Result in Reduced Consumption of Music

20. As an initial matter, as previously discussed above, the Copyright Owners' proposal would have substantially increased the all-in royalties for Subpart B interactive streaming services paid by Google, compared to the royalties that Google paid under the current Section 115 rates and would have paid under its own proposal. Furthermore, going forward, under the Copyright Owners' proposal Google will expect to pay all-in royalties considerably larger than under the current Section 115 rates and its own proposal. Dr. Eisenach ignores this economic reality—that a shift to the Copyright Owners' proposal would significantly disrupt interactive streaming services and ultimately these services' customers and result in the reduced consumption of music.

21. As I discussed in my opening reports, digital interactive streaming service providers have had a history of not being profitable under the current Section 115 statutory rates (See Section VII.B. of my opening reports). For example, despite a continuously increasing user base and subscription revenue, Google Play Music has never been profitable. Spotify, despite its subscriber growth, has also never been profitable. Many other interactive streaming service providers, under the current Section 115 statutory rates, have also not achieved profitability, including Tidal, Deezer, and Rhapsody. According to an October 2016 Goldman Sachs music industry report, "[w]ith no interactive streaming service currently being profitable, the economic viability of such business models is yet to be proven."[18] Furthermore, a number of interactive

[18] "Music in the Air: Stairway to Heaven," Goldman Sachs, October 4, 2016, p. 66. I note that one of Copyright Owners' other experts, Dr. Gans, relies heavily on data contained in the Goldman Sachs report.

streaming service providers have shut down due to a lack of profitability under the current Section 115 rates.[19]

22. As a result, under the Copyright Owners' proposal, which would result in even greater Section 115 all-in royalty payments, existing interactive streaming services providers such as Google would be even less profitable. Furthermore, it is likely that these higher royalty payments would result in additional service providers exiting the market for interactive streaming services. The exit of existing suppliers would be disruptive, both to those suppliers and the customers who prefer those suppliers, given that the various interactive streaming suppliers offer differentiated services that appeal to different customer segments (e.g., Amazon versus Spotify). Any increase in the prices of interactive streaming services or changes in the business model (such as the elimination of "all you can eat" plans or imposition of limits on streaming) that results from an increase in the musical works royalties would be both disruptive to the services, which made investments assuming a particular royalty structure and level, and their customers, who revealed a preference for the specific plan and service they chose. The ultimate result would be a decrease in the consumption of music due to higher prices and a change in the nature of plans.

3. The Markets for Sound Recording and Musical Work Rights Are Substantially Different

23. A fundamental input into Dr. Eisenach's benchmark analysis is the rates paid by interactive music streaming service providers for sound recordings. However, the markets for sound recording and musical work rights are substantially different for several reasons and, as a

[19] Written Direct Testimony of Zahavah Levine, November 1, 2016, ¶¶ 16-17.

result, the use of sound recording royalty payments to form benchmarks for musical work royalty payments is inappropriate.

24. First, sound recording rights for interactive music streaming services are set in a market not subject to the 801(b)(1) factors or other regulatory constraints and reflect the exercise of market power by record companies. As discussed in the Web IV decision:

- "The Services dismiss the idea that the record companies' negotiations with interactive services are evidence of an effectively competitive market. The Judges agree with the Services criticism of this assertion."[20]
- "The Judges reject SoundExchange's argument that evidence of its negotiations with interactive services demonstrates that the interactive market is effectively competitive. As the Judges pointed out in their *Commencement Notice* in this proceeding, price discrimination is a feature of markets such as sound recording markets, where the marginal physical cost of licensing a sound recording is essentially zero, and is also a relatively common feature of many markets…Further, the Judges cannot ignore the testimony from several record company witnesses, discussed in this determination, in which they acknowledged that they never attempted to meet their competitors' pricing when negotiating with interactive services."[21]
- "The Judges were presented with substantial, unrebutted evidence that the interactive services market is *not* effectively competitive. The Services conclude from this that the interactive services benchmarks are wholly uninformative with regard to the rates that would be negotiated in an *effectively competitive* market…The Judges disagree…The Services' own evidence demonstrates persuasively that competitive steering has reduced royalty rates in the noninteractive market and would do so in the hypothetical market as well. This evidence of steering (provided by Pandora and iHeart) demonstrates a measurable range of adjustment to the prices that would be set in a market for those streaming services if the services could inject price competition via steering. Thus, the rate set in Dr. Rubinfeld's upstream interactive benchmark market can and should be adjusted to reflect such price competition, in order to render it is usable as an 'effectively competitive' rate in the segment of the market to which that benchmark applies – the noninteractive subscription market."[22]

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[20] *In re* Determination of Royalty Rates and Terms for Ephemeral Recording and Webcasting Digital Performance of Sound Recordings (Web IV), Docket No. 14-CRB-0001-WR (2016-2020), December 16, 2015, p. 65.

[21] *In re* Determination of Royalty Rates and Terms for Ephemeral Recording and Webcasting Digital Performance of Sound Recordings (Web IV), Docket No. 14-CRB-0001-WR (2016-2020), December 16, 2015, p. 66.

[22] *In re* Determination of Royalty Rates and Terms for Ephemeral Recording and Webcasting Digital Performance of Sound Recordings (Web IV), Docket No. 14-CRB-0001-WR (2016-2020), December 16, 2015, p. 66. See also p. 67 ("Here, the range of steering adjustments from direct noninteractive licenses has been introduced in evidence, steering experiments have confirmed the reasonableness of such an endeavor and expert testimony has

In this matter, as I understand it, the goal is to set rates for mechanical rights for musical works that reflect the economic considerations outlined in the 801(b)(1) factors. Under these factors, rates should not incorporate market power generally and specifically should not incorporate the market power of record labels in the sound recording market. As a result, it is inappropriate to use sound recording royalty payments as comparable benchmarks to establish rates for mechanical rights for musical works.

25. Second, Dr. Eisenach's analysis assumes that musical work rates need to be increased relative to sound recording rates to bring them in line with his sound recording royalties to musical work royalties ratio benchmarks. If sound recording rates are above the competitive level due to record labels' market power in the sound recording market, then setting musical work rates based on sound recording rates results in musical work rates that are similarly above the competitive level. This is not consistent with the 801(b)(1) factors.

26. In addition, Dr. Eisenach ignores an implication of his (and other Copyright Owner experts) claim that the musical work royalties have been "suppressed" by regulation. If musical work royalties have been suppressed, that leaves a larger pie over which the record labels and services bargain, with the result that the labels likely get "more" than they would get if the musical work royalties were not suppressed as Copyright Owners' experts claim. This is particularly so given the record labels' market power and the fact that the services generally have not earned a profit. If musical work royalties increased to the level that Dr. Eisenach proposes, the size of the pie to be bargained over between record labels and services would decrease, the labels would get a smaller royalty payment, and Dr. Eisenach's ratio would then exceed the level

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explained how steering is a mechanism by which to offset the complementary oligopoly power of the Majors (while not reducing their firm-specific and copyright-specific market power.").

he claims is the appropriate benchmark level. To see this, suppose that on each $100 of streaming subscription revenues, musical work royalties are currently $10, sound recording royalties are $60, and the service keeps $30, but this just covers its costs. This means that the record labels capture all of the profit pie that is left after paying musical work royalties. If the musical work royalties increased to $25, consistent with Dr. Eisenach's analysis, the record labels would still capture all of the profit pie left after paying the musical works royalty (record labels' relative bargaining strength is the same), but that pie would now be reduced to $45. (The services would still have to receive $30 to cover its costs.) This means that the sound recording royalty to musical work royalty under his proposal would actually $45/$25, or 1.8:1, which is smaller than his claimed benchmark ratios [redacted]. Even under his approach, Dr. Eisenach has set the musical work royalty too high because he fails to consider the fact that sound recording royalties will decrease if musical works royalties increase.

4. Dr. Eisenach's Proposed Sound Recording to Musical Work Ratio Benchmarks Are In Fact Not Valid Comparables

a. Dr. Eisenach Ignores Sound Recording to Musical Work Ratios Derived from the Subpart A Permanent Digital Download Rates

27. As I discussed in my opening reports, the most relevant comparable benchmark to use for establishing the rates for Subpart B interactive streaming services is the Subpart A rates for PDDs. The Subpart A rates are the most appropriate benchmarks for reasons including: (1) there is evidence that interactive streaming competes with download sales to varying degrees, which suggests that there should be consistency between the Subpart A and Subpart B rates; (2) the Subpart A rates were recently extended for the period from 2018 to 2022 based on a settlement agreed to by Copyright Owners and the same publishers in this proceeding; and (3)

the Subpart A rates reflect the 801(b)(1) factors. In addition, there are certain conceptual similarities between streaming and a download. Having paid for a track download, a user can listen to it as often as desired without further charge. Similarly, having paid the subscription fee, a streaming user can listen to a track as often as desired without further charge. Dr. Eisenach flatly ignores this benchmark.

28. In my amended opening report, using the Subpart A rates I compared Google's effective Subpart A rate of $0.095 per download paid to publishers for musical work rights under Section 385, Subpart A to the royalties paid to record companies for sound recording rights on the same sale of a PDD (i.e., 70% of the retail price, which is inclusive of the $0.095 per download effective royalty owed to music publishers and that is passed through by the record company to the music publishers). Based on the weighted average retail price per digital download of $0.99 in 2006 and $1.10 in 2015, the ratio of musical work-to-sound recording royalties on sales of PDDs covered under Section 385, Subpart A has decreased from approximately 15.8% to 14.2% from 2006 to 2015. These percentages can be expressed in the manner that Dr. Eisenach presents his ratios—i.e., 15.8% is equivalent to a 6.31:1 ratio, and 14.2% is equivalent to a 7.07:1 ratio. I note that these ratios are higher than the upper bound of ratios (i.e., [redacted]) used by Dr. Eisenach, which is based on the 21% of sound recording payment term in the current Section 115, Subpart B regulations. Furthermore, the ratio based on the Subpart A benchmark has been increasing over time, and is expected to continue to increase because, for example, the average retail price (and the corresponding 70% retail price paid to record labels) of a PDD has trended upward while the Copyright Owners have agreed to fix the Subpart A royalty rate at the current levels through the end of the license period at issue here.

29. It is my opinion, for the reasons explained in my opening reports and discussed above, that the ratio of sound recording to musical work royalties derived from an analysis of the Subpart A royalties is the most comparable benchmark for determining Subpart B interactive streaming royalties.

b. Dr. Eisenach's Range of Sound Recording to Musical Work Royalty Ratio Benchmarks Is Wide, A Fact for Which Dr. Eisenach Has No Explanation, Rendering His Analysis Unreliable

30. According to Dr. Eisenach, for his benchmark analysis "it is sufficient simply to assume that the relative values of the two rights [sound recording and musical work rights] should be stable across similar or identical market contexts."[23] However, the results of Dr. Eisenach's benchmark analysis have, in fact, shown the exact opposite—i.e., that the range of ratios of sound recording to musical work royalties across the markets considered comparable by Dr. Eisenach is extremely wide. Specifically, Dr. Eisenach's analysis, based on five supposed benchmarks, generates ratios of sound recording to musical work royalties ranging from [redacted][25] The wide range exhibited by Dr. Eisenach's sound recording to musical work royalty ratios contradicts his assumption that the ratios across supposedly comparable industries should be "stable." The failure of his own analysis to be consistent with the key

[23] Expert Report of Jeffrey A. Eisenach, Ph.D., October 31, 2016, ¶ 79.

[24] Expert Report of Jeffrey A. Eisenach, Ph.D., October 31, 2016, ¶ 99. I note that the criteria used by Dr. Eisenach to select his five supposed benchmarks, and to ignore other benchmarks, is generally unclear. For example, he offers no explanation for why he ignored the Subpart A benchmark discussed in the previous section. Additionally, he offers no explanation for why he did not consider, for example, the terrestrial radio benchmark, or why such a benchmark is less comparable than the benchmarks that he used, which include synchronization rights, ringtones, user-posted videos on YouTube, and non-interactive music streaming. I note that the ratio of sound recording to musical work royalties for terrestrial radio is actually 0:1.

[25] I note that the upper bound of Dr. Eisenach's range is lower than the 6:1 ratio calculated by Goldman Sachs for ad-funded and subscription streaming services. See "Music in the Air: Stairway to Heaven," Goldman Sachs, October 4, 2016, p. 58.

underlying assumption demonstrates that his benchmark analysis is unreliable. Furthermore, as discussed below, the markets and rates that Dr. Eisenach has analyzed—excluding the existing Subpart B interactive streaming rate that generate his [redacted] ratio—are neither similar nor identical.

31. In the following sections, I address the specific comparability issues with each of the benchmarks used by Dr. Eisenach in his analysis. I note that the [redacted] benchmark ratio, based on the existing rates and terms of Subpart B, can be relevant for setting the going-forward Subpart B rates for the percentage of sound recording payments prong in this proceeding because these rates were set in a 2012 settlement and reflect the 801(b)(1) factors. However, as discussed in the previous section, the increasing historical ratios based on the Subpart A benchmark are further evidence that the ratio has been and will continue to increase over time.

c. Ringtones and Interactive Streaming Services Are Not Comparable

32. As discussed above, Dr. Eisenach ignores benchmarks based on Subpart A rates for PDDs; however, he does rely on a benchmark derived from a [redacted] agreement that was eventually amended to include ringtones, which are also subject to statutory rates under Subpart A. According to Dr. Eisenach, under this agreement "[redacted][26] Dr. Eisenach assumes that [redacted] would pay a royalty to [redacted] of [redacted] per ringtone based on the assumption that [redacted] According to Dr. Eisenach, the [redacted] royalty is inclusive of both the royalty payment for sound recording and

[26] Expert Report of Jeffrey A. Eisenach, Ph.D., October 31, 2016, ¶ 89.

musical work rights; [redacted] would pass through [redacted] for the mechanical royalty for musical works based on the Subpart A statutory rate; and SME would retain [redacted] for sound recording rights. This results in a sound recording to musical work royalty ratio of [redacted].[28] Dr. Eisenach concludes:

> While this agreement implicates the compulsory rate for ringtones, the negotiation was conducted by [redacted] such that the topline rate is not subject to regulation. Thus, the [redacted]e agreement provides a benchmark of the relative values of the sound recording and musical works rights as negotiated between a record label and a service, in which the musical works component was established through compulsory license, but the *relative* value of the musical works and sound recording rights was the result of voluntary negotiation.[29]

33. First, Dr. Eisenach's conclusion regarding the applicability of the ringtone benchmark is based, in part, on the facts that the "topline rate is not subject to regulation" and the "relative value of the musical works and sound recording rights was the result of the voluntary negotiation"—but these facts also hold true for the PDD-based benchmark. The topline rate of 70% of the retail price of a PDD was also freely negotiated between Google and record labels and was not subject to regulation; and the relative value of the sound recording and musical work royalties—6.31:1 in 2006 and 7.07:1 in 2015—were also the result of a voluntary negotiation. Dr. Eisenach does not explain why his ringtone benchmark is valid, but a PDD-based benchmark is not. In fact, throughout his report, Dr. Eisenach explains how there has been a shift from

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[27] Expert Report of Jeffrey A. Eisenach, Ph.D., October 31, 2016, ¶ 89.

[28] Expert Report of Jeffrey A. Eisenach, Ph.D., October 31, 2016, ¶¶ 89-90.

[29] Expert Report of Jeffrey A. Eisenach, Ph.D., October 31, 2016, ¶ 91.

digital downloads to streaming;[30] implying that there is a relationship between these two types of music consumption. But, again, he ignores any type of benchmark analysis based on downloads.

34. Second, ringtones and interactive music streaming services are not comparable. Ringtones, for example, are short excerpts of songs that are played on a mobile device when receiving an incoming phone call,[31] which is different than when a person engages in interactive music streaming by choosing a specific song to listen to at a specific point in time. As Dr. Eisenach acknowledges, interactive music streaming is more in line with an actual download of a complete song.

35. Third, Dr. Eisenach's selectively chooses [redacted] as the price that [redacted] charges for ringtones. Dr. Eisenach acknowledges that "retail prices for ringtones have historically been above $2 per ringtone (which would require a higher payment from [redacted] to [redacted] and that [redacted] currently sells many (but not all) ringtones for [redacted].[32] The [redacted] price is from 2016, and does not reflect the complete set of ringtone prices charged in the period following the 2007 amendment that included ringtones. In fact, the total price that a customer paid for a ringtone, introduced by iTunes in 2007, was [redacted].[33] Furthermore, at a price of only [redacted] and a total

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[30] Expert Report of Jeffrey A. Eisenach, Ph.D., October 31, 2016, ¶ 45 ("The next major transformation of the music industry occurred with the shift from digital downloads to both interactive and non-interactive streaming services."); ¶ 65 ("More recently, the transition from downloads to streaming has further inhibited royalty payments."); ¶ 69 ("Second, more recently, the transition from downloads to streaming appears to have further limited royalty payments, and dissatisfaction regarding compensation to publishers and songwriters is a widely recognized phenomenon.").

[31] Verizon Wireless, a mobile telecommunications provider, describes ringtones as "a fun way to customize your phone and show off your style while getting notified of incoming calls." See "Ringtones: How to Get and Use Them," Verizon Wireless, February 4, 2015.

[32] Expert Report of Jeffrey A. Eisenach, Ph.D., October 31, 2016, ¶ 89.

[33] I note that this price consists of the price of $0.99 for a digital download in 2007 and the price to obtain the ringtone for $0.99, because the ringtones offered by iTunes may only be purchased after the ringtone's song is purchased. See "iPhone Ringtones Will Cost You," Josh Lowenson, CNET, June 27, 2007; and "Apple Unveils the iTunes Wi-Fi Music Store," Apple Press Info, September 5, 2007.

royalty to record companies and music publishers of [redacted], [redacted] would make only [redacted] per ringtone before accounting for any other costs. Thus, it is unlikely that [redacted] would make any profits on such a ringtone sale. Instead, if we assume a price of approximately $2.00 for a ringtone, [redacted] total royalty payment to [redacted] would be [redacted]; SME would pass through [redacted] for the mechanical royalty for musical works, retaining [redacted]; and the sound recording to musical work royalty ratio would be [redacted] Furthermore, historically the average selling price of a ringtone for the entire industry has remained just below $2.50, with prices in 2006 as high as $3.50.[34] Based on the ringtone royalty terms in the [redacted] agreement, and assuming a retail price for ringtones of approximately [redacted] in 2015, the total royalty payment to the record label would be [redacted]; the record label would pass through [redacted] for the mechanical royalty for musical works, retaining [redacted]; and the sound recording to musical work royalty ratio would be [redacted]. These alternative calculations illustrate how Dr. Eisenach's [redacted] ratio is sensitive to his selective assumption of a [redacted] ringtone price.

36. Fourth, the payment of [redacted] for a ringtone, defined as "a phonorecord of a partial musical work,"[35] is significantly higher than the rate of $0.091 for PDDs, a full reproduction of a musical work. This makes little economic sense unless the economic context of ringtones is substantially different than that of digital downloads (and streaming). Given that Dr. Eisenach does not address these differences, ringtones are an invalid benchmark. Prior to the statutory regulation of ringtone payments in 2006, many ringtone sellers had entered into privately-negotiated licensing arrangements with publishers at rates well above the statutory rate for the

[34] Exhibit 5. For the $3.50 price, see "Ringtones: The Sound of Money," Paul R. La Monica, CNN Money, April 12, 2006.

full use of the song.[36] But in the ensuing rate setting proceeding before the CRB, music publishers were able to introduce the previously negotiated agreements as marketplace benchmarks, and as a result secured a much higher rate for ringtones than the rate for full songs.[37] Furthermore, in the proceeding it was determined that the ringtone and PDD markets "differ significantly in terms of the ultimate product consumed."[38]

d. Synchronization Rights Are Not Useful for Establishing a Benchmark Ratio

37. Dr. Eisenach's analysis also looks outside of the market for audio content altogether and considers audiovisual content licensing. Dr. Eisenach states: "While these licenses [synch and micro-synch licenses] do not apply to music streaming services as such, in my opinion they provide relevant benchmarks because they are negotiated completely outside the shadow of a compulsory license, and thus serve to establish a market-based lower bound on the ratio of sound

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[35] 37 CFR §385.2.

[36] Mechanical and Digital Phonorecord Delivery Rate Adjustment Proceeding, 71 Fed. Reg. 64,303, 64,308-09 (Nov. 1, 2006) (discussing "voluntary license agreements granting the labels the right to create ringtones at specified mutually-negotiated royalty rates.").

[37] Mechanical and Digital Phonorecord Delivery Rate Determination Proceeding, 74 Fed. Reg. at 4517-18; 4522 (explaining that those licenses constitute "valuable rate evidence from the marketplace for" ringtones but not for "other products at issue in this proceeding (*i.e.*, CDs and permanent downloads).").

[38] Mechanical and Digital Phonorecord Delivery Rate Determination Proceeding, 74 Fed. Reg. at 4518 ("While the proposed mastertone benchmark certainly offers valuable rate evidence from the marketplace for one of the types of products covered by the Section 115 license that is the subject of this proceeding (i.e., ringtones), it is much less persuasive when that benchmark is applied to the other products at issue in this proceeding (i.e., CDs and permanent downloads) that are, at best, only in small part similar in nature and ultimate consumer use. For example, although CDs and permanent downloads may be easily perceived as substitutes by consumers, it is unlikely that consumers would regard a CD as a very good substitute for a mastertone or vice versa. In short, we find that although substantial empirical evidence shows that sound recording rights are paid similar multiple times the amounts paid for musical works rights in most ringtone markets, that proposed benchmark evidence is far from dispositive of what the size of that multiple might be for other types of products such as CDs and permanent downloads. While similar sellers and sometimes even similar buyers might be participants in both the proposed benchmark ringtone market and the target CD and permanent downloads market, the benchmark and target markets differ significantly in terms of the ultimate product consumed.").

recording valuations to musical work valuations."[39] Dr. Eisenach uses synchronization licenses to establish his lower bound sound recording to musical work royalty ratio of [redacted].[40]

38. As an initial matter, if synchronization rights are truly a comparable economic context to streaming, why is the [redacted] ratio so much smaller than the ratio that Dr. Eisenach (and the other Copyright Owners' experts) settle on? The answer is that synchronization rights are not comparable to streaming and thus Dr. Eisenach is incorrect to suggest that they are.

39. Synchronization licenses are not comparable for interactive streaming licenses. The lack of comparability arises because synchronization differs in important economic respects from streaming. Synchronization rights pertain, for example, to music used in films, and the historical tradition of publishing rights and sound recording rights being valued equally arises from the particular conditions faced in that industry. The filmmakers may have a certain musical work in mind as a good fit for a particular scene in the film. The filmmakers always have the option of making their own sound recording of that musical work, and for this reason, cover songs are quite common in films.[41] Thus, the contribution (value) of the sound recording is less valuable as compared to the musical work in this particular market. Additionally, in the case of synchronization rights, the marketplace for these particular rights is more competitive than other music licensing contexts because individual musical works compete against one another for

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[39] Expert Report of Jeffrey A. Eisenach, Ph.D., October 31, 2016, ¶ 93.

[40] Expert Report of Jeffrey A. Eisenach, Ph.D., October 31, 2016, ¶¶ 95, 98-99.

[41] Indeed, many television shows and films use cover songs. Cover songs are viewed as a "low-risk, high-reward option available to anyone with well-produced renditions of classic songs." See "Cash for Covers: Make Money Licensing Cover Songs for Film, TV, and Advertising and Collecting Performance Royalties," DIY Musician, April 19, 2011. Cover songs may even be more appealing to films since they can be customized to "give the audience something to grab onto within the first 10 seconds of hearing it." See "Why Are Movie Trailers Using So Many Creepy Pop Covers? A Music Director Explains," Slate, July 30, 2015.

inclusion in the final product (e.g., a film), as opposed to a streaming service where compositions are licensed to build a catalog of many works that can then be streamed to listeners.

40. Furthermore, the fact that these agreements are market-based is a reason why they are less relevant for purposes of establishing the Section 115 statutory rates for interactive streaming, contrary to Dr. Eisenach's opinion. Market-based benchmarks do not necessarily account for the 801(b)(1) factors and, thus, have an incomparability problem. In contrast, it is precisely the fact that certain statutory rates, including the renewal of the current Subpart A rates for PDDs, already account for the 801(b)(1) factors that make them more comparable than the markets rates contained in the synch and micro-synch agreements used by Dr. Eisenach.

e. Dr. Eisenach's Use of Google's YouTube Agreements with Publishers Is Inappropriate

41. Dr. Eisenach states that certain "YouTube agreements represent reasonably comparable benchmarks for the purpose of assessing the relative value of sound recordings and musical works rights."[42] Based on these YouTube agreements, Dr. Eisenach calculates a sound recording to musical work royalty ratio of [redacted]. His ratio is based on the following assumptions: (1) YouTube pays [redacted] of ad revenue for User Video[s] with commercial sound recording to publishers; (2) YouTube pays a total royalty of [redacted] of ad revenue to all content providers; and (3) this implies that YouTube pays [redacted] of ad revenue for User Video[s] with commercial sound recording to record labels.[43] Dr. Eisenach's ratio of [redacted] is equal to the [redacted] implied royalty paid to record labels divided by the [redacted] actual royalty paid to publishers for the supposedly

[42] Expert Report of Jeffrey A. Eisenach, Ph.D., October 31, 2016, ¶ 100.

[43] Expert Report of Jeffrey A. Eisenach, Ph.D., October 31, 2016, ¶¶ 101-102. I understand that Google has recently produced its YouTube agreements with record labels. I reserve the right to amend my opinions accordingly after I have had time to review these agreements.

comparable User Video[s] with commercial sound recording content. Dr. Eisenach's use of Google's YouTube agreements with publishers is flawed for several reasons.

42. First, Dr. Eisenach's analysis assumes that User Video[s] with commercial sound recording content is comparable to the audio-only, interactive streaming content that is subject to the Section 115 statutory rates. I disagree with Dr. Eisenach's conclusion on the comparability between these two types of content.

43. YouTube's publisher agreements define User Videos with Commercial Sound Recordings as [redacted][44] A User Video is defined as [redacted][45] In contrast, YouTube's publisher agreements define a Publisher Audio-Only Track, which is subject to the Section 115 statutory rates, as "[redacted]"[46] An Audio-Only Track is defined as "[redacted]

[44] GOOG-PHONOIII00002538 at 551.

[45] GOOG-PHONOIII00002538 at 550.

[46] GOOG-PHONOIII00002538 at 549.

[redacted]

[redacted][47] User-posted, audio-visual content (i.e., User Videos with Commercial Sound Recordings) is not similar to an audio-only, interactive streaming content (i.e., Publisher Audio-Only Tracks). Furthermore, Dr. Eisenach completely ignores Publisher Audio-Only Tracks despite the fact that they are specifically addressed in the YouTube agreements. I note that consideration of the 10.5% royalty for Publisher Audio-Only Tracks, and the rates paid for the sound recordings associated with such tracks, generates a substantially higher sound recording to musical work royalty ratio that is in line with the ratio reflected in the existing Section 115 license.

44. Second, the publisher agreements reviewed by Dr. Eisenach also contain payment terms for other types of content, and Dr. Eisenach does not explain why these other forms of content are less comparable to the audio-only, interactive streaming content subject to Section 115.[48] For example, YouTube's publisher agreements require YouTube to pay [redacted] of ad revenue for "Publisher Label Videos," which are defined as [redacted]

[47] GOOG-PHONOIII00002538 at 547.

[48] Regarding record Label Videos, Dr. Eisenach notes that "because the label is likely also serving as the producer of the music video – and thus is providing additional value not at issue in this proceeding, it is not possible to discern the relative value of musical works rights and sound recording rights without evidence as to the relative value of video production." See Expert Report of Jeffrey A. Eisenach, Ph.D., October 31, 2016, fn. 93. This may or may not be true, but in any event is also the case with User Videos, in which the uploader of the video also provides value through their video production. While users uploading videos to YouTube have been historically pegged to low-production value (through home-produced videos), that trend is less apparent with the increasing competitive nature of YouTube entertainers and the growth of YouTube as a standard medium. YouTube content creators (i.e., Users) have opted for higher production value in order to sustain and grow their audience base. See "Why Production Value Matters in Online Video," Valentina Vee, We Make Movies, February 23, 2015. User videos that feature music also compete with music videos with high post-production standards, such that "it has become a reality for all musicians that music videos on YouTube should look polished and visually striking…practically, this means synchronizing footage from multiple HD cameras, adding subtle visual FX …, and advanced color grading to get visual consistency throughout." See "Post-production tips for Youtubers," Videopixie, October 12, 2013.

[redacted]."[49] A Label Video is defined as "[redacted][50] I note that using the 10% royalty for Publisher Label Videos, and the corresponding royalty rates for the sound recordings embodied in such videos, generates a substantially higher sound recording to musical work royalty ratio that is in line with the ratio reflected in the existing Section 115 license. The higher ratios derived from Publisher Audio-Only Tracks and Publisher Label Videos illustrates the unreliable nature of Dr. Eisenach's ratio based solely on User Videos with Commercial Sound Recordings, which are not comparable to the interactive music streaming services subject to Section 115.

45. Third, the [redacted] (assumption) and [redacted] of ad revenue rates that form the basis of Dr. Eisenach's [redacted] ratio are both market rates that do not necessarily account for the 801(b)(1) factors and, thus, have an incomparability problem for purposes of establishing the Section 115 statutory rates for interactive streaming. Furthermore, although Dr. Eisenach states that the ratio based on the YouTube agreements "reflects the relative valuations of sound recording and musical works rights arrived at in free market negotiations," several of the Copyright Owners' other witnesses in this proceeding have suggested the YouTube licenses Dr. Eisenach relies on are not the result of a truly unregulated market.[51] In contrast, it is precisely the fact that certain

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[49] GOOG-PHONOIII00002538 at 550.

[50] GOOG-PHONOIII00002538 at 548.

[51] Expert Report of Jeffrey A. Eisenach, Ph.D., October 31, 2016, ¶ 102; Witness Statement of Peter S. Brodsky, October 28, 2016, ¶ 108 (stating that both the record labels and music publishers "are at a disadvantage when negotiating with YouTube because YouTube claims (in our view, hides behind) the protection of the 'safe harbor' provisions of the Digital Millennium Copyright Act ('DCMA'). 17 U.S.C. §512. The fact that YouTube claims DMCA protection means that even if we are unable to reach a deal with YouTube, our songs will remain on YouTube and it will be up to us to identify and send take down notices for all of our content, which is time-consuming, costly and ultimately futile task (as any content removed will almost always be re-uploaded). Our negotiations (as well as the record labels' negotiations) take place in that context. Our deal with YouTube is, nevertheless, illustrative of the relative value assigned to sound recordings and musical works by licensees

statutory rates already account for the 801(b)(1) factors, including the renewal of the current Subpart A rates for PDDs, that make them more comparable than the markets rates contained in the YouTube agreements used by Dr. Eisenach.

46. Fourth, when constructing his [redacted] ratio, Dr. Eisenach relies on an inaccurate assumption concerning sound recording royalty rates for user generated videos. Though Dr. Eisenach assumes that the payment to sound recording rights holders for this category of content would always be [redacted], the actual rates paid by YouTube to record labels vary according to the terms of YouTube's different sound recording contracts.[52] In many cases, the sound recording rates are higher than suggested by Dr. Eisenach, and thus the corresponding ratio of sound recording payments to publishing payments is also higher.

f. Dr. Eisenach's Use of [redacted] Agreements for Non-Interactive Services Is Inappropriate

47. According to Dr. Eisenach:

> [redacted] While their right to do so was in question throughout most of the ensuing five years, the agreements nevertheless were negotiated with at least some expectation that they would not be subject to rate court review. Moreover, the markets and parties involved in the [redacted] agreements are comparable to the markets and parties involved in the Section 115 licenses at issue here. Thus, these agreements provide significant insight into the relative value of the sound recording and musical works rights in this proceeding.[53]

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operating outside of the context of the compulsory license (and where both record labels and publishers are confronted with the same DMCA argument by YouTube)."). See also Witness Statement of David Kokakis, October 28, 2016, ¶ 102.

[52] GOOG-PHONOIII-0004017-GOOG-PHONOIII-00005323.

[53] Expert Report of Jeffrey A. Eisenach, Ph.D., October 31, 2016, ¶ 103.

Dr. Eisenach calculates the annual midpoint rate of musical work royalties based on [redacted]. These results are presented in his Table 6, produce a ratio range for sound recordings and musical works from [redacted] in 2012 to 4[redacted] in 2018 with a general downward trend.[54] Dr. Eisenach states: "Had DOJ decided otherwise – i.e., if the shadow of the compulsory license had been lifted permanently and completely – it is reasonable to expect that the adjustment towards equilibrium, market-based rates would have continued."[55] As a result, Dr. Eisenach "performed a simple linear regression to forecast how musical work payments as a share of sound recording payments would have progressed if the potential for re-imposition of the compulsory license that affected negotiated rates from 2012-2018 had been removed entirely."[56] Based on his regression results, Dr. Eisenach forecasts the ratio of sound recording to musical works royalties to decrease from [redacted], with an average ratio over the five-year period equal to [redacted].[57] Dr. Eisenach's use and analysis of [redacted] with publishers is flawed for several reasons.

48. First, in using just the headline rates from the opt-out agreements that Dr. Eisenach has reviewed, he relies on the assumption that the midpoint of the rates from these agreements is an accurate representation of the actual market rates paid by [redacted] to publishers for musical works. However, an alternative approach to avoid the assumptions made by Dr. Eisenach is instead to rely on [redacted] for the musical work payments, as found in their 10-K reports. To quote Dr. Eisenach, "from an economic perspective, the most relevant and reliable information is not the schedule of prices that may have been agreed to but rather the price

[54] Expert Report of Jeffrey A. Eisenach, Ph.D., October 31, 2016, Table 6.

[55] Expert Report of Jeffrey A. Eisenach, Ph.D., October 31, 2016, ¶ 126.

[56] Expert Report of Jeffrey A. Eisenach, Ph.D., October 31, 2016, ¶ 127.

actually paid."[58] Using the actual market rates for musical work payments as a percentage of revenue reported by [redacted] in its 10-K, I re-calculated the ratio of sound recording to musical work royalties presented in Dr. Eisenach's Table 6. I also corrected Dr. Eisenach's mistake for 2012 and 2013 by using [redacted]s content costs and revenue values for these years as reported in Pandora's 10-K covering these years. This resulted in the following ratios compared to Dr. Eisenach's ratios: (1) 2012: [redacted] ratio; (2) 2013: [redacted]; (3) 2014: [redacted] versus Dr. Eisenach's [redacted] ratio; and (4) 2015: [redacted] ratio.[59] Note that in all of these years Dr. Eisenach's ratio is lower than the calculated ratio based on [redacted]s actual data presented in its 10-Ks.

49. Second, Dr. Eisenach assumes that the ratios of sound recording to musical work royalties reached in [redacted] with music publishers, which range from [redacted], do not already reflect "equilibrium, market-based rates." Put another way, Dr. Eisenach is of the opinion that, absent the DOJ's decision to not permit withdrawals by publishers, the ratio of sound recording to musical work royalties would continue to decline towards some hypothetical equilibrium, market-based level. Dr. Eisenach does not offer any evidence to support his claim that adjustment toward equilibrium, market-based rates would have continued beyond 2018, or what the equilibrium, market-based rate would actually be. An alternative interpretation, one that Dr. Eisenach does not address, is that the ratio of sound recording to musical work royalties has already settled at a

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[57] Expert Report of Jeffrey A. Eisenach, Ph.D., October 31, 2016, ¶ 128, Table 8.

[58] Expert Report of Jeffrey A. Eisenach, Ph.D., October 31, 2016, ¶ 145.

[59] Exhibit 6.

market-based equilibrium in the range of [redacted].

50. I note that the recent drop in the ratio of sound recording to musical work royalties based on [redacted] with music publishers is a result, in part, of the publishers exercising market power and the significant uncertainty that existed in the market with respect to the repeated withdrawals by publishers from ASCAP and BMI. As noted in judicial opinions and Department of Justice filings, [redacted] was subjected to systematic attempts by publishers to raise [redacted] through either partial or very temporally short withdrawals of catalog from BMI and ASCAP. Publishers had on several occasions withdrawn their rights from either BMI or ASCAP with the aim of using their market power to extract public performance rates well above long-standing rates for non-interactive services.[60] After the courts stymied publishers' partial withdrawals, publishers petitioned the Department of Justice in an attempt to amend the ASCAP and BMI consent decrees to allow for such partial withdrawals of catalog from ASCAP and BMI. Notably, even the [redacted] would have been negotiated while that DOJ review was pending and the possibility of future partial withdrawals of catalog from ASCAP and BMI was being weighed by the DOJ.[61] I understand from testimony provided by [redacted] that, in negotiating the opt-out rates that Dr. Eisenach relies upon, publishers used uncertainty and the threat of future withdrawals, including full withdrawals, from ASCAP and

[60] See, e.g., In re Petition of Pandora Media, Inc., Nos. 12 Civ. 8035(DLC), 41 Civ. 1395(DLC) (S.D.N.Y. 2014), p. 97 (Noting that following partial withdrawals, "Sony and UMPG each exercised their considerable market power to extract supra-competitive prices."). Because of the uncertainty and exercise of market power inflicted by the withdrawals, the ASCAP rate court ultimately did not consider publishers' direct agreements with Pandora as benchmarks in setting a public performance rate for Pandora. See id. At 105-06 ("UMPG's 7.5% industry-wide rate implied an ASCAP rate of 3.42%. This was even higher than the ASCAP rate for interactive music services, which was set at 3.00%. If there was one principle regarding rate structure on which the parties agreed at trial it was that the rate for customized radio should be set below the rate for on-demand interactive services.").

BMI to extract supracompetitive rates from [redacted][62] The large degree of uncertainty surrounding the [redacted] agreements contradicts any suggestion by Dr. Eisenach that the rates reflected in the agreements reflect a fair market-based equilibrium.

51. Third, Dr. Eisenach's projection into the future assumes, without any basis, that the same historical trend from 2012 to 2018 in the ratio of sound recording to musical work royalties (as calculated by Dr. Eisenach) would continue into the future (i.e., through 2022 and beyond). However, I understand that the recent Web IV decision increased the sound recording rates and, therefore, calls into question whether the ratio of sound recording to musical work royalties will continue to decline.[63] [redacted][64] As a result, it is possible that musical works rates are less likely to increase in the future, again calling into question whether the ratio of sound recording to musical work royalties will continue to decline.

52. Dr. Eisenach's projection into the future also assumes that the ratio of sound recording rates to musical work rates is a function of only one factor – the time trend. It is incorrect to assume that this historical trend in the ratio is the only factor affecting the ratio; the ratio in the future may also be affected by many other factors including, for example, future technological innovations made by service providers that would affect both the future sound recording and

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[61] Expert Report of Jeffrey A. Eisenach, Ph.D., October 31, 2016, ¶ 123.

[62] [redacted]

[63] In re Determination of Royalty Rates and Terms for Ephemeral Recording and Webcasting Digital Performance of Sound Recordings (Web IV), Docket No. 14-CRB-0001-WR (2016-2002), December 16, 2015, p. 1.

musical work royalties paid by these providers to rightsholders (i.e., record labels and publishers). Additionally, I note that Dr. Eisenach uses only forecasted ratios to derive his average ratio of [redacted] for the period from 2018-2022, and chooses to ignore in his average calculation the actual ratio for 2018 of [redacted], which is higher than his forecasted ratio of [redacted] for the same year. Dr. Eisenach does not explain why it is more appropriate to use a forecasted ratio for 2018 when, in fact, he has the actual 2018 ratio based on Pandora's actual agreements with music publishers.

53. Fourth, the ratios calculated by Dr. Eisenach based on the Pandora opt-out agreements compare regulated sound recording rates determined under the willing buyer/willing seller standard with regulated musical work rates subject to the ASCAP/BMI consent decrees. Therefore, neither of these rates necessarily account for the 801(b)(1) factors and, thus, have an incomparability problem for purposes of establishing the Section 115 statutory rates for interactive streaming. As discussed previously, in contrast, it is precisely the fact that certain statutory rates already account for the 801(b)(1) factors, including the renewal of the current Subpart A rates for PDDs, that make them more comparable for purposes of establishing the Section 115 rates.

5. Dr. Eisenach's Methods and Corresponding Calculations for Estimating the Royalty for the Mechanical Right for Musical Works Are Unreliable

a. Method 1 (Per Play)

54. As previously discussed, Dr. Eisenach's Method 1 assumes that the difference between rates paid for sound recordings for interactive streaming services and rates paid for sound recordings for non-interactive streaming services represents an implicit rate for mechanical rights

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[64] [redacted]

for sound recordings. Dr. Eisenach calculates the rates paid for sound recordings for interactive streaming services for different interactive streaming service providers (i.e., an average of [redacted] and calculates the average rates paid for sound recordings for non-interactive streaming services (i.e., [redacted]). He then divides the difference between these two figures by the ratios of sound recording to musical work royalty payments derived from his benchmarks (with a focus on the YouTube and [redacted]) to calculate an implied rate for mechanical rights for musical works. Dr. Eisenach's Method 1 results in a range of implied rates for mechanical rights for musical works of [redacted].[65] In addition to the issues discussed in the previous sections regarding the lack of comparability of Dr. Eisenach's benchmark ratios of sound recording to musical work royalty payments, Dr. Eisenach's Method 1 suffers from further errors and is unreliable.

55. First, Dr. Eisenach's underlying assumption for his Method 1—"the difference between the all-in sound recording royalty for interactive services and the performance-only sound recording royalty (i.e., 20 cents/hundred streams)…is the implicit mechanical rate for sound recordings"[66]—makes no economic sense. Both of these figures represent the rates paid by service providers for all of the sound recording rights necessary (i.e., all-in rights) to stream music interactively and non-interactively, respectively. As discussed in my opening reports, mechanical and performance rights are perfect complements—neither has value without the other and there is no meaningful economic way to allocate musical work royalties between public performance and mechanical rights. Therefore, it is most meaningful to talk about an "all-

[65] Expert Report of Jeffrey A. Eisenach, October 31, 2016, ¶¶ 140-141, 151-153.

[66] Expert Report of Jeffrey Eisenach, October 31, 2016, ¶ 141.

in" rate for musical works.[67] Service providers view these two rights as a single bundle to be licensed at the same time, and a service is only concerned with securing whatever rights in sound recordings are necessary for streaming. Therefore, the difference between these two figures does not represent some hypothetical mechanical-only, sound recording right. Instead, it represents a difference in the value of a sound recording between when it is offered in an interactive streaming service and when it is offered in a non-interactive streaming service (this difference in value, in turn, is related to differences in consumer willingness-to-pay for the two types of services). While Dr. Eisenach assumes, without any support, that the rates paid for public performance rights for sound recordings by interactive service providers and the rates paid for public performance rights for sound recordings by non-interactive service providers are equal, this is inconsistent with another of his opinions that that there is incremental value in interactivity:

[67] However, to the extent that a separate mechanical-only rate exists, one approach to identifying such a rate would be to look to Sections 112 and 114, where I understand that the server copy (i.e., mechanical) is valued at 5% of the overall (i.e., mechanical plus public performance) payment. See *In re* Determination of Royalty Rates and Terms for Ephemeral Recording and Webcasting Digital Performance of Sound Recordings (Web IV), Docket No. 14-CRB-0001-WR (2016-2020), December 16, 2015, pp. 191-192 ("The Judges accept SoundExchange's proposal to continue the current bundling of the Section 112 and 114 rates. The Judges find persuasive the designated testimony of Dr. Ford and the license agreements that SoundExchange cites in its PFFCL that willing buyers and willing sellers would prefer that the rates for the two licenses be bundled and that they would be agnostic with respect to the allocation of those rates to the Section 112 and 114 license holders. The Judges also find that the minimum fee for the Section 112 license should be subsumed under the minimum fee for the Section 114 license, 5% of which shall be allocable to the Section 112 license holders, with the remaining 95% allocated to the Section 114 license holders."); and 200 ("In accordance with the Judges' analysis *supra*, section VII, the royalty rate for ephemeral recordings under 17 U.S.C. § 112(e) applicable to commercial webcasters shall be included within, and constitute 5% of the royalties such webcasters pay for performances of sound recordings under section 114 of the Act."). See also Statement of Marybeth Peters The Register of Copyrights before the Subcommittee on Courts, The Internet and Intellectual Property of the House Committee on the Judiciary, United States House of Representatives, 108th Congress, 2d Session, March 11, 2004, p. 23 ("I can also see no justification for providing a compulsory license which covers ephemeral reproductions of sound recordings needed to effectuate a digital transmission and not providing a similar license to cover intermediate copies of the musical works embodied in these same sound recordings, but that is what Section 112 does in its current form. Parallel treatment should be offered for both the sound recordings and the musical works embodied therein, which are part of a digital audio transmission.").

> In 2015, Spotify paid about $76.8 million in sound recording rights for about 51.3 billion plays, or about $0.15 per 100 plays for its ad-supported interactive service. This rate is essentially equal to the ad-supported rate paid by statutory webcasters for non-subscription uses (which was $0.14 per 100 plays for pureplay webcasters such as Pandora in 2015 and was set to $0.17 per 100 plays starting in 2016). That is, if this rate were taken at face value, it would indicate that there is essentially no value in interactivity, which cannot be the case.[68]

This is also inconsistent with the Pandora v. ASCAP decision.

- "Because ASCAP considers its music to be more valuable to the services it classifies as interactive, it has licensed them at a higher rate than non-interactive services."[69]
- "the historical division between interactive and non-interactive internet music services requires that Pandora be licensed well below the 3.0% rate at which ASCAP licenses interactive music services."[70]
- "If there was one principle regarding rate structure on which the parties agreed at trial it was that the rate for customized radio should be set below the rate for on-demand interactive services."[71]

56. Thus, what Dr. Eisenach claims is a hypothetical mechanical royalty is in fact just the difference in the value of a sound recording in the context of interactive streaming. Dr. Eisenach does not address this issue. Additionally, the sound recording royalty rates for interactive services are set in a market not subject to the 801(b)(1) factors or other regulatory constraints and reflect the exercise of market power by record companies, while the sound recording royalty rates for non-interactive services are set under the willing buyer, willing seller standard by the CRB. Therefore, a comparison of these two types of rates may not be an apples-to-apples comparison, and further does not reflect the considerations of the 801(b)(1) factors.

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[68] Expert Report of Jeffrey Eisenach, October 31, 2016, fn. 127.

[69] In Re Petition of Pandora Media, Inc. related to United States of America v. American Society of Composers, Authors, and Publishers, 12 Civ. 8035 (DLC), 41 Civ. 1395 (DLC), March 14, 2014, p. 32.

[70] In Re Petition of Pandora Media, Inc. related to United States of America v. American Society of Composers, Authors, and Publishers, 12 Civ. 8035 (DLC), 41 Civ. 1395 (DLC), March 14, 2014, p. 91.

[71] In Re Petition of Pandora Media, Inc. related to United States of America v. American Society of Composers, Authors, and Publishers, 12 Civ. 8035 (DLC), 41 Civ. 1395 (DLC), March 14, 2014, p. 106.

57. Second, Dr. Eisenach's actual calculation of the sound recording royalty payments to record labels for certain interactive streaming service providers is unreliable. Dr. Eisenach improperly excludes [redacted] paid for sound recording rights in his calculations for Method 1 "[b]ecause the bargains between [redacted] [and] in my opinion they do not constitute reliable benchmarks and I do not include them in the calculations below."[72] [redacted], Dr. Eisenach's weighted average sound recording rate per 100 plays across the interactive service providers that he considers artificially increases from [redacted].[73] Dr. Eisenach provides no reliable evidence that the rates negotiated between [redacted]"[74] In fact, [redacted] are in line with Rhapsody's rates,[75] and Rhapsody is not owned by any record labels.[76] I note that another of the Copyright Owners' experts in this matter, Dr. Rysman, does not exclude [redacted] from his calculations.[77] Furthermore, Dr. Eisenach is inconsistent in his decision to exclude the rates from service providers that are partially owned by record labels. For example, Deezer, which has some of the higher rates in Dr. Eisenach's calculation and which he does not remove from his calculation, is partially owned by Sony,

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[72] Expert Report of Jeffrey Eisenach, October 31, 2016, ¶ 150.

[73] Expert Report of Jeffrey Eisenach, October 31, 2016, Table 11.

[74] Expert Report of Jeffrey Eisenach, October 31, 2016, ¶ 150.

[75] Expert Report of Jeffrey Eisenach, October 31, 2016, Table 11.

[76] As of 2015, RealNetworks owned 43% of issued and outstanding common stock of Rhapsody. See RealNetworks 2015 Form 10-K. Additionally, Crunchbase, an aggregator of private company information, acknowledges three investors of Rhapsody – Columbus Nova Technology Partners, Real Networks, and Telefonica, https://www.crunchbase.com/organization/rhapsody#/entity.

[77] Expert Report of Marc Rysman, October 28, 2016, Table 1, ¶ 66.

Universal Music, and Warner,[78] [redacted].[79] Tidal, which also has some of the higher rates in Dr. Eisenach's calculation and which he does not remove from his calculation, is known for being owned by successful recording artists, and is also reported in 2015 to be partially owned by record labels.[80] Dr. Eisenach offers no explanation for why [redacted] should be removed from his calculations, while service providers such as Deezer and Tidal, which have some of the higher sound recording rates, should remain in the calculations. Based on Dr. Eisenach's calculations in his Table 11, the appropriate weighted average sound recording rate per 100 plays should include [redacted]

58. Dr. Eisenach also chooses to exclude from his calculation ad-supported interactive streaming service providers even though there is data available to calculate their effective sound recording rates from the sources that he uses to calculate the rates for the other service providers in his Table 11. [redacted] s:

> The data indicate that the rate [redacted]. This rate is

[78] "Music streaming service Deezer plans Paris listing," Leila Abboud, Reuters, September 22, 2015: "Three music labels, Warner Music, Sony Music and Universal Music, part of Vivendi, together own about 15 percent of the shares."

[79] "Sony BMG, Universal Music, Warner Music, EMI and Merlin…bought at the time in to Spotify – for a pittance." See "This Is Quite Possibly The Spotify Cap Table," TechCrunch, August 7, 2009. "Warner, along with the other big music labels, owns minority equity stakes in services like Spotify and Soundcloud…" See "Warner Music Says it Will Share Its (Theoretical) Spotify Payday with its Artists," Recode, February 4, 2016.

[80] "Jay Z on Competing With Jimmy Iovine: 'I Don't Have To Lose...For You Guys To Win'," Tony Gervino and Andrew Hampp, Billboard, March 30, 2015: "[16 artists] are believed to have been gifted 3% equity in the company, with the remaining stakes owned by Jay Z, another investor and the record labels."

> [redacted] to the ad-supported rate paid by statutory webcasters for non-subscription uses (which was $0.14 per 100 plays for pureplay webcasters such as Pandora in 2015 and was set to $0.17 per 100 plays starting in 2016). That is, if this rate were taken at face value, it would indicate that there is essentially no value in interactivity, which cannot be the case. In my opinion, [redacted] Further, in my opinion it would not be appropriate to base a rate on an average that included non-subscription services. Using a lower, blended rate would risk causing the sort of disruption I have discussed above – a rate that is too low for subscription services could lead to disruptive and distortionary changes in the interactive service segment, but a rate that may be too high for non-subscription services would not, simply because of the asymmetric nature of those risks.[81]

I disagree with Dr. Eisenach's reasons for excluding ad-supported, free services, [redacted] As discussed above, [redacted]—both Deezer and Tidal are partially owned by record labels—[redacted] Rhapsody's subscription-based rates, and Rhapsody is not owned by record labels. With regards to [redacted] ad-supported service, Dr. Eisenach's statement that "it would not be appropriate to base a rate on an average that included non-

[81] Expert Report of Jeffrey Eisenach, October 31, 2016, fn. 127.

subscription services" makes no economic sense.[82] The Copyright Owners' proposal does not differentiate between subscription-based or ad-supported services; in other words, subscription and ad-supported services pay the same per-play or per-user rate. Therefore, it does make sense to base the proposed "one size fits all" rate on a blended rate that accounts for both the rates that subscription services and ad-supported services have been paying. Therefore, in my opinion it is incorrect to exclude the ad-supported services from Dr. Eisenach's calculations. Including the ad-supported service providers available in the data used by Dr. Eisenach [redacted] results in a weighted average sound recording rate per [redacted]

59. Dr. Eisenach also does not include in his calculations several subscription-based interactive streaming service providers even though there is data available to calculate their effective sound recording rates from other sources available in this proceeding. These paid subscription service providers include, for example, Rdio and Slacker. Including the paid subscription service providers and ad-supported service providers for which data is available in Dr. Eisenach's calculations, and including Spotify (both its paid subscription and ad-supported service), [redacted]

60. Applying the corrected sound recording per-play rate of [redacted] per 100 plays, and the comparable sound recording to musical work royalty ratios of [redacted] of sound recording payments based on the current Section 115 regulations), [redacted] of sound recording payments based on the 2006 Subpart A benchmark), and [redacted] of sound recording

[82] Expert Report of Jeffrey Eisenach, October 31, 2016, fn. 127.

[83] Exhibit 2a.

[84] Exhibit 2a.

payments based on the 2015 Subpart A benchmark), results in the corrected musical work mechanical right royalty rates based on Dr. Eisenach's Method 1 presented in Exhibit 2e. Note that the results are all substantially lower than the Copyright Owners' proposal of $0.0015 per play.

b. Method 2 (Per Play)

61. As previously discussed, Dr. Eisenach's Method 2 divides the rates paid for sound recordings for interactive streaming services for different interactive streaming service providers (i.e., an average of [redacted] per 100 plays, [redacted]) by the ratios of sound recording to musical work royalty payments derived from his benchmarks (with a focus on the YouTube and [redacted] benchmarks) to calculate an implied all-in rate for musical works. Then, he subtracts from this result the public performance rates paid for musical works (i.e., an average of [redacted] per 100 plays, [redacted], calculated using the same data as for his calculation of the [redacted] per 100 plays sound recording rate) to calculate an implied rate for mechanical rights for musical works. Dr. Eisenach's Method 2 results in a range of implied rates for mechanical rights for musical works of [redacted] per 100 plays (i.e., [redacted] per play) to [redacted] per 100 plays (i.e., [redacted] per play).[85] In addition to the issues discussed in the previous sections regarding the lack of comparability of Dr. Eisenach's benchmark ratios of sound recording to musical work royalty payments, Dr. Eisenach's Method 2 suffers from further errors and is unreliable.

62. First, the all-in sound recording royalty rates for interactive services are set in a market not subject to the 801(b)(1) factors or other regulatory constraints and reflect the exercise of market power by record companies, and therefore are not appropriate benchmarks to use to

[85] Expert Report of Jeffrey Eisenach, October 31, 2016, ¶¶ 142-143, 154-158.

calculate the mechanical musical work royalty rates, which should reflect the considerations of the 801(b)(1) factors.

63. Second, Dr. Eisenach's Method 2 relies on the same calculation of the sound recording royalty payments to record labels for certain interactive streaming service providers used in his Method 1, and therefore, suffers from the same errors discussed above—i.e., a more appropriate rate would include all available data for paid subscription and ad-supported service providers, including Spotify.

64. Third, Dr. Eisenach also makes mistakes in his calculation of the musical work public performance royalty payments for certain interactive streaming service providers. Specifically, he inappropriately (1) [redacted] paid subscription service ([redacted] per 100 plays[86]); (2) excludes ad-supported interactive streaming service providers, [redacted]; and (3) does not include paid subscription interactive streaming service providers for which data is available. Including [redacted] and the ad-supported service providers for which data is available from the sources used by Dr. Eisenach, changes Dr. Eisenach's weighted average musical work public performance rate per 100 plays to [redacted].[87] Including Spotify (both its paid subscription and ad-supported service), and the ad-supported and paid subscription service providers for which data is available, further changes Dr. Eisenach's weighted average musical work public performance rate per 100 plays to [redacted][88]

[86] Expert Report of Jeffrey Eisenach, October 31, 2016, Table 13.

[87] Exhibit 2b.

[88] Exhibit 2b.

65. Applying the corrected sound recording per-play rate of [redacted] per 100 plays, the corrected musical work public performance per-play rate of [redacted] per 100 plays, and the comparable sound recording to musical work royalty ratios of [redacted] of sound recording payments based on the current Section 115 regulations), [redacted] of sound recording payments based on the 2006 Subpart A benchmark), and [redacted] of sound recording payments based on the 2015 Subpart A benchmark), results in the corrected musical work mechanical right royalty rates based on Dr. Eisenach's Method 2 presented in Exhibit 2f. Note that the results are all substantially lower than the Copyright Owners' proposal of $0.0015 per play.

c. Method 2 (Per User)

66. Dr. Eisenach also uses his Method 2 to analyze the Copyright Owners' $1.06 per user proposal. "I implement Method 2, except that the magnitudes are expressed on a per-user basis rather than a per play basis."[89] Dr. Eisenach's Method 2 on a per-user basis suffers from similar errors as his Method 2 on per-play basis and is, therefore, unreliable.

67. For example, Dr. Eisenach inappropriately (1) [redacted] service and various other paid subscription services that he considered in his Method 2 per-stream analysis (see Dr. Eisenach's Tables 11 and 13); (2) [redacted] and (3) does not include paid subscription interactive streaming service providers for which data is available. [redacted], and the other ad-supported service providers for which data is available from the sources used by Dr. Eisenach, changes Dr.

[89] Expert Report of Jeffrey Eisenach, October 31, 2016, ¶ 159.

Eisenach's weighted average sound recording rate per user to [redacted]; and changes his weighted average musical work public performance rate per user to [redacted].[90] Further including the additional ad-supported and paid subscription service providers for which data is available changes Dr. Eisenach's weighted average sound recording rate per user to [redacted]; and changes his weighted average musical work public performance rate per user to [redacted].[91]

68. Applying the corrected sound recording per-user rate of [redacted], the corrected musical work public performance per-user rate of [redacted], and the comparable sound recording to musical work royalty ratios of [redacted] of sound recording payments based on the current Section 115 regulations), [redacted] of sound recording payments based on the 2006 Subpart A benchmark), and [redacted] of sound recording payments based on the 2015 Subpart A benchmark), results in the corrected musical work mechanical right royalty rates based on Dr. Eisenach's Method 2 presented in Exhibit 2f. Note that the results are all substantially lower than the Copyright Owners' proposal of $1.06 per user.

6. Dr. Eisenach's Opinion that the Current Section 115 Statutory Rates Act as a Ceiling, But Not a Floor, for the Rates Actually Paid by Interactive Music Service Providers Is Incorrect

69. Dr. Eisenach states the following opinion with regards to the current Section 115 statutory rates acting as a ceiling, but not a floor, for the actual rates paid by interactive streaming service providers.

> Under the Section 115 compulsory license, rightsholders are not permitted to withhold a license from a licensee who is prepared to pay the statutory rates. Licensees, on the other hand, have the option of not taking a license. The practical effect of this aspect of the compulsory license is that, if the rates and terms in the statutory license establish a higher value for the license than licensees

[90] Exhibits 2c-2d.

[91] Exhibits 2c-2d.

> are willing to pay, licensees have the legal right to walk away from the statutory rate and force a renegotiation of terms. In this circumstance, both parties would have an incentive to agree to a lower but still mutually beneficial rate. By contrast, if the statutory rate is set "too low," licensors have an incentive to negotiate different terms, but they lack legal standing to force a renegotiation. As the Copyright Office puts it, "while copyright owners and users are free to negotiate voluntary licenses that depart from the statutory rates and terms, in practical effect the CRB-set rate acts as a ceiling for what the owner may charge."[92]

70. Dr. Eisenach's opinion is based on the assumption that an interactive streaming service provider could threaten "to walk away from the statutory rate and force a renegotiation." A threat has an effect on the outcome of a negotiation only if it is "credible" as that term is used in the game theory literature. However, an interactive streaming service provider's threat to walk away from the statutory rate in negotiations likely would not be credible because it would mean foregoing offering a streaming service entirely or having a less attractive service offering than competing interactive streaming service providers that had already accepted the statutory rate. Thus, the statutory rate likely acts as both a ceiling and a floor for the actual rates paid by interactive music streaming service providers. The conclusion that the statutory rate acts a floor is consistent with the testimony of Google's Zahavah Levine, who described 10.5% of service revenue as currently defined as representing the "floor" for publishers in negotiations with Google; that is, it has been the copyright owners, not Google, that have used the Section 115 compulsory license as leverage in the negotiations.[93]

71. Dr. Eisenach's opinion is also based on the assumption that "if the statutory rate is set 'too low,' licensors have an incentive to negotiate different terms, but they lack legal standing to force a renegotiation." However, Dr. Eisenach ignores two potential actions that the copyright

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[92] Expert Report of Jeffrey A. Eisenach, Ph.D., October 31, 2016, ¶ 29.

owners could take to force a renegotiation. First, if the copyright owners/publishers believed that they were not being properly compensated for the mechanical rights for their musical works, then they could threaten to walk away from the negotiation for the public performance rights for their musical works. Indeed, I understand that publishers have threatened to withdraw from ASCAP and BMI and negotiate directly with the service providers for musical work public performance rights. Second, as discussed in my opening reports, the major record labels share common corporate ownership with the major music publishers.[94] When a single entity controls the musical work rights and sound recording rights, and that entity believes it is not being properly compensated for the mechanical rights for their musical works, the entity could threaten to walk away from the negotiation for the sound recording rights. Thus, it is clear that the current statutory rates can also act as a floor for what the copyright owners may charge.

7. Dr. Eisenach Incorrectly Attributes Certain Changes in the Overall Music Industry to Interactive Streaming

72. Dr. Eisenach discusses extensively the changes in the music industry that "have limited compensation to rightsholders by transforming the quantity and means by which consumers access music."[95] But the changes discussed by Dr. Eisenach cannot be attributed to interactive streaming as Dr. Eisenach suggests. One of the changes addressed by Dr. Eisenach is "[t]he transition from physical to digital formats [that] has shifted sales from albums to singles, meaning that rather paying 91 cents for a 10-song album containing one or two very popular songs and eight or nine less popular ones, consumers often purchase just the few popular

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[93] Written Direct Testimony of Zahavah Levine (On behalf of Google Inc.), October 31, 2016, ¶ 49.

[94] In fact, of the top 15 songs on Billboard's "Hot 100" list, 11 songs have overlap in the affiliated record label and music publisher ownership. Expert Witness Statement of Dr. Gregory K. Leonard, November 1, 2016, ¶ 18; Amended Expert Witness Statement of Dr. Gregory K. Leonard, January 25, 2017, ¶ 18; "The Hot 100," Billboard, http://www.billboard.com/charts/hot-100, last accessed February 9, 2017.

songs."[96] I note, first, that this statement refers to changes brought about by digital downloads, not streaming, and, second, that the phenomenon being discussed represents an increase in consumer welfare.

73. As I discussed in my opening reports, Apple's launch of the iTunes Music Store in April 2003 broke up the record industry's long-standing, preferred product bundle, the album, and allowed customers to legally buy just the songs they wanted.[97] While this change may have impacted industry revenues, it was not related to interactive streaming. As illustrated in Exhibit 6a of my opening reports, between 2005 and 2010 total U.S. music industry revenues declined by 43% from $12.3 billion to $7.0 billion. This decline in revenues was predominantly driven by the decline in revenues from CD sales, which were $10.5 billion in 2005 but decreased to $3.4 billion in 2010. Exhibit 6a also shows that between 2005 and 2010, CD unit sales declined from 705.4 million shipments to 253.0 million shipments, while Download Single unit sales increased from 366.9 million shipments to 1,177.4 million shipments. Therefore, between 2005 and 2010, the decline in total U.S. music industry revenues was a result, in large part, of consumers switching from purchasing CDs (bundled albums) to individual tracks due to the unbundling of albums and the rise of digital download services such as iTunes. Services such as iTunes enabled consumers to purchase and download individual tracks rather than being limited to purchasing only the entire album, a factor which resulted in declining music industry revenue as

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[95] Expert Report of Jeffrey A. Eisenach, Ph.D., October 31, 2016, ¶ 65.

[96] Expert Report of Jeffrey A. Eisenach, Ph.D., October 31, 2016, ¶ 65.

[97] Expert Witness Statement of Dr. Gregory K. Leonard, November 1, 2016, ¶¶ 105-106; Amended Expert Witness Statement of Dr. Gregory K. Leonard, January 25, 2017, ¶¶ 107-108; "iTunes Store at 10: How Apple Built a Digital Media Juggernaut," The Verge, April 26, 2013.

the increased sales of individual tracks did not offset losses from full album sales.[98] It is important to note that consumers benefited substantially from this development.

74. In summary, the shift from consumers purchasing bundled albums to unbundled individual tracks, which led to a decrease in total U.S. music industry revenues, had nothing to do with interactive music streaming services. As a result, there is no valid economic reason that the Copyright Owners' proposal for the Section 115 statutory rates should compensate publishers for the shift from bundled albums to unbundled individual tracks that was caused by factors other than interactive streaming, including the popularity of download services such as iTunes, as suggested by Dr. Eisenach.[99]

75. Dr. Eisenach also states that "[m]ore recently, the transition from downloads to streaming has further inhibited royalty payments."[100] As I discussed in my opening reports (see Exhibit 6b of my opening reports) after falling steadily after 1999, starting in 2010 the downward trend leveled off, and total U.S. music industry revenues have remained relatively flat despite revenues from CD sales continuing to decline and revenues from Download Single sales remaining relatively flat. It is important to note that the reason that total U.S. music industry revenues have remained relatively constant since 2010 is because revenues from music streaming services—captured in categories including Paid Subscriptions, payments to SoundExchange, and free On-

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[98] Elberse, Anita, "Bye-Bye Bundles: The Unbundling of Music in Digital Channels," *Journal of Marketing* 74, no. 3 (May 2010), p. 108; "More Artists Steer Clear of iTunes," The Wall Street Journal, August 28, 2008; "Who Killed the Music Industry," Pando, August 5, 2013; "A Decade of iTunes Singles Killed the Music Industry," CNN Money, April 25, 2013.

[99] I note that Dr. Eisenach acknowledges that the shift from albums to singles was caused, in part, by iTunes. "First, the growth of digital music distribution that began with the iTunes Music Store has resulted in an increase in sales of individual tracks relative to albums." Expert Report of Jeffrey A. Eisenach, Ph.D., October 31, 2016, ¶ 66.

[100] Expert Report of Jeffrey A. Eisenach, Ph.D., October 31, 2016, ¶ 65.

Demand Streaming[101]—have all increased substantially since 2010. As a result, interactive streaming has, in fact, been a source of increasing royalty payments in recent years, putting an end to what had been a downward trend, rather than inhibiting royalty payments as Dr. Eisenach suggests.

76. Goldman Sachs' October 4, 2016 report titled, "Music in the Air: Stairway to Heaven," provides support for the conclusion that interactive streaming has been a positive development for the overall music industry (including for publishers).[102]

- "The music industry is on the cusp of a new era of growth after nearly two decades of disruption. The rising popularity and sophistication of streaming platforms like Spotify and Pandora is ushering in a second digital music revolution – one that is creating value rather than destroying it like the piracy and unbundling that came before."[103]
- "We believe new technology changes such as the emergence of internet radio and music streaming are driving a new era of growth for the recorded music industry. New tech enablers such as Spotify, Apple or Pandora have disentangled music content from its delivery. The resulting convenience, accessibility and personalization has driven more consumption of legal music and greater willingness to pay for it, at a time of improving connectivity and growing consumer preference for accessing rather than owning music. Unlike its predecessor, this "second" digital revolution creates more value for rights holders (rather than destroys it), shifting revenue streams from structurally declining markets (physical, download sales) to a significantly larger new revenue pool (ad-funded and subscription streaming). This shift has enabled the recorded music market to return to growth in 2015 following almost two decades of value destruction led by piracy and unbundling."[104]
- "By revolutionizing the listening experience, making it seamless and personalized, streaming improves the monetization of music content through 1) a range of subscription streaming options with multiple price points that address consumers willing to pay for better access and convenience, and 2) ad-funded, free streaming that addresses consumers not able or willing

[101] "News and Notes on 2015 Mid-Year RIAA Shipment and Revenue Statistics," The Recording Industry Association of America, 2015.

[102] I note that one of Copyright Owners' other experts, Dr. Gans, relies heavily on data contained in the Goldman Sachs report.

[103] "Music in the Air: Stairway to Heaven," Goldman Sachs, October 4, 2016, p. 1.

[104] "Music in the Air: Stairway to Heaven," Goldman Sachs, October 4, 2016, p. 3.

to pay (therefore reducing piracy). Moreover, streaming improves the discoverability of catalogues and increases their value."[105]

- "The incumbent publishers, who so far have been more insulated from digital disruption, are also likely to gain as they receive around 10% of the platforms' revenue as mechanical and performance royalties. We forecast their revenue pool to grow to $7 bn in 2030 from $4 bn in 2015, with streaming alone adding $3 bn of revenue. The main pool at risk (i.e. physical mechanical royalties) is currently worth $0.6 bn on our estimates. Assuming margin remains broadly unchanged at 30% as publishers do not benefit from the same margin uplift in streaming as the labels, we forecast profit to double to $2 bn in 2030."[106]
- "Streaming improves discoverability and monetization of back catalogues, thus turning a one-off transaction into an annuity of cash flows. Catalogue songs (i.e., older than 18 months) accounted for 70% of all streaming volume in 2015, compared to 50% of overall physical and digital album sales (Nielsen). This comes at a time when physical sales of current albums have come under significant pressure, which led the overall share of current album sales (physical + downloads) to decrease from 63% in 2005 to less than 50% today (Nielsen). Warner Music in its 2015 10K report said that it sees greater monetization of its catalogue songs in streaming and higher margins (given lower marketing cost)."[107]

77. Dr. Eisenach may be making the fundamental economic error of looking only at mechanical royalties when he should be looking at total royalties for musical works. From this perspective, streaming has helped copyright owners.

C. Specific Criticisms of the Rysman Expert Report

1. Overview of the Rysman Expert Report

78. In his report, Dr. Rysman proposes that the Section 115 rates should be per-play and per-user rates rather than based on a percentage of revenue.[108] Dr. Rysman argues that a revenue-based royalty structure is economically inappropriate because songwriters and publishers receive lower royalty payments when streaming providers choose to forgo higher revenue by using lower

[105] "Music in the Air: Stairway to Heaven," Goldman Sachs, October 4, 2016, p. 3.

[106] "Music in the Air: Stairway to Heaven," Goldman Sachs, October 4, 2016, p. 13.

[107] "Music in the Air: Stairway to Heaven," Goldman Sachs, October 4, 2016, pp. 37-38.

[108] Expert Report of Marc Rysman, October 28, 2016, ¶ 34.

pricing models to attract users.[109] Therefore, such a structure results in royalty revenue to songwriters and publishers that is dependent on the pricing model of the service.[110]

79. Dr. Rysman claims that the statutory policy objectives support a higher rate and the proposed per-play and per-user rates are in line with these objectives.[111] Specifically, Dr. Rysman argues that the proposed per-play and per-user rates would not reduce the creative works available to the public since they are in the range of or higher than the current or historical rates paid by services.[112] Dr. Rysman also argues that the proposed per-play and per-user rates are in line with the policy objectives of fair returns and support the objective of rewarding the relative role of songwriters.[113] Dr. Rysman further claims that the proposed rates would not be disruptive since music streaming services have the ability to quickly adapt and change strategy to offset the impact of a rate increase, and they may not even need to adjust given that the industry is very robust.[114]

80. In the following sections, I provide specific criticisms of the Rysman Expert Report.

2. Revenue-Based Royalty Payment Structures Are the Most Commonly Used Methodology

81. Dr. Rysman claims that a revenue based royalty structure is not appropriate because it is likely to be manipulated by music streaming services by defining revenue in opportunistic ways

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[109] Expert Report of Marc Rysman, October 28, 2016, ¶¶ 35-41.

[110] Expert Report of Marc Rysman, October 28, 2016, ¶¶ 35-41.

[111] Expert Report of Marc Rysman, October 28, 2016, ¶¶ 69-70.

[112] Expert Report of Marc Rysman, October 28, 2016, ¶¶ 69-70.

[113] Expert Report of Marc Rysman, October 28, 2016, ¶¶ 77-79, 85-89.

[114] Expert Report of Marc Rysman, October 28, 2016, ¶ 92.

and such a royalty structure is inconsistent with the objective of fair return.[115] However, contrary to Dr. Rysman's opinion, in my experience, revenue-based royalty payment structures are, in fact, extremely common in intellectual property licenses.[116] Additionally, a percentage of revenue structure has been selected in both of the previous Phonorecords matters pertaining to interactive streaming, where a percentage of revenue headline rate was part of the Section 115 rate structure, and in the PSS/SDARS II proceeding that set a rate as a percentage of gross revenue.[117] Furthermore, a percentage of revenue structure is particularly relevant for purposes of accounting for the "relative roles" of the copyright owner and interactive streaming service provider, as contemplated under the third 801(b)(1) factor,[118] because the compensation to both the copyright owner and service provider is proportional to the growth in interactive streaming.

82. With regards to the music streaming industry at issue, a revenue-based rate structure makes economic sense because songwriters and interactive streaming service providers collectively share in both the upfront investments in the service offering and in the upside (or downside) rewards associated with those investments. Moreover, a percentage of revenue structure provides an adjustment to the royalty for a streaming service depending on the willingness-to-pay of the consumer segment that the service is targeting.

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[115] Expert Report of Marc Rysman, October 28, 2016, ¶¶ 44, 77-79.

[116] See, for example, Richard Razgaitis, "Valuation and Dealmaking of Technology-Based Intellectual Property: Principles, Methods, and Tools," Wiley (2nd Edition), 2009, p. 508, "The classic Cash As payment structure is a running royalty. … A very common form of this calculation is a running rate defined as a percentage, and the base as the revenue (aka 'sales') in dollars of the products made by the technology licensed." Also see Parr and Smith, "Intellectual Property: Valuation, Exploitation, and Infringement Damages," Wiley (2005), p. 672.

[117] In the Matter of Determination of Rates and Terms for Preexisting Subscription Services and Satellite Digital Audio Radio Services, Docket No. 2011-1 CRB PSS/Satellite II, February 14, 2013.

[118] I note that the third 801(b)(1) factor is consistent with the type of analysis required under *Georgia-Pacific* Factor 13 in a patent infringement matter. *Georgia-Pacific* Factor 13 states: "The portion of the realizable profit that should be credited to the invention as distinguished from non-patented elements; the manufacturing process, business risks, or significant features or improvements added by the infringer." *Georgia-Pacific Corp. v. United States Plywood Corp.*, 18 F. Supp. 1116, 1120 (S.D.N.Y. 1970).

3. There Is No Evidence, and Dr. Rysman Presents No Evidence, That Interactive Service Providers Have Artificially Lowered Their Prices to Attract Users, Resulting in Lower Royalty Payments to Songwriters

83. In his report, Dr. Rysman claims that music streaming services "charge prices that do not maximize current direct profits, but instead charge lower prices today in order to build a customer base that leads to greater long-run profitability…or greater profitability from selling other products or services to its customers."[119] Dr. Rysman proposes that there are four features of the music streaming services that "might lead a music service to accept lower prices or revenue today with the intent of collecting higher revenue through the music service in the future," including network effects, economies of scale, learning about consumers, and switching costs.[120] However, the four features described by Dr. Rysman merely indicate the importance of user base growth for music services, but he provides no reliable support for the claim that firms are actually choosing to forgo current profits in order to gain user base. There is no evidence, nor does Dr. Rysman provide any evidence, that music streaming service providers "set artificially low prices now in the hopes of being able to realize higher returns at some point in the future."[121] For example, there is no evidence that, e.g., Spotify, which currently charges $10 per month for a subscription, has plans to increase this price in the future. Thus, Dr. Rysman just engages in speculative theorizing without actually showing that such theories apply in this case.

84. Dr. Rysman claims that a "get big fast" strategy foregoes current profits and thus does not properly compensate songwriters. Even if we assume that streaming services are currently charging low prices to build their installed base, unsupported though this assumption is by any

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[119] Expert Report of Marc Rysman, October 28, 2016, ¶ 13.

[120] Expert Report of Marc Rysman, October 28, 2016, ¶ 29.

[121] Expert Report of Marc Rysman, October 28, 2016, ¶ 28.

evidence, there is nothing "artificial" or economically wrong about such a strategy. Indeed, promotional pricing is widespread in the marketplace, with price discounts among the most widely employed sales promotion tactics.[122] Promotional pricing strategies are commonly used by companies in various industries, such as video streaming services, cell phone companies, internet providers, fitness clubs, and electronic newspapers and magazines, all of which are comparable to streaming services in terms of the subscription business model.[123] This is particularly true early in a product's lifecycle,[124] where it can be utilized to learn consumer price sensitivities and preferences, and attract the core group of consumers.[125] The purpose of such a strategy is to "invest" today (with lower prices) with the return coming in terms of a larger installed base in the future. In the case of streaming, that would benefit copyright owners by increasing the royalties paid in the future. Because copyright owners would share in the rewards from such a strategy, they should also share in the costs of the "investment." That is, to the extent that streaming services are currently charging lower prices to build installed base, copyright owners should receive lower royalties with the return coming in the form of higher

[122] See Chen, Marmorstein, Tsiros, and Rao, "When More Is Less: The Impact of Base Value Neglect on Consumer Preferences for Bonus Packs over Price Discounts," Journal of Marketing (2012), p.1. Also see Carl Shapiro and Hal R. Varian, "Information Rules," Harvard Business School Press (1998), pp. 35, 42-43, 78-81.

[123] For example, Hulu, a video streaming service, lowered the price since October 2016 from $8 to $6 a month for new subscribers for the first year since they subscribed. "Hulu Drops Price to $6 Per Month," CNET, https://www.cnet.com/news/hulu-promotion-6-dollars-per-month/. The Economist offers price discounts and student subscription plan for its digital version. "Choose Your Subscription to The Economist," The Economist, https://subscription.economist.com/DA/AFF-GLB-PH/GLOBALAFF/PH. 24 Hours Fitness, a leading fitness club with more than 400 clubs across the U.S., provides new member offer, family/friend add-on offer, and other special offers. "Specials," 24 Hour Fitness, http://www.24hourfitness.com/membership/offers/specials.html.

[124] Gitman and McDaniel, "The Future of Business: The Essentials," Cengage Learning, 3rd edition (March 23, 2007), pp. 392-393. "Product Life Cycle Strategies (PLC) and Characteristics – Managing Each PLC Stage," Marketing Insider, https://marketing-insider.eu/product-life-cycle-strategies/.

[125] Carl Shapiro and Hal R. Varian, "Information Rules," Harvard Business School Press (1998), pp. 35, 42-43, 78-81.

royalties in the future. However, as noted above, Dr. Rysman has provided no evidence that the streaming services, or Google in particular, are actually engaging in such a strategy.

4. There Is No Evidence, and Dr. Rysman Presents No Evidence, That Interactive Service Providers Have Defined Revenue in Opportunistic Ways to Manipulate Revenues, Resulting in Lower Royalty Payments to Songwriters

85. Dr. Rysman claims that a revenue based royalty structure is not appropriate since it is also likely to be manipulated by music streaming services by "defining revenue in opportunistic ways."[126] As Dr. Rysman claims, Amazon Prime Music [redacted] to music streaming because it treated the music streaming service as a gift to subscribers, or multi-product firms such as Apple and Google use their music streaming services as a loss leader to drive sales and traffic towards other parts of the company.[127] He argues that publishers, as a result, would not be able to realize revenue even in the long run.[128] As discussed below, Dr. Rysman does not provide any reliable evidence that music streaming service providers define revenue in opportunistic ways.

86. Furthermore, while Dr. Rysman's concerns might have more theoretical merit if directed against a rate proposal that was purely expressed as a percentage of revenue, Dr. Rysman ignores the fact that the existing Section 115 rate structure, and the proposal put forth by Google, both contain a greater of structure with certain minimum payments that protect songwriters against the supposed risk arising from the uncertainty related to the revenue of the interactive streaming service. Specifically, the minimums included in Section 115 consider a specified percentage of the total amount expensed by the service provider for sound recording rights and per-subscriber

[126] Expert Report of Marc Rysman, October 28, 2016, ¶ 44.

[127] Expert Report of Marc Rysman, October 28, 2016, ¶¶ 43-44.

per-month minimum rates. This protects songwriters against the supposed risk arising from the uncertainty related to the financial performance of the interactive streaming service and other potential transparency issues. For example, if the revenues earned by a service are too low such that 10.5% of the revenues earned for the service falls below the lesser of the percentage of sound recording payments and per-subscriber minima, then the service pays pursuant to the minima, which ultimately protect songwriters against the downside risk of the financial performance of the interactive streaming service. Therefore, even Dr. Rysman's theoretical concerns about the transparency issues of services revenues are misguided.

a. The Examples Used by Dr. Rysman Are Not Valid

87. None of the examples that Dr. Rysman uses provide reliable evidence that firms define revenue in opportunistic ways. Dr. Rysman claims that Amazon Prime Music has reported [redacted]g because it treated the music streaming service as a gift to subscribers.[129] He ignores again that the musical work royalty payments for Amazon Prime Music are equal to [redacted], and thus are effectively [redacted].[130] Again, the current Section 115 royalty structure and Google's proposal both include a percentage of sound recording rights fees prong.

88. Dr. Rysman also argues that multi-product firms such as Apple and Google use their music streaming services as a loss leader to drive sales and traffic towards other parts of the company.[131] His argument implies that, for example, the sales of Google's music streaming

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[128] Expert Report of Marc Rysman, October 28, 2016, ¶¶ 47-48.

[129] Expert Report of Marc Rysman, October 28, 2016, ¶¶ 43-44.

[130] Expert Witness Statement of Dr. Gregory K. Leonard, November 1, 2016, ¶ 62; Amended Expert Witness Statement of Dr. Gregory K. Leonard, January 25, 2017, ¶ 64.

[131] Expert Report of Marc Rysman, October 28, 2016, ¶¶ 43-44.

services drive the sales or use of other Google services. However, Dr. Rysman does not provide any evidence or economic analysis to show such a causal relationship actually exists, i.e., that Google Music subscriptions drive use of other Google services. In fact, to the extent that there is such a causal link, it is the opposite direction – Google Music subscriptions are likely driven by usage of other Google services such as Google Search, which have existed much longer than Google Music, and the Google brand name, which was well established before Google Music. For example, Google's websites hit more than one billion unique visitors per month in mid-2011, even before the launch of Google Music.[132] The growth in the user base of Google Music followed the growth in the user base of other Google services, not vice-versa. Indeed, Google Music was able to benefit from the user base and brand recognition of the company due to Google's existing services. This result is consistent with existing services driving new services, rather than the reverse. Moreover, the price of Google Play Music is consistent with the standard industry rate charged by pure-play streaming companies such as Spotify and Rhapsody. This demonstrates that Google is not using Google Music as a "loss leader" to drive other businesses. Additionally, evidence that Google operates Google Play Music at a loss, and yet still pricing the service at the standard industry rate, would only suggest that the current Section 115 rates are set too high under the 801(b)(1) factors.

b. Investment in the Short Run Would Benefit Songwriters in the Long Run

89. Dr. Rysman's claim that publishers would not be able to realize revenue even in the long run rests upon the incorrect assumption that services would define revenues in opportunistic ways.[133] As discussed above, this assumption does not have any support. In fact, given that the

[132] "Google Notches One Billion Unique Visitors Per Month," The Wall Street Journal, June 21, 2011.

[133] Expert Report of Marc Rysman, October 28, 2016, ¶¶ 47-48.

goal of short term investment is to ultimately increase user base and revenue in the longer run, it is economically reasonable that the investment in the short run would benefit songwriters in the long run.

90. Dr. Rysman also argues that musical works that are popular in the present would not be able to benefit from revenues created by services in the future.[134] This argument is flawed for two reasons. First, songwriters generally continue to write songs, and thus are able to benefit over the long run. Among many other examples, songwriter Max Martin has had success writing songs for about two decades. Songs written by Martin have appeared in the Billboard Top 10 songs since the 1990s and his most recent No. 1 song was in May of 2016.[135] Moreover, hit songs of a moment may have a "resurgence of interest" at later time points, and thus would be able to benefit in the future.[136] Second, publishers could take it upon themselves to reallocate royalties intertemporally so as to smooth payments to songwriters over time. This is, in fact, actually done in the form of advanced payments that are made by publishers to songwriters.[137]

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[134] Expert Report of Marc Rysman, October 28, 2016, ¶ 50.

[135] "Max Martin's Hot 100 No. 1s as a Songwriter" Billboard, May 23, 2016. "Ask Billboard: Max Martin Has Written How Many Hot 100 Top 10s?!" Billboard, August 18, 2015.

[136] According to Gregg Barron, the Senior Director of Licensing at BMG Rights Management: "Some of our significant synchronization placements … can lead to a resurgence of interest in an older song. For example, after the iPhone ad, "Time In A Bottle" entered the Billboard Rock Charts and Hot Rock Songs charts 40 years after it had topped the Billboard Hot 100." See Witness Statement of Gregg Barron, ¶¶ 24-25.

[137] Advances are usually made to the songwriter to induce them to enter into an exclusive deal in which the writer gives up the right to exploit their songs or license others to do so. In an Exclusive Term Agreement, which was the most common kind of publisher-songwriter agreement for many years, the songwriter agrees to assign the exclusive right to administer all compositions that they write during a specified term. In return, the publisher pays a songwriter an advance at the beginning of the contract which is recoupable against the writer's royalties. Additional advance payments are usually due if the publisher exercises options to extend the contract. This is similar to Co-Publishing agreements, a more standard form of publisher-songwriter agreement. See "Now You Know Everything About Music Publishing," Steve Gordon, Digital Music News, August 26, 2015.

5. Dr. Rysman's Opinion That a Revenue-Based Royalty Structure Gives Interactive Streaming Services an Unfair Competitive Advantage over Permanent Download Services at the Expenses of Rightsholders is Incorrect

91. Dr. Rysman claims that a revenue-based royalty structure gives streaming services an unfair competitive advantage over download services at the expense of copyright owners because it enables streaming services to offer consumers more consumption without raising the price while music downloads require a fee for each download.[138] This claim is fundamentally flawed.

92. First, Dr. Rysman fails to recognize that payment for per-play is fundamentally different from payment for per-download. Payment for per-download allows unlimited access to a given song, while payment for per-play allows for only a single play. Notably, streaming and digital downloads both allow "more consumption" (indeed unlimited consumption of the musical work) once a fixed fee is paid. Put another way, digital downloads do not operate under the per-play structure that Dr. Rysman is proposing should apply to streaming. Thus, the premise of his claim is incorrect.

93. Second, as discussed elsewhere in this report and in my opening reports, interactive streaming services and digital download services are not homogenous; they are differentiated, with different characteristics, and appeal to different customer segments consisting of customers with different preferences and willingness to pay for music.[139] For example, Amazon's streaming music service offerings are unique in the digital music industry. Amazon's Music Unlimited for Echo only allows users to access music through one of Amazon's proprietary smart speakers and is also differentiated from other streaming services by its lower monthly

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[138] Expert Report of Marc Rysman, October 28, 2016, ¶ 51.

[139] Expert Witness Statement of Dr. Gregory K. Leonard, November 1, 2016, ¶¶ 83-91; Amended Expert Witness Statement of Dr. Gregory K. Leonard, January 25, 2017, ¶¶ 85-93.

subscription fee of only $3.99.[140] Amazon Prime Music only grants users access to a limited music catalog of two million songs and is offered as ad-free with no cost to Amazon Prime members.[141] Due to the unique features of Amazon's streaming services, evidence on usage data has shown that streaming usage patterns differ between Amazon and Spotify, with Amazon Prime Music users streaming tracks far fewer times per month than Spotify's users.[142] As such, there is no economic basis for the claim that the royalty rates (on a per-stream or per-user basis) should be the same across the different types of services.

6. A Per-Play Royalty Rate Structure Is Not in Line with the "All You Can Eat" Subscription Service Plan of Interactive Streaming Services

94. As discussed in my opening reports, the subscription streaming services provided by companies such as Spotify and Google offer "all you can eat" plans, where subscribers pay a fixed monthly fee and then choose the desired amount of streaming.[143] Under the current royalty structure, in which the royalty is based on a percentage of the subscriber fee (subject to minimums), the royalty, like the subscriber fee, is a fixed amount per subscriber. This gives the service certainty about both its revenues and a major cost component on a per-subscriber basis. If the royalty structure were changed to a per-stream basis, on the other hand, the royalty cost component on a per-subscriber basis would be uncertain because it would depend on the amount of usage of the subscribers. Moreover, with per-stream royalties, services would have the incentive to minimize their costs by taking measures to limit usage by each subscriber, including possibly imposing usage limits. This incentive could even result in services themselves starting

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[140] Expert Report of Dr. Glenn Hubbard, November 1, 2016, p. 17.

[141] Expert Report of Dr. Glenn Hubbard, November 1, 2016, pp. 18-19.

[142] Expert Report of Dr. Glenn Hubbard, November 1, 2016, Exhibit 3.

[143] Expert Witness Statement of Dr. Gregory K. Leonard, November 1, 2016, ¶ 124; Amended Expert Witness Statement of Dr. Gregory K. Leonard, January 25, 2017, ¶ 126.

to charge users on a per-stream basis, which would also tend to limit usage. Streaming services that rely on advertisements to generate revenue likely would face similar disruption from a change to per-stream royalties. Notably, Netflix, which is an online video streaming service provider and used by Dr. Rysman as a benchmark of platforms that properly rewards rightsholders, employs a lump-sum licensing structure, rather than a per-play or per-user royalty payment structure.[144]

95. Furthermore, under the "all you can eat" plans, the user pays a fixed fee for "access" and then a zero marginal price for each stream. Given that the marginal cost of provision of musical work rights for an additional stream is essentially zero, a fixed access fee/zero marginal cost pricing structure has good economic efficiency properties.[145] A per-play royalty structure would give services incentives to change their pricing models to less efficient ones. Nor is a per-play royalty structure necessary to give songwriters the appropriate incentives to write popular songs. The fixed subscriber access fee is allocated by publishers among tracks based on number of

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[144] Netflix describes their licensing structure as lump sum: "Our licensing is all time-based, so that we might pay, for example, $200,000 for a 4 year exclusive subscription video-on-demand (SVOD) license for a given title. At the time of renewal, we evaluate how much the title has been viewed as well as member rating feedback to determine how much we are willing to pay." Netflix Long Term View, Netflix, April. 25, 2013.

[145] A second best optimum can be reached by imposing a constraint (such as the number of firms and/or pricing structure) on the first-best optimum, where the firms set their price constant equal to the marginal price and get subsidized by the government for their losses. D. W. Carlton and J. M. Perloff, "Modern Industrial Organization," Pearson (4th Edition), 2004, p. 213. Two-part tariffs, which include a fixed access fee with a constant marginal price, are well-known devices to improve the efficiency of pricing when average cost is decreasing. Yew-Kwang Ng and Mendel Weisser, "Optimal Pricing with a Budget Constraint--The Case of the Two-part Tariff," The Review of Economic Studies, Vol. 41, No. 3 (1974), p. 337. With regards to pricing, "[i]f the marginal price is set equal to the marginal cost and the resulting annual charge does not cause any potential consumers to prefer no purchase at all, the allocation of resources is Pareto efficient." See Martin S. Feldstein, "Equity and Efficiency in Public Sector Pricing: The Optimal Two-Part Tariff," Quarterly Journal of Economics, Vol. 86, No. 2 (1972), p. 175. Therefore, given that under the current structure the pricing of streaming services follows the two-part tariffs structure and the royalty payment from services to publishers/songwriters is in the form of revenue-based lump-sum payment that is consistent with the pricing model, the current royalty payment structure is economically efficient.

streams.[146] This gives songwriters the incentive to write popular songs (that would be streamed more).

7. Dr. Rysman Incorrectly Calculates the Mechanical Per-Play Royalty Rates Paid by Certain Interactive Streaming Service Providers

96. Dr. Rysman claims that the Copyright Owners' proposed per-play rate of $0.0015 for mechanical royalties is reasonable and is "within the historic range of rates paid by services,"[147] and that [redacted][148] To support his conclusion, Dr. Rysman analyzes the mechanical per-play royalty rates paid by a select group of subscription-based interactive streaming services over the last four years.[149] Dr. Rysman's analysis, however, suffers from numerous errors including the exclusion of data from ad-supported models and paid locker services, as well as the exclusion of data from other relevant subscription-based service providers and time periods. After correcting for these multiple methodological errors, the evidence shows that the historical rates paid by a comprehensive set of interactive streaming

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[146] The mechanical royalty allocated to each song is calculated as a per-play allocation multiplied by the number of plays of each music work, where the per-play allocation is obtained by dividing the payable royalty pool by the total number of plays of all musical works. 37 CFR Part 385, *Determination of Rates and Terms for Making and Distributing Phonorecords* (Phonorecords III), Federal Register 48371 Vol. 81 No. 142, July 25, 2016. The payable royalty pool is traditionally split 50/50 among publishers and songwriters. Donald S. Passman, "Publishing Companies and Major Income Sources," (Chapter 16), *All You Need to Know about the Music Business*, Eighth Edition, Simon and Schuster, 2013, p. 220. Therefore, the per-song mechanical royalty payable to songwriters is a proportion of the total per-song mechanical royalty, which is obtained based on the number of streams.

[147] Expert Report of Marc Rysman, October 28, 2016, ¶ 68.

[148] Expert Report of Marc Rysman, October 28, 2016, ¶ 64.

[149] Expert Report of Marc Rysman, October 28, 2016, ¶ 62. In Dr. Rysman's Figure 7, he shows historical mechanical royalties per play for "Other Paid Services", but in his ultimate analysis of historical per-stream rates that he compares to the Copyright Owners' proposal of $0.0015 per stream presented in his Table 1, Dr. Rysman "highlight[s] some of the larger services and historical effective per-play rates." Expert Report of Marc Rysman, October 28, 2016, ¶ 62, Figure 7, ¶ 64, Table 1.

service providers—both ad-supported and paid subscription business models—are well below the rates proposed by the Copyright Owners, contrary to Dr. Rysman's claim.

97. As an initial matter, before correcting for Dr. Rysman's multiple methodological errors in the following sections, based on his results presented in Table 1 of his report the weighted average per-stream mechanical royalty from 2012 to 2015 for "some of the larger services" is [redacted]. Therefore, Dr. Rysman's claim that the Copyright Owners' proposed per-play rate of $0.0015 for mechanical royalties is "within the historic range of rates paid by services" is misleading because the weighted average rate across even the select group of paid subscription interactive streaming services that he analyzes is [redacted] the Copyright Owners' proposal of $0.0015 per play.[150]

a. Dr. Rysman Ignores the Presence of Ad-Supported Models and Paid Locker Services and Bases His Calculation Solely on a Select Group of Paid Subscription Interactive Streaming Services

98. In performing his calculations, Dr. Rysman ignores the presence of ad-supported models and paid locker services and instead bases his analysis on a select group of larger paid subscription interactive streaming services.[151] For instance, when calculating Spotify's rates, Dr. Rysman excludes data related to Spotify's ad-supported service from his calculation, without providing any justification.[152] However, given that the Copyright Owners' proposed $0.0015 per-stream royalty would apply to both paid subscription and ad-supported interactive streaming

[150] Furthermore, as previously discussed, I understand that the Copyright Owners' proposal requires royalty payments for all streams, including promotional streams, while the current Section 115 regulations do not require royalty payments for promotional streams. Therefore, when comparing the historical range of rates paid by interactive streaming service providers to the $0.0015 per-play proposal, Dr. Rysman should have adjusted for the fact that the historical rates do not account for promotional streams while the $0.0015 per-play proposal does account for promotional streams. By not making this adjustment, Dr. Rysman's comparison of historical per-stream mechanical royalty rates and the $0.0015 per-play proposal is not an apples-to-apples comparison.

[151] Expert Report of Marc Rysman, October 28, 2016, ¶ 62, Table 1.

services, and Dr. Rysman is comparing historical mechanical royalties per play to this proposed rate in an attempt to establish its reasonableness, both paid subscription and ad-supported services should be included in Dr. Rysman's calculation of historical mechanical per-play rates.[153] By choosing not to include ad-supported services in his historical mechanical per-play rate calculation Dr. Rysman is artificially biasing his results upwards in an attempt to show that the Copyright Owners' $0.0015 per-play proposal is in line with historical rates actually paid by interactive streaming services when, in fact, it is not in line with actual historical rates. When Dr. Rysman's calculation is corrected to include data from Spotify's ad-supported service, Spotify's weighted average per-stream mechanical royalty rate for both its paid subscription and ad-supported services is equal to [redacted] from 2012 to 2016,[154] compared to Dr. Rysman's figure based only on Spotify's paid subscription service of [redacted] from 2012 to 2015.

99. Dr. Rysman also excludes data from Amazon's paid locker services when calculating Amazon's royalty rate in his Table 1. Under the Copyright Owners' proposal, the $0.0015 per-stream rate would apply to all Subpart B and C business models, including paid locker services.[155] Therefore, when calculating his rate Dr. Rysman should have included data from

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[152] Expert Report of Marc Rysman, October 28, 2016, fn. 56.

[153] I note that ad-supported streaming generated nearly a quarter of the industry's interactive streaming revenue according to 2015 data from the RIAA. Specifically, in 2015, on-demand streaming generated 24% of revenue as a share of on-demand streaming and paid subscriptions revenue. See "U.S. Sales Database," The Recording Industry Association of America, last accessed September 21, 2016; "News and Notes on 2015 Mid-Year RIAA Shipment and Revenue Statistics," The Recording Industry Association of America, 2015. Furthermore, Spotify, which is the largest streaming service provider, currently has 70 million ad-supported listeners, which translates to 70% of its overall users. See "Spotify Looks to Ramp Up Ad Business," The Wall Street Journal, June 20, 2016.

[154] Exhibit 3a.

[155] "The ten different Subpart B and C categories, each with a different rate and rate structure, resulted from the settlements of the prior *Phonorecords I* and *II* proceedings. These categories are no longer applicable given that the copyright owners propose that the same rates and rate structure should apply to all offerings of interactive streams and/or limited downloads, regardless of the business model employed." *See* "Copyright Owners'

Amazon's paid locker service in addition to Amazon's Prime Music subscription service; data that was readily available in Dr. Rysman's source documentation for 2014 that he nevertheless chose to exclude. When data from Amazon's paid locker service are included, Amazon's per-stream mechanical royalty rate covering both its paid subscription and paid locker services is equal to [redacted] in 2014,[156] compared to Dr. Rysman's figure based only on Amazon's paid subscription service of [redacted] in 2014.

b. Dr. Rysman Excludes Data from Other Service Providers from His Analysis

100. In conducting his ultimate analysis of historical per-stream rates (see Dr. Rysman's Table 1), Dr. Rysman excludes data for smaller service providers (referred to by Dr. Rysman as "Other Paid Services" in his Figure 7) without any explanation.[157] I have included these other service providers in my corrections to Dr. Rysman's analysis in his Table 1. The weighted average per-stream mechanical royalty rate for all of the other service providers is [redacted] from 2012 to 2016.[158]

c. Dr. Rysman Excludes Data from 2016

101. Finally, Dr. Rysman also excludes readily-available 2016 mechanical royalty and streaming data. Although royalty data for the first two quarters of 2016 are available in the source documents relied upon for Apple, Dr. Rysman chooses to exclude these data from his

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Proposed Rates and Terms," *In the Matter of Determination of Rates and Terms for Making and Distributing Phonorecords (Phonorecords III)*, November 1, 2016, p. B-4.

[156] Exhibit 3a. Note that paid locker services data is unavailable for 2015.

[157] Expert Report of Marc Rysman, October 28, 2016, Figure 7.

[158] Exhibit 3a.

calculations.[159] Apple's per-stream mechanical royalty rate declined in 2016 compared to 2015, dropping from [redacted] by the Copyright Owners. In 2016, Amazon's per-stream mechanical royalty rate exhibited [redacted]. Although 2016 royalty data are available in the source documents relied upon by Dr. Rysman, these data are nevertheless excluded from his calculations. Amazon's per-stream mechanical royalty rate [redacted]. I have also included 2016 per-stream mechanical royalty rates for Spotify, Tidal, and the other service providers in my corrections to Dr. Rysman's analysis. Spotify's rate (including its paid subscription and ad-supported services) [redacted]

d. Corrections to Dr. Rysman's Table 1

102. I present my comprehensive set of corrections to Dr. Rysman's Table 1, as discussed above, in Exhibit 3a. As previously discussed, before correcting for Dr. Rysman's multiple methodological errors, based on his results presented in Table 1 of his report the weighted average per-stream mechanical royalty rate from 2012 to 2015 for "some of the larger services" is [redacted]. After correcting for all of Dr. Rysman's errors, the weighted average per-stream mechanical royalty rate from 2012 to 2016 is $0.0007, [redacted] the Copyright Owners' proposal of $0.0015 per stream.[161]

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[159] Instead, Dr. Rysman includes royalty data only for 2015 Q3-Q4 in his analysis. Expert Report of Marc Rysman, October 28, 2016, Table 1.

[160] Exhibit 3a.

[161] I have also presented my comprehensive set of corrections to Dr. Rysman's Table 1, but excluding Subpart C-related services (e.g., Amazon's paid locker service). See Exhibit 3a. The results of this scenario are consistent with the results of the scenario where I included Subpart C-related services.

8. Dr. Rysman's Calculation to Justify the $1.06 Monthly Per-User Rate Suffers from Multiple Errors

103. Dr. Rysman claims that a monthly per-user mechanical royalty rate of $1.06 is justified because it is consistent with the product of the $0.0015 per-play rate and the current number of monthly streams per user.[162] However, in formulating his calculation, Dr. Rysman only considers limited monthly streams per user data from three paid subscription interactive service providers ([redacted] for a single year (2015), and chooses to exclude data from other relevant industry providers, service offerings, and time periods. Furthermore, as discussed in the previous section, Dr. Rysman's analysis of historical per-play rates paid by certain interactive streaming service providers is incomplete and does not support the Copyright Owners' proposal of $0.0015 per play. Rather, a corrected version of Dr. Rysman's analysis supports a lower per-play rate (e.g., a weighted average per-stream mechanical royalty rate from 2012 to 2016 of [redacted]).

104. [redacted] Additionally, Dr. Rysman chooses to present per-user streaming rates only for 2015, although there is information available for both [redacted] and [redacted] from 2012 to 2015. Similarly, there is data available for [redacted] and [redacted] for 2016, which Dr. Rysman nevertheless chooses to exclude from his calculation.

105. Dr. Rysman also excludes data from other industry interactive streaming service providers, including providers referenced in his Table 1 and Figure 7, when calculating historical

[162] Expert Report of Marc Rysman, October 28, 2016, ¶ 66.

mechanical per-play royalties. These providers include [redacted] identified in his Table 1, and the smaller providers identified by Dr. Rysman as "Other Paid Services" in his Figure 7.[163]

106. The inclusion of per-user streaming data from other relevant industry service providers, service offerings, and time periods results in a weighted average streams per user of 368. Applying this figure results in a weighted average per-user rate of [redacted] (based on the Copyright Owners' unsupported proposal of $0.0015 per stream, i.e., $0.0015 per stream * 368 streams per user) and [redacted] (based on the result of my corrections to Dr. Rysman's analysis of [redacted] per stream, i.e., [redacted] * 368 streams per user).[164]

107. An alternative way to calculate the per-user mechanical royalties is to simply divide the service providers' actual mechanical royalties by their actual users. This can be done using the data that was available to Dr. Rysman as discussed above. My calculation of the per-user mechanical rates using this approach for the service providers analyzed by Dr. Rysman, and for the additional service providers, service offerings, and time periods that I have included in my corrections to Dr. Rysman's Table 1, is provided in Exhibit 3c. The results indicate that the historical per-user mechanical royalties paid by interactive streaming service providers—i.e., [redacted] per user—are well below the Copyright Owners' proposal of $1.06 per user.[165]

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[163] Expert Report of Dr. Rysman, October 28, 2016, Figure 7, Table 1.

[164] Exhibit 3b. I have also presented my comprehensive set of corrections to Dr. Rysman's per-user analysis, but excluding Subpart C-related services (e.g., Amazon's paid locker service). See Exhibit 3b. The results of this scenario are consistent with the results of the scenario where I included Subpart C-related services.

[165] I have also performed this analysis excluding Subpart C-related services (e.g., Amazon's paid locker service). See Exhibit 3c. The results of this scenario are consistent with the results of the scenario where I included Subpart C-related services.

9. Dr. Rysman Presents No Evidence or Analysis that Increasing the Statutory Royalty Rate Would Have Any Significant Effect on the (Quality-Adjusted) Number of Songwriters and Songs

a. The Number of Songwriters and Songs Has Been Increasing Under the Current Rate Structure

108. Dr. Rysman speculates that increasing the mechanical royalty rate would increase the amount and quality of music, providing incentives to songwriters to write more songs and inducing potential songwriters to leave other professions to devote time to writing songs.[166] However, Dr. Rysman provides no empirical evidence to support his speculation. In fact, as discussed in my opening reports, under the current industry rate structure, the number of songwriters and songs has continued to increase over time based on data collected from the largest PROs.[167] Thus, there is no evidence that the existing royalty structure has adversely affected the creation of compositions. Moreover, even if the number of songwriters and songs were to increase as a result of an increase in mechanical royalties, they likely would be the marginal songwriters and songs, in terms of quality (the high quality songwriters are already writing songs given current incentives). Thus, the increase in quality-adjusted song quantity would be minimal.

b. An Increase in Royalty Payments May Further Adversely Affect Service Providers' Low Profitability, Leading to Potential Exit from the Market

109. On the other hand, an increase in the royalty rate would further increase service providers' costs, leading to potential exit from the market. As discussed in my opening reports, digital interactive streaming service providers have had a history of not being profitable, despite

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[166] Expert Report of Marc Rysman, October 28, 2016, ¶ 69.

[167] Expert Witness Statement of Dr. Gregory K. Leonard, November 1, 2016, ¶ 94; Amended Expert Witness Statement of Dr. Gregory K. Leonard, January 25, 2017, ¶ 96.

the rapid growth in the user base and corresponding subscription revenue.[168] Google Play Music, as an example, has incurred significant costs on infrastructure and music royalties, and has historically generated operating losses of approximately [redacted] per quarter for its U.S. operations.[169] An increase in royalty rates may make service providers unable to sustain their businesses and be forced to exit the market. It may also raise barriers to entry faced by new ad-based services, imposing a further disruptive effect on the music streaming industry. A decrease in the number of suppliers would adversely affect consumers who preferred the defunct suppliers and thus could result in a decrease in the consumption of music. This is particularly true given the product differentiation among streaming providers. For example, if Amazon were to exit the streaming market, current Amazon Prime users may not be willing to pay for a Spotify subscription and, as a result, may stop streaming music.

c. An Increase in Royalty Payments May Lead to Higher Prices for Interactive Streaming Services, Which May, In Turn, Adversely Affect Demand for Interactive Streaming Services and Suppress the Number of Songwriters and Songs

110. Dr. Rysman claims that "services have strategic options to offset the impact of changes to rates."[170] He fails to consider what impact these "strategic options" themselves may have on the industry. As discussed above, an increase in royalty rates may lead some suppliers to exit the market, which may increase the price to consumers as well as eliminate their preferred provider. Service providers who remain in the market may also choose to increase their prices or increase the number of ads to adjust for the increase in costs. Even worse, the services may be forced to

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[168] Expert Witness Statement of Dr. Gregory K. Leonard, November 1, 2016, ¶ 96; Amended Expert Witness Statement of Dr. Gregory K. Leonard, January 25, 2017, ¶ 98.

[169] Written Direct Testimony of Elliot Alyeshmerni, November 1, 2016, ¶¶ 17-18.

[170] Expert Report of Marc Rysman, October 28, 2016, ¶ 93.

change the characteristics of their services, e.g., move away from "all you can eat" plans. These impacts would substantially harm consumers and reduce the consumption of music. They may also harm songwriters, thereby offsetting at least in part the benefits to songwriters from an increase in the mechanical royalty rate.

10. Dr. Rysman Presents No Evidence or Analysis that a Decrease in the Number of Interactive Music Service Providers Would Not Result in a Reduction in the Number of Songwriters and Songs

111. Lastly, Dr. Rysman claims that an increase in royalties would not reduce the creative works available to the public. He argues that even if the rates may lead some services to reduce investment or exit the market entirely, the remaining services "will increase their market share to fill the void, causing no lasting effect on the overall availability of musical works to the public."[171] However, Dr. Rysman does not provide any evidence or economic analysis to support his arguments. Moreover, his argument assumes that interactive streaming services are homogeneous. As I discuss elsewhere, this assumption is incorrect. Streaming services are differentiated, and thus there is no reason to believe that remaining services will "fill the void." Again, Amazon Prime and Spotify are not homogeneous and thus Amazon Prime is unlikely to be a suitable substitute for many Spotify customers. Finally, with a smaller number of providers, competition is likely to be reduced, which could lead to fewer subscribers and plays and thus lower royalties (under Copyright Owners' proposal) to copyright owners.

[171] Expert Report of Marc Rysman, October 28, 2016, ¶¶ 69-70.

D. Specific Criticisms of the Gans Expert Report

1. Overview of the Gans Expert Report

112. Dr. Gans asserts that the statutory royalty rates for mechanical rights are lower than the royalty rates that would prevail in a market setting, i.e., if mechanical rights licenses were negotiated outside of the regulatory structure, and in particular that the royalty rates for mechanical rights have been depressed relative to the royalty rates for sound recording rights. He proposes a "Shapley value" approach to determining appropriate rates for mechanical rights.

113. As an initial matter, I disagree with Dr. Gans' premise that the statutory royalty rates for mechanical rights for interactive streaming should reflect rates that would prevail in a market setting. Rather, these rates should reflect the considerations addressed in the 801(b)(1) factors.

114. In the following sections, I provide additional specific criticisms of the Gans Expert Report.

2. Dr. Gans' Opinion That Sound Recording Rights and Musical Work Rights Have Equal Value Is Incorrect

115. Dr. Gans' opinions, and his Shapley value analysis in particular, are premised on the assumption that sound recording rights and musical works rights have equal value and thus record labels and music publishers should receive royalties that result in equal profits for each. For example, Dr. Gans claims: "It is easy to draw parallels between sound recording rights and musical work rights;"[172] "one right cannot…hold any value…absent the other right;"[173] and "the

[172] Expert Report of Joshua Gans, October 31, 2016, ¶ 14.

[173] Expert Report of Joshua Gans, October 31, 2016, ¶ 14.

value of sound recording rights and musical work rights for interactive streaming are equal" because "[t]hese two rights are perfect complements to one another."[174]

116. However, Dr. Gans presents no support for this crucial assumption. In fact, the assumption is incorrect, leading to incorrect conclusions on Dr. Gans' part. Popular artists contribute more value than songwriters and thus would be expected to capture a larger share of the profits from royalties in a market outcome. This is due to the fact that a popular artist has many potential substitute songs that he or she could record, while a songwriter has a smaller number of potential substitutes for a popular artist to record his or her song. Indeed, it is not uncommon for a prominent artist to be pitched thousands of songs for one album.[175] Songs in an album are also likely to be "inside" songs written by the artist, producer or someone else involved in the project, leaving only one or two slots available for "outside" songwriters.[176] Moreover, research has shown that, as a music style increases in popularity, it becomes less instrumentally complex and more homogeneous;[177] composers aiming to write a hit song have to compete in a market with little variety and high interchangeability. When two parties negotiate over the split of a pie, the party with the more attractive set of alternatives generally earns a larger share of the pie. Because the artist has a greater set of alternatives (including writing his or her own songs), the artist would be expected to earn a larger share of the pie than the songwriter.

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[174] Expert Report of Joshua Gans, October 31, 2016, ¶ 23.

[175] Cornelius Cowles, "Music, Money, and The Middleman: The Relationship Between The Songwriter and The Publisher," Vanderbilt Journal of Entertainment Law and Practice (1999), p. 102.

[176] "I Know I've Got A Great Song: Now What?," BMI, March 25, 2014; "Now What? Inside Songwriting," TAXI, August 2008.

[177] Gamaliel Percino, Peter Klimek, and Stefan Thurner, "Instrumentational Complexity of Music Genres and Why Simplicity Sells," PLOS ONE, (2014); "Scientists Just Discovered Why All Pop Music Sounds Exactly the Same," Mic, January 7, 2015.

117. An analogy can be made to film actors and screenwriters. An actor in a starring role typically makes substantially greater compensation from a film than the screenwriter. Star actors can make $25 million from a single movie, while a screenwriter who sells a movie to a major studio earns about $100,000, and the few most in demand writers can make up to $5 million annually, but this is still well below the compensation earned by the biggest stars.[178] Actor's reputation, as a key feature of a motion picture, is often perceived as a sign of quality prior to its release as well as a predictor of the film's level of success.[179] Describing casting on the movie "Cast Away," former chairman of 20th Century Fox, Bill Mechanic, stated, "To me, 'a guy stranded on an island' without Tom Hanks is not a movie. Hanks got $20 million for the role. With another actor, it would gross $40 million. With Tom Hanks it grossed $200 million. There's no way to replace that kind of starpower."[180]

118. Furthermore, the fact that sound recording rights are set in a market not subject to the 801(b)(1) factors or other regulatory constraints and reflect the exercise of market power by record companies, while musical work rights are set to reflect the economic considerations addressed in the 801(b)(1) factors, further supports the point that the royalty rates paid for each respective right (i.e., their "value") should not be the same.

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[178] "Hollywood Salaries Revealed, From Movie Stars to Agents (and Even Their Assistants)," Hollywood Reporter, October 2, 2014.

[179] Anita Elberse, "The Power of Stars: Do Star Actors Drive the Success of Movies?," Journal of Marketing, Vol. 71, No. 4 (2007), p. 103

[180] "Actors Savor Star Bucks," Variety, April 1, 2002.

3. Dr. Gans' Claim That the Compulsory Licensing Rates for Mechanical Rights for Musical Works Have Been Depressed Relative to the Market-Determined Rates for Sound Recordings Is Incorrect

119. Dr. Gans argues that the royalty rates for musical works have been depressed relative to the royalty rates for sound recordings, and that the reason for this is the compulsory licensing framework that applies to musical works, but not to sound recordings.[181] Dr. Gans further argues that the compulsory royalty rates have set a ceiling for negotiated royalty rates for musical works and have thus "skewed perceptions,"[182] which then have anchored subsequently set compulsory royalty rates for musical works.[183] In short, Dr. Gans argues that there is a negative feedback loop between the statutorily set and negotiated rates.

120. However, Dr. Gans' arguments are unsupported. He has failed to provide any empirical evidence that "anchoring" has actually occurred and, more to the point, that any anchoring has led to compulsory royalty rates for musical works rights that deviate from rates that are appropriate under the 801(b)(1) factors. As a logical matter, the mere existence of a close relationship (anchoring) between the compulsory rate and negotiated rates by itself does not demonstrate that the compulsory rate differs from what the appropriate rate is under the 801(b)(1) factors. A close relationship would be expected to exist even when the compulsory rate is equal to the appropriate rate: negotiated rates would appear to be anchored to the compulsory rate and subsequently set compulsory rates would appear to be anchored to the previously negotiated rate and the previously set compulsory rate.

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[181] Expert Report of Joshua Gans, October 31, 2016, ¶ 22.

[182] Expert Report of Joshua Gans, October 31, 2016, ¶ 10.

[183] Expert Report of Joshua Gans, October 31, 2016, ¶ 20.

121. Dr. Gans is implicitly arguing that the CRB has repeatedly set the wrong compulsory rate for musical works. To the extent he argues this because he thinks the CRB should have set market rates instead of appropriate rates under the 801(b)(1) factors, he is incorrect. Moreover, he ultimately brushes aside the important fact that the copyright owners agreed to settle for a Subpart A mechanical rights royalty of 9.1 cents per digital download. Thus, this rate was not statutorily set; it was agreed to by the copyright owners in negotiations with services even though the copyright owners had the opportunity to challenge the rate in the regulatory proceeding and, in particular, make the arguments Dr. Gans now makes. It is not as if significant new information is now available that was not available in 2016 when copyright owners agreed to settle Subpart A for 9.1 cents per digital download.[184]

122. According to the Goldman Sachs report that Dr. Gans relies on for the calculations in his Table 3, publishers earn approximately the same profits from streaming as a percentage of streaming revenues as they earn from CDs as a percentage of CD revenues.[185] Thus, there is no basis to claim that publishers are doing less well under streaming than under CDs. Labels appear to be earning greater profits on streaming (as a percentage of streaming revenue) than they do on CDs,[186] but that is a consequence of labels' ability to retain cost-savings that result from digital distribution as opposed to physical distribution. Labels' ability to retain, rather than pass on, cost-savings is likely a consequence of their market power. As discussed below, the labels' market power is one of the reasons that Dr. Gans is incorrect to assume in his Shapley value analysis that publishers are entitled to the same profit as the labels.

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[184] Determination of Rates and Terms for Making and Distributing Phonorecords (Phonorecords III), Docket No. 16-CRB-0003-PR (2018-2022).

[185] "Music in the Air: Stairway to Heaven," Goldman Sachs, October 4, 2016, p. 58.

[186] "Music in the Air: Stairway to Heaven," Goldman Sachs, October 4, 2016, p. 54.

4. Dr. Gans' Opinion That the Mechanical Rights Value for Streaming Services Should Be Higher Due to Unbundling Is Incorrect

123. Dr. Gans argues that the unbundling of albums has resulted in consumers frequently purchasing and downloading only a subset of the tracks on an album. He concludes that, therefore, the mechanical royalty rate for the downloaded unbundled tracks should be higher than the mechanical royalty rate that applied to the tracks on the bundled album of tracks.[187] He further claims that the mechanical rate under unbundling should be at least 93% higher than the mechanical royalty rate under album bundling.[188]

124. As an initial matter, Dr. Gans does not appear to recognize that streaming services do not "unbundle" in the same sense that digital download services do. In the "all you can eat" streaming service, a consumer pays a subscription fee for unlimited access to the entire library—all of the tracks on a given album. Whether the streaming service consumer chooses to listen to all of the tracks, or only a subset, is up to the consumer. In contrast, a digital download consumer pays a fee for unlimited access only to particular tracks and has no access to other tracks.

125. Dr. Gans' calculations in Table 2 can be summarized in the following example, which makes a few changes for ease of explication, but without changing the essence of the calculations:

- Consider an album with three tracks. Under album bundling, when the album was purchased by a consumer, the publishers would have received mechanical royalties equal to (3 tracks)*(9.1 cents/track) = 27.3 cents. Having purchased the album, the consumer was entitled to listen to each individual track as often as desired (or not at all).

[187] Expert Report of Joshua Gans, October 31, 2016, ¶ 24.

[188] Expert Report of Joshua Gans, October 31, 2016, Table 2.

- Suppose that when the three tracks were made available through a streaming service, of all streams of the three tracks by a consumer, on average the first track accounted for 75% of the streams, the second track accounted for 25% of the streams, and the third track accounted for 0% of the streams.
- Dr. Gans claims first that the 27.3 cent album royalty under bundling should be allocated across the three tracks based on their percentage of streams. This results in a "repriced mechanical" rate of 75%*27.3 = 20.5 cents for the first track, 6.8 cents for the second track, and zero for the third track. Note that the sum of the "repriced mechanical" rates across the three tracks equals the 27.3 cent album royalty.
- Dr. Gans now goes a step further. He calculates a "weighted average repriced mechanical rate" as 75%*(20.5 cents) + 25%*(6.8 cents) = 17.1 cents. He appears to argue that this figure can be compared to the 9.1 cent actual mechanical rate for digital downloads. In particular, he seems to claim that the appropriate mechanical royalty payment for a streaming customer that streams the first two tracks is 2*17.1 cents, or 34.2 cents. Note that this figure exceeds the 27.3 cent royalty that would have been paid under album bundling.

126. Dr. Gans' calculations are flawed for a number of reasons. First, as noted, his calculations imply that the total mechanical royalty paid for tracks associated with an album under streaming (34.2 cents in my example) should be larger than the total mechanical royalty paid for the same tracks under album bundling (27.3 cents). This is despite the fact that the listening behavior of the consumer who would have bought the album under bundling, and thereby explicitly sought to obtain rights to listen to all of the songs on the album, is likely to be at least as intensive, and perhaps more intensive, than the streaming consumer who also has access to all tracks of the album, chooses to stream some or all of the tracks, but may not have chosen to purchase the entire album under bundling. This makes no economic sense.

127. Second, as noted, some streaming consumers who choose to listen to tracks from an album may not have purchased the entire bundled album in a world with only bundled albums. Thus, streaming expands the number of consumers listening to at least a subset of tracks from the album. The copyright owners whose musical works enjoy a greater level of listening benefit by receiving a greater share of musical works royalties.

128. Third, Dr. Gans' calculations mix and match figures related to bundled album sales, digital downloads, and streaming, respectively, without any basis to assume that the figures are comparable. For example, a consumer who purchases a bundled album may listen to each track as often as desired. The publishers receive 9.1 cents per track on the album regardless of how many times each track is listened to. A consumer who purchases a digital download track may listen to the track as often as desired. The publishers receive 9.1 cents for the track regardless of how many times it is listened to. A Google Music subscriber pays $10 per month and may listen to any track on a given album as often as desired. The publishers generally receive $1.05 per subscriber per month in total regardless of which tracks are listened to. Dr. Gans applies the 9.1 cents per track from album and digital download sales to streaming without any adjustment even though mechanical royalties for streaming are not calculated on a per stream basis.[189] If they were, as discussed in my opening reports, that would present a serious challenge for the streaming service business model and likely result in changes to the "all you can eat" plans, which would then change the streaming usage patterns on which Dr. Gans relies.

129. Fourth, Dr. Gans ignores the fact that Google Play pays royalties to publishers under a formula where the binding prong is based on a percentage of subscriber revenue. To the extent that unbundling and other aspects of streaming make the streaming service more attractive to consumers, Google Play is able to charge a higher subscription fee than it otherwise would. The publishers, in turn, receive a higher royalty per subscriber (if the percentage of royalty prong of the current statutory formula binds). Dr. Gans does not provide any reason to suggest that

[189] In my opening reports, I use the 9.1 cent mechanical royalty for digital downloads as a benchmark for the appropriate all-in musical works royalty rate for streaming services, but only after expressing it as a percentage of digital download revenue, which puts it on the same footing as streaming services, where royalties are also calculated as a percentage of sales. This adjustment avoids the problems that arise with Dr. Gans' calculations.

unbundling entitles publishers to a larger *share* of service revenues (as compared to the labels and the services). The contribution of the copyright owners is the same with and without bundling. It is the technologies and investments of the service providers that made the unbundling possible. Moreover, the unbundling has generated other benefits that Dr. Gans does not consider, e.g., a reduction in incentives for piracy.[190] According to the Goldman Sachs report on which Dr. Gans relies, publishers' share of revenues is approximately the same for streaming services as it is for (bundled) CDs.[191] Moreover, the Goldman Sachs report notes that streaming has benefited rights owners, including musical works rights owners.

5. Dr. Gans' Asserted Benchmarks Are Invalid

130. Dr. Gans points to the sound recording to musical work royalty ratios for synchronization licenses as evidence that the sound recording to musical work royalty ratios for streaming are too high.[192] Generally, under synchronization license agreements, musical works and sound recordings receive equal royalties. I note, however, that this "proves too much" for Dr. Gans. Dr. Gans claims elsewhere that the *profits* from streaming royalties, not the royalties themselves, should be equal for musical works and sound recordings.[193] In fact, Dr. Gans concludes from his Shapley value analysis that, for streaming, sound recording royalties should be 2.5x the musical works royalties.[194] If the synchronization licenses were valid comparables for streaming, they would imply that sound recording royalties should be 1x the musical works royalties.

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[190] Koh, Byungwan, Hann, Il-Horn and Raghunathan, Srinivasan, "Digitization, Unbundling, and Piracy: Consumer Adoption amidst Disruptive Innovations in the Music Industry," Robert H. Smith School Research Paper 2015.

[191] "Music in the Air: Stairway to Heaven," Goldman Sachs, October 4, 2016, p. 58.

[192] Expert Report of Joshua Gans, October 31, 2016, ¶ 28.

[193] Expert Report of Joshua Gans, October 31, 2016, ¶ 68.

[194] Expert Report of Joshua Gans, October 31, 2016, ¶ 79.

131. The discrepancy between Dr. Gans' Shapley analysis and the synchronization licenses, which Dr. Gans makes no effort to explain, demonstrates that the synchronization licenses are, in fact, not valid comparables for streaming. As previously discussed, the lack of comparability arises because synchronization differs in important economic respects from streaming. Synchronization rights pertain, for example, to music used in films. The filmmakers may have a certain musical work in mind as a good fit for a particular scene in the film. The filmmakers always have the option of making their own sound recording of that musical work and, for this reason, cover songs are quite common in films. Thus, the contribution (value) of the musical work is greater for synchronization than in the situation where a popular recording artist is choosing among musical works to record.

132. More generally, Dr. Gans' claim that a "normally functioning" market can serve as a benchmark for streaming is incorrect. A potential benchmark market must be demonstrated to be sufficiently comparable in terms of, among other things, the rights being exchanged, the outside options available to the parties, regulatory constraints (such as the 801(b)(1) factors), and other contract terms before it can provide a valid benchmark. Notably, a "normally functioning" market may not account for the 801(b)(1) factors.

133. Dr. Gans asserts that sound recording rights provide a benchmark for mechanical rights.[195] As noted above, to the extent that he claims that the two sets of rights are of equal value, this is an unsupported and incorrect assumption on his part. Moreover, under Dr. Gans' own theory, sound recording rights are "too high." If, as Dr. Gans maintains, mechanical rights royalties have been depressed by regulation, that would increase the profit pie that was the

[195] Expert Report of Joshua Gans, October 31, 2016, ¶¶ 38-39.

subject of the negotiations between the labels and the streaming services. Thus, the labels would obtain greater royalties than they "should" have received absent the regulation of mechanical rights royalties (according to Dr. Gans), and indeed these "undeserved" royalties would represent royalties that "should" have gone to the publishers (according to Dr. Gans). Thus, it is inconsistent from an economics point of view for Dr. Gans to claim, on the one hand, that the mechanical rights royalty has been depressed, while on the other hand claiming that the sound recording rights royalty is a valid benchmark.

134. Dr. Gans is also incorrect to claim that the sound recording rights royalty is a valid benchmark for the mechanical rights royalty because the labels may be able to exploit market power. Indeed, the Web IV proceedings acknowledged that sound recordings rates are not currently negotiated in an "effectively competitive" environment due to the market power of the music labels.[196] As also pointed out in a Goldman Sachs analyst report, "labels generally take a higher percentage of that pie than publishers, as is the case with physical and digital sales. This harkens back to the industry perspective that labels invest much more to sell the 'single' than publishers so they are entitled to more."[197] Similarly, as discussed above, artists often also hold more bargaining power than other players, such as songwriters, in the music industry.

6. Dr. Gans Incorrectly Applies the "Efficient Component Pricing Rule" (ECPR)

135. Dr. Gans has a section of his report that discusses the ECPR. Although he ultimately uses the Shapley value approach instead of an ECPR-based approach, I note a few flaws with Dr. Gans' discussion of the ECPR. First, Dr. Gans claims that mechanical rights for a given musical

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[196] Determination, *Web IV*, at 66-67.

[197] "Music in the Air: Stairway to Heaven," Goldman Sachs, October 4, 2016, p. 29.

work is analogous to an "essential facility."[198] This is incorrect for the reasons discussed above—an artist has the choice among many songs to record. No one song is "essential" in the way that the term is used in competition economics. Application of the antitrust laws should prevent any one party (e.g., a publisher) from aggregating rights to enough songs that it could become an essential facility. It is also worth noting that the essential facility doctrine is applied in only the rarest of circumstances in the United States.

136. Second, Dr. Gans claims that a rightsholder is "forced to grant access."[199] While it is, strictly speaking, true that the compulsory license requires the copyright owner to give a license to mechanical rights to its musical works, this does not mean that the musical works rightsholder is forced to grant access. First, as discussed above, the rightsholder may withhold performance rights to the musical work or, if it also shares common ownership with the owner of the sound recording rights, it may threaten to withhold sound recording rights. Either of these options would result in withholding access. Moreover, this is unlike the situation where, for example, a firm that is a monopolist in an upstream network service competes with other firms in a downstream market and is forced to grant access to its upstream network to its downstream competitors. Here, the copyright owners do not compete with the potential licensees in the provision of music to consumers. The only way that the copyright owners can earn a return on their musical works is by entering into license agreements with the music service providers. As long as there are gains to trade, the copyright owners and licensees should be able to work out an agreement that makes them both better off. Dr. Gans appears to recognize this important

[198] Expert Report of Joshua Gans, October 31, 2016, ¶ 44.

[199] Expert Report of Joshua Gans, October 31, 2016, ¶ 44.

distinction,[200] but ignores it. I note that William Baumol makes a similar point, writing that the ECPR applies to the situation where "a copyright owner [] competes with licensees in a downstream market."[201] In cases where "holders of such copyrights often have no intention of competing in such a market (e.g., the songwriter who cannot sing)," one may need to turn to other pricing models such as Ramsey pricing.[202]

137. Implicitly recognizing the absence of direct competition, Dr. Gans asserts that the royalty should at least be equal to the opportunity cost from licensing, where the opportunity cost of licensing one party would be equal to the foregone royalty on sales this party would cannibalize from other licensees.[203] However, he provides the incorrect ECPR formula for this situation. The formula he provides assumes a 100% cannibalization rate and thus is incorrect if the cannibalization rate is anything less than 100%.[204] With differentiation between digital downloads or CDs, on the one hand, and streaming on the other, one would expect something far less than 100% cannibalization. Dr. Gans provides no evidence to support 100% (which would imply that streaming has not expanded the market at all) and, indeed, substantial evidence (such as streaming turning around the fortunes of the music industry) suggest that the cannibalization rate is well below 100%.

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[200] Expert Report of Joshua Gans, October 31, 2016, ¶ 44.

[201] William J. Baumol (2004) "The Socially Desirable Size of Copyright Fees," *Review of Economic Research on Copyright Issues,* **1**(1): 83-92, at 91.

[202] William J. Baumol (2004) "The Socially Desirable Size of Copyright Fees," *Review of Economic Research on Copyright Issues,* **1**(1): 83-92, at 91.

[203] Expert Report of Joshua Gans, October 31, 2016, ¶ 50.

[204] See, e.g., R. Gilbert, "The Protected Profits Benchmark: A Refusal to Deal Metric?" *Antitrust Law Journal*, 2013.

138. Dr. Gans claims that, under the ECPR, royalty rates should not be set differently for different business models.[205] This is clearly incorrect once product differentiation is accounted for as the correct ECPR formula demonstrates—different business models address different market segments; they therefore compete with each other to different extents, i.e., cannibalization rates differ across pairs of business models; and different levels of cannibalization lead to different rates under the ECPR formula. Moreover, as I discussed in my opening reports, different prices for different business models addressing different customer segments with different willingness to pay can lead to expanded consumption of music, which is one of the factors I understand the CRB must consider. For example, there is evidence that a significant portion of consumers are unwilling to pay for music, beyond the "cost" of being subject to advertising.[206] In the absence of streaming, some of these consumers may switch to piracy or other forms of "free" music for which publishers would receive no compensation.

139. Dr. Gans claims that "neutrality" (i.e., equal rates) arises in "normally functioning" markets.[207] This claim is at odds with the economic reality of many markets—it is quite common in "normally functioning markets" for different prices to be charged for the "same" good in different market segments. This is called "price discrimination."

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[205] Expert Report of Joshua Gans, October 31, 2016, ¶ 53.

[206] In its 2015 US study, Nielsen reported that 78 percent of respondents said they were somewhat unlikely or very unlikely to pay for a streaming service in the next six months. See "2015 Nielsen Music U.S. Report," *Nielsen*, 2015, p. 25. About 60% of survey respondents do not want to pay for streaming services. See "Keep on Streaming in the Free World: Results from 4th Annual RBC Online Music Survey," *RBC Capital Markets*, June 30, 2016, p. 6.

[207] Expert Report of Joshua Gans, October 31, 2016, ¶ 54.

7. Dr. Gans Incorrectly Argues that the Musical Works Royalty Rates Should Be the Same for All of the Service Providers' Business Models

140. Dr. Gans claims that the same musical works or mechanical royalty rate should apply in all situations, regardless of the business model of the service provider.[208] I addressed this point in my opening reports. Essentially, different rate structures and even different rates for different business models will result in more efficient outcomes because the different business models address consumers with different preferences and willingness to pay for music and the different business models obtain their revenues in different ways. One size fits all is not efficient.

141. Dr. Gans ignores the fact that it is very common for intellectual property owners and licensees to negotiate different rates and rate structures in different licensee contexts, even for the same intellectual property.

8. Dr. Gans' Shapley Value Analysis Is Unreliable

142. In his Table 3, Dr. Gans applies a "Shapley value" analysis to determine what he believes is the appropriate mechanical rights royalty. The approach works as follows:

- Dr. Gans asserts that, under the Shapley value approach and his assumption that the value of the musical work rights is equal to the value of the sound recording rights, the profits that the publishers receive from streaming royalties should equal the profits that the labels receive from streaming royalties.
- He calculates the hypothetical royalty revenues that the publishers would need to receive to bring their profits up to the level of the profits of the labels. He calculates the ratio of the actual royalty revenues of labels to the hypothetical royalty revenues for publishers to be 2.5 to 1.
- He assumes that the additional royalty revenues for publishers (i.e., the difference between the hypothetical royalty revenues and the actual royalty revenues) should all be generated through additional mechanical royalties as opposed to performance royalties.[209]

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[208] Expert Report of Joshua Gans, October 31, 2016, ¶¶ 57-58.

[209] Fixing this issue reduces the mechanical royalty. In addition, Dr. Gans also erred in omitting data on ad-supported streaming services (which are included in the publisher and label revenue data Dr. Gans relies upon).

- He calculates the per-stream and per-subscriber mechanical royalties that would produce the hypothetical royalty revenues he has postulated.

143. Dr. Gans' calculations are unreliable for a number of reasons. First, as discussed above, his assumption that the value of the musical work rights is equal to the value of the sound recording rights is incorrect. This assumption is crucial to his calculations and his calculations are invalid without this assumption.

144. Second, Dr. Gans' application of the Shapley value model is misplaced. He claims that he can use the Shapley value model "to assess how royalties for musical works would compare to sound recording royalties if they were to be negotiated freely in a non-compulsory market."[210] However, the Shapley model is an axiomatic approach to allocating "surplus" among parties; the Shapley values may or may not correspond to a market outcome depending on the underlying economics.[211] For example, suppose there are three parties; party 1 is necessary for there to be surplus, while parties 2 and 3 are perfect substitutes for each other and only one of the two is needed to generate surplus (this is Dr. Gans' glove example).[212] In this case, the Shapley values (expressed as fractions of the surplus) are 2/3, 1/6, and 1/6. Under the Shapley model, both parties 2 and 3 are "paid" even though only one of them would be involved in the actual creation of the surplus. It is a rare market outcome in which a party that did not actually participate in production receives compensation from those that did. Instead, in a real market situation, party 1 is likely to play parties 2 and 3 against each other and bargain them down to a lower level of compensation, with the result that party 1 receives more than 2/3 of the surplus. Moreover, Dr.

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[210] Expert Report of Joshua Gans, October 31, 2016, ¶ 68.

[211] The Shapley model is a method to "define a fair allocation of a given pie." Watt, R., "Fair Copyright Remuneration: The Case of Music Radio," Review of Economic Research on Copyright Issues (2010), Vol. 7, No. 2, p. 22.

Gans' formulation of the Shapley value model in the context of the music industry is much too simple. It ignores the fact that value can vary substantially across musical works and sound recordings. It ignores the possibility of substitution among various musical works and among various sound recordings. Yet, the outcome of his approach depends crucially on these unrealistic assumptions. Furthermore, the Shapley value approach is inappropriate because it ignores the considerations of the 801(b)(1) factors and, in particular, does not consider consumers.

145. Third, under Dr. Gans' assumptions, the Shapley value for the service providers should also be equal to the Shapley value for the labels, i.e., the service providers should earn the same profits as the labels (so that the surplus is divided three ways). The services are as "necessary" as the musical work and the sound recording under Dr. Gans' formulation. Yet, Dr. Gans never considers the service providers' profits. Given that the service providers' profits appear to be negative (e.g., Spotify), the royalty payments from the service providers to the labels and, potentially, the publishers must decrease in order to equilibrate the profits of the service providers to those of the labels and publishers. I have recalculated Dr. Gans' results under the assumption that the Shapley value for the publishers is 1/3 of the sum of the actual profits of the publishers and labels. This assumes that the publishers, labels, and streaming services are each entitled to one-third of the surplus and that the streaming services currently earn zero profits (which is conservative since they currently earn negative profits). Under these assumptions, the ratio of sound recordings to musical works Shapley-based royalties increases to 4.7 from 2.5.[213]

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[212] Expert Report of Joshua Gans, October 31, 2016, ¶ 70.

[213] Exhibit 4.

146. Fourth, Dr. Gans equates the profits of the publishers and labels after these entities have paid, respectively, the songwriters and artists. However, it is the combined "profits" of the songwriters and publishers, on the one hand, and the combined "profits" of the artists and labels, on the other hand, that are relevant. The publishers receive payments only because of the efforts of the songwriters, and similarly for the labels with respect to the artists. By excluding the profits of the songwriters and artists, Dr. Gans is missing an important piece of the puzzle. However, there is no data on the costs of the songwriters and artists (including the opportunity cost of their time) and thus no way to fix Dr. Gans' calculations. The absence of the necessary data does not justify the use of incomplete and thus flawed data.

147. Fifth, as discussed above, under Dr. Gans' theory, labels are overcompensated and thus do not provide a valid benchmark for publishers. In addition, labels' profits may reflect some degree of market power and thus again would not provide a valid benchmark for publishers particularly under the 801(b)(1) factors.

9. Dr. Gans' Argument That a Single Per-Play Rate is "Fair" Is Incorrect

148. Dr. Gans argues that a single per-play rate is "fair" and that this conclusion is supported by the fact that different streaming services have historically paid different effective per-play rates.[214] Dr. Gans is incorrect. As discussed above and in my opening reports, different services have customers with different preferences and different willingness to pay for music. Given that context, applying a single per-play rate to every service would not be economically efficient. Dr. Gans again makes the implicit assumption that the cannibalization rate between services is

[214] Expert Report of Joshua Gans, October 31, 2016, ¶ 84.

100%. He has no support for such an assumption, and indeed it is incorrect given the differentiation among the services.

10. Dr. Gans Failed to Address the Four Factors

149. Dr. Gans does not analyze the Copyright Owners' proposal (or his Shapley value results) in the context of the four 801(b)(1) factors that I understand the CRB considers in determining the appropriate royalty rate. As discussed in my opening reports, a change to per-stream and per-user royalty rates and the substantial increase in royalty payments that would result from the Copyright Owners' proposal (see Section III.A. of this report) would disrupt the streaming service providers and reduce the consumption of music. Moreover, the 801(b)(1) factors do not imply an unconstrained market standard nor a "willing buyer/willing seller" standard. Instead, the 801(b)(1) factors argue for a rate that can maximize consumer surplus, which may not be achieved under an unconstrained market.

IV. REVIEW AND CRITICISMS OF THE EXPERT REPORTS ON BEHALF OF APPLE

A. Apple's Proposal

150. I understand that for Subpart B interactive streaming and limited download services, Apple is proposing an all-in, per-play rate of $0.00091, which is based on the $0.091 per download statutory rate for Subpart A phonorecord deliveries, permanent digital downloads, and ringtones and an assumed streams-to-download ratio of 100:1.[215]

[215] "Apple Inc. Proposed Rates and Terms," In the Matter of Determination of Rates and Terms for Making and Distributing Phonorecords (Phonorecords III), p. 1-2; Expert Report of Anindya Ghose, November 1, 2016, ¶ 33.

151. I understand that for Subpart C paid locker services, Apple is proposing an all-in, per-subscriber monthly rate of $0.17 for paid locker services.[216]

152. Both of Apple's experts in this matter, Dr. Ghose and Dr. Ramaprasad, endorse Apple's Subpart B and Subpart C proposals.

B. Specific Criticisms of the Ghose Expert Report

1. Overview of the Ghose Expert Report

153. In his Expert Report, Dr. Ghose proposes that a per-play rate rather than a revenue-based royalty structure should be adopted given that "[a] per-play rate structure appropriately balances the rewards to songwriters and streaming services."[217] In contrast, Dr. Ghose proposes that the current percentage of revenue-based royalty structure "does not always appropriately balance the rewards to songwriters and streaming services"[218] in part because it supposedly exposes songwriters to risks such as the financial performance of the interactive streaming service and the decoupling of demand for their songs from the manner in which they are compensated for those songs.[219]

154. Dr. Ghose is also of the opinion that a percentage of revenue-based royalty structure is inappropriate because "it may expose songwriters to variable compensation across different streaming services even if the demand for their songs does not vary."[220] Furthermore, according

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[216] "Apple Inc. Proposed Rates and Terms," *In the Matter of Determination of Rates and Terms for Making and Distributing Phonorecords (Phonorecords III),* p. 1-2; Expert Report of Anindya Ghose, November 1, 2016, ¶ 34.

[217] Expert Report of Anindya Ghose, November 1, 2016, ¶ 60.

[218] Expert Report of Anindya Ghose, November 1, 2016, ¶ 62.

[219] Expert Report of Anindya Ghose, November 1, 2016, ¶¶ 63-64.

[220] Expert Report of Anindya Ghose, November 1, 2016, ¶ 65.

to Dr. Ghose, a loss-leader strategy (e.g., a freemium business model) does not properly compensate songwriters.[221]

155. Dr. Ghose further states that a "per-play rate structure for interactive streaming is consistent with the rate structures for other prominent forms of music distribution," citing to permanent downloads.[222] Dr. Ghose also posits that because per-unit rates are well-established for different forms of music distribution it would minimize the disruptive impact on the structures of the industries involved.[223]

156. Finally, Dr. Ghose also believes that a percentage of revenue-based structure "make[s] the calculation of royalty rates complicated"[224] and is "opaque to songwriters"[225] but that a per-play-based structure is simpler and easier to understand.[226]

157. In the following sections, I provide specific criticisms of the Ghose Expert Report.

2. Dr. Ghose's Opinions Regarding a Per-Play Rate Structure for Subpart B Interactive Streaming Services Are Unsupported

a. Dr. Ghose Incorrectly Concludes that a Per-Play Rate Structure Appropriately Balances the Rewards to Songwriters and Interactive Streaming Service Providers

158. Dr. Ghose states that "[a] per-play rate structure appropriately balances the rewards to songwriters and streaming services."[227] With respect to songwriters, according to Dr. Ghose:

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[221] Expert Report of Anindya Ghose, November 1, 2016, ¶ 67.

[222] Expert Report of Anindya Ghose, November 1, 2016, ¶ 4.

[223] Expert Report of Anindya Ghose, November 1, 2016, ¶ 84.

[224] Expert Report of Anindya Ghose, November 1, 2016, ¶ 80.

[225] Expert Report of Anindya Ghose, November 1, 2016, ¶ 81.

[226] Expert Report of Anindya Ghose, November 1, 2016, ¶ 83.

[227] Expert Report of Anindya Ghose, November 1, 2016, ¶ 60.

> As long as the per-play rate is appropriately determined and streams are measured in a way that is indicative of demand (e.g., by considering the streams that are longer than 30 seconds to eliminate accidental streams or streams of snippets of songs where users are merely sampling a song), payments to songwriters are likely to be commensurate with the demand for their songs. If the demand for their songs were to increase (i.e., if their songs are streamed more), their income also would increase.[228]

With respect to interactive streaming service providers, according to Dr. Ghose:

> If a streaming service makes certain decisions (e.g., to invest in developing a new feature that benefits consumers), and its revenues increase because of that decision, the streaming service alone should receive the additional revenue attributable to that innovation because it is not connected to any particular songwriter. Accordingly, increased revenue due to any innovation specific to the service should not have to be shared with songwriters.[229]

159. First, Dr. Ghose's premise that a per-play rate structure appropriately balances the rewards to songwriters and interactive streaming service providers assumes that the per-play rate is "appropriately determined." As I will discuss below, Dr. Ghose and Dr. Ramaprasad do not appropriately determine the per-play rate for numerous reasons, including, their use of a streams-to-download ratio of 100:1 that is unsupported. Furthermore, this ratio is artificially too low and results in a per-play rate that is too high and in favor of songwriters so that it does not appropriately balance the rewards to songwriters and interactive streaming service providers.

160. Second, the demand for a particular song is not due to just the song itself. The demand for a particular song within a given streaming service is also a function of the service provider's innovations and investments such as playlists, social recommendation features, bundling of value-added services, infrastructure, and plan offerings as well as the willingness to pay of the

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[228] Expert Report of Anindya Ghose, November 1, 2016, ¶ 60.

[229] Expert Report of Anindya Ghose, November 1, 2016, ¶ 61.

users of the service. For example, as discussed in my opening reports, Spotify's social media integration is one feature credited as a reason for its success. Spotify allows users to integrate their existing Facebook and Twitter accounts, enabling access to their friend's music and sending tracks and playlists.[230] Furthermore, in July 2015, Spotify launched its Discover Weekly feature enabling users to receive new 30-track playlists each week tailored to each user based on a machine-learning algorithm.[231] Discover Weekly quickly became one of Spotify's most successful features with over 40 million listeners in May 2016.[232] One of Google Play Music's unique advantages is its human playlist curation. Google Play Music is one of the best music-streaming services at predicting what listeners want to hear and personalizing playlist recommendations.[233] Google Play Music offers human-curated playlists based on your mood, activity, or the time of day.[234] Amazon's key advantage is the integration of its streaming music service, Amazon Prime Music, into Amazon Prime, the company's $99-per-year premium bundle of services.[235] Amazon's strategy has been to win over casual listeners with smaller willingness to pay for music, who do not highly value having access to 30 million songs (Amazon's catalog is roughly 1 million songs), by offering bundled services at a lower price.[236]

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[230] "Spotify: The Next Step in Digital Music Innovation," Northwestern Business Review, January 3, 2012.

[231] "Spotify's Discover Weekly: How It Works," The Guardian, August 1, 2016.

[232] "Why Spotify's Discover Weekly Is So Addictive," Vogue, May 30, 2016. As of April 2016, 3% of all streams on Spotify come from Discover Weekly playlists. Half of those who try their Discover Weekly playlist end up listening to at least 10 of its 30 songs, adding at least one to a personal playlist. John McDermott, "How Spotify Solved for the 'Paradox of Choice,'" John McDermott, LinkedIn, April 12, 2016. Spotify published in May 2016 that more than 1 billion streams per week come from Spotify's curated playlists. "Spotify Playlists: Now playing… More than 1 Billion Streams a Week," Spotify Artists, May 26, 2016.

[233] "Google Might Have the Best Music App in the World," Business Insider, April 27, 2016.

[234] "It's Tuesday Morning, Play Music for a Bright, Sunshiny Day," Android Blog, October 21, 2014.

[235] "Why You Should Give Amazon Prime Music a Second Chance," Make Use Of, February 17, 2016.

[236] "Amazon's Streaming Music Aims for More Casual Listeners," The New York Times, November 10, 2015.

The "all you can eat" plan structure also likely expands the demand for music, as I discussed in my opening reports.

161. Therefore, when a consumer subscribes to a streaming service, it is not only to obtain music, but also to obtain the convenience of the resulting method of access to music, plus the other features of the service, such as listening suggestions, curated playlists, or bundling with other products or services. The method of access and features are provided by the services. The copyright owners have benefited from the existence of the services and their innovations, just as the services have benefited from having music to stream. See ¶¶ 75-76 of this report where I provide support for the conclusion that interactive streaming services have been a positive development for the overall music industry, publishers, and copyright owners.

162. Moreover, different services and different plans appeal to customers with different preferences and different willingness to pay for music.

163. As a result of these economic realities, it is not necessarily the case, even with an appropriately determined rate, that a per-play rate structure properly balances the rewards to songwriters and service providers across all plans and services. A per-play rate may overcompensate songwriters for benefits that are actually attributable to innovations and features developed by the interactive streaming service providers. Furthermore, a per-play rate structure does not properly balance the risks between songwriters and service providers because it guarantees the songwriter a certain royalty regardless of the level of success of the service provider, while the service provider bears all of the downside risk of the service.[237] Since the service is the combination (synergy) of the contributions of the musical works rights owners and

the service providers, both parties (as well as the sound recording rights owners) should share in both the risks and rewards of the services. A percentage of revenue appropriately achieves such risk- and reward-sharing. Finally, a per-play rate structure fails to account for the fact that different services and plans appeal to customers with different willingness to pay for music. By definition, a given musical work has lower value to customers with a lower willingness to pay. The musical work should therefore receive a lower royalty for such a customer. However, the per-play rate structure proposed by Apple does not allow for this. In contrast, a percentage of revenue royalty structure does result in lower royalties in the situation of a service or plan targeted toward lower WTP customers because such a service will generally charge a lower price (so that applying a given percentage of revenue would result in a lower royalty).

b. Dr. Ghose Incorrectly Concludes That a Percentage of Revenue Rate Structure Does Not Appropriately Balance the Rewards to Songwriters and Interactive Streaming Service Providers

164. Dr. Ghose states:

> a percent-of-revenue structure does not always appropriately balance the rewards to songwriters and streaming services…A percent-of-revenue structure exposes songwriters' compensation to two additional types of risk, however. First, there also is risk arising from uncertainty related to the financial performance of the streaming service…Second, the percent-of-revenue rate structure also gives rise to risk if the songwriters' compensation is decoupled from the demand for their songs.[238]

Dr. Ghose's statements are based on his opinions that songwriters should not bear any of the downside risk of the streaming service, and that the value of a musical work stream is the same in all economic contexts. Both opinions are incorrect. Dr. Ghose's statements also ignore the

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[237] It is also important to note that the songwriters are able to diversify the risks inherent in any one service by having their songs available on multiple services.

[238] Expert Report of Anindya Ghose, November 1, 2016, ¶¶ 62-64.

fact that the streaming services have fundamentally different business models than digital download services and that these differences are responsible for the success of streaming (which in turn has benefited copyright owners). Given the different business models, use of the same royalty structure for all models makes no economic sense.

165. First, a percentage of revenue rate structure makes economic sense in the context of streaming because songwriters and interactive streaming service providers collectively share in both the upfront investments in the service offering and in the upside (or downside) rewards associated with those investments. As discussed above, the demand for a stream of a particular song, and ultimately the revenues and profits generated from users of the particular service, are both a function of the demand for the song itself and the characteristics of the service offering provided by the provider, including the method of accessing the music and other features of the service including listening suggestions, curated playlists, bundling with other products or services, and the full access to the music library (in the case of "all you can eat" plans). Therefore, it makes economic sense that songwriters and service providers should share in both the upside, or downside, of the financial performance of the interactive streaming service that attracted consumers in the first place. A percentage of revenue rate structure accomplishes this balance.

166. Furthermore, Dr. Ghose ignores the fact that the existing Section 115 rate structure, and the proposal put forth by Google, both contain a greater of structure that protects songwriters against the supposed risk arising from the uncertainty related to the financial performance of the interactive streaming service. Specifically, the minimums included in Section 115 consider a specified percentage of the total amount expensed by the service provider for sound recording rights and per-subscriber per-month minimum rates. This protects songwriters against the

supposed risk arising from the uncertainty related to the financial performance of the interactive streaming service. For example, if the revenues earned by the Google Play Music subscription service, or Spotify's ad-supported service, are too low such that 10.5% of the revenues earned for the service falls below the lesser of the percentage of sound recording payments or per-subscriber minimum, then the songwriters receive the result of the lesser-than clause as the Section 115 all-in royalty payment and are ultimately protected against the downside risk of the financial performance of the interactive streaming service. Therefore, even though it is my opinion that songwriters should bear some of the downside risk associated with the financial performance of the service offering, Dr. Ghose's concerns about the percentage of revenue rate structure on this issue are accounted for by the existence of the existing and proposed percentage of sound recording payments and per-subscriber minimums in the Section 115 regulations.

167. Second, I disagree with Dr. Ghose that the value of a stream should remain constant regardless of any other factors, such as a service provider's business model and plan offerings, the preferences and willingness to pay of the consumers it is targeting, and the service provider's business decisions. Specifically, according to Dr. Ghose:

> Another feature of the percent-of-revenue structure is that it may expose songwriters to variable compensation across different streaming services even if the demand for their songs does not vary. Because different streaming services may have different business models (e.g., ad-supported, subscription-based), and may make different business decisions such as how to price their services (for subscription-based services) or how to place and what to charge for ads (for ad-supported services), their revenues may vary. It is plausible that different streaming services might pay different royalties to the same songwriter for the same number of streams under the percent-of-revenue structure.[239]

[239] Expert Report of Anindya Ghose, November 1, 2016, ¶ 65.

There is no valid economic reason why songwriters should receive the same exact dollar royalty for the streams that occur on different interactive streaming services or on different types of plans. As previously discussed, the demand for a given stream depends on the song itself, the innovations and features offered by the interactive streaming service, and the preferences of the consumers that were targeted by the particular service. These innovations and features can include, for example, the specific method of access to music of the service, plus the other features of the service, such as listening suggestions, curated playlists, bundling with other products or services, the way in which the user pays for the service (i.e., a monthly fee), and the nature of access to music. Since each interactive streaming service is different in terms of the features that it offers to consumers, and the demand for these features varies across consumers, it makes economic sense that a stream on one service by one consumer may generate a different value, and resulting mechanical royalty, than a stream on a completely different service by a different consumer.

168. Dr. Ghose also states that a loss-leader strategy, or freemium offering, does not properly compensate songwriters. According to Dr. Ghose: "Because such a loss leader, or free service, will have lower revenues (by definition) relative to a subscription-based service, the compensation to songwriters for the use of their songs on that service is also lower, although such use may ultimately be highly beneficial to the service."[240] As previously discussed in this report, promotional pricing strategies (freemium offerings are a form of such strategies) are accepted strategies that are widespread in the music marketplace and various other industries, with price discounts among the most widely employed sales promotion tactics, and that copyright owners would, in fact, benefit from these same strategies. Furthermore, Dr. Ghose

makes no showing that, for example, Google Music is a "loss leader" in the sense that Dr. Ghose uses that term. Finally, Dr. Ghose also ignores the per subscriber minimum prong of Google's proposal, which addresses Dr. Ghose's concern.

169. Third, Dr. Ghose focuses only on the supposed risks that songwriters may be exposed to under a percentage of revenue rate structure, and ignores the risks that interactive streaming service providers would be exposed to under a per-play rate structure. As discussed in my opening reports, a change to the structure of the royalties under the Section 115 compulsory license from the current percentage of revenue to Apple's proposed per-stream royalty rates likely would cause substantial disruption to streaming services, particularly given that the services made investments in developing their services likely with the reasonable expectation that the existing royalty rate structure would not change substantially. The subscription streaming services provided by companies such as Spotify and Google offer "all you can eat" plans, where subscribers pay a fixed monthly fee and then choose the desired amount of streaming. Under the current royalty structure, in which the royalty is based on a percentage of the subscriber fee (subject to minimums), the royalty, like the subscriber fee, is a fixed amount per subscriber. This gives the service certainty about both its revenues and a major cost component on a per-subscriber basis. If the royalty structure were changed to a per-stream basis, on the other hand, the royalty cost component on a per-subscriber basis would be uncertain because it would depend on the amount of usage of the subscribers. Moreover, with per-stream royalties, services would have the incentive to minimize their costs by taking measures to limit usage by each subscriber, including possibly imposing usage limits. This incentive could even result in services themselves starting to charge users on a per-stream basis, which would also

[240] Expert Report of Anindya Ghose, November 1, 2016, ¶ 67.

tend to limit usage. Streaming services that rely on advertisements to generate revenue likely would face similar disruption from a change to per-stream royalties. These changes would disrupt both providers and users, and would limit the availability of copyrighted works.

c. Dr. Ghose Does Not Present Any Evidence that a Per-Play Rate Structure Is More Simple and Transparent Than a Percentage of Revenue or Hybrid Rate Structure

170. Dr. Ghose states that the "number and variety of factors to consider under the percent-of-revenue structure or the hybrid structure make the calculation of royalty rates complicated."[241] Furthermore, Dr. Ghose states that the current percentage of revenue rate structure is "opaque to songwriters," complex, and confusing; and, in particular, "[t]he determination of service revenue for streaming could be particularly challenging when the service provider offers a streaming service as part of a larger bundle of services for which it charges a single price."[242] In contrast, Dr. Ghose believes that a per-play rate structure is simple to understand, easy to administer, and transparent.[243]

171. Dr. Ghose's characterization of the current Section 115 percentage of revenue rate structure is inconsistent with the fact that interactive streaming service providers have been paying royalties under this type of structure since at least 2009.[244] The CRB has approved such a percentage of revenue structure for interactive streaming services twice, in each of the past Phonorecords proceedings. Therefore, the actions of the CRB and the ability of service providers to successfully pay royalties under a percentage of revenue structure does not support

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[241] Expert Report of Anindya Ghose, November 1, 2016, ¶ 80.

[242] Expert Report of Anindya Ghose, November 1, 2016, ¶¶ 78-81.

[243] Expert Report of Anindya Ghose, November 1, 2016, ¶ 83.

Dr. Ghose's opinion that such a structure is too complicated to implement. Furthermore, Dr. Ghose presents no evidence that the calculation of mechanical royalties based on a percentage of revenue rate structure has been opaque to songwriters, and that a per-play rate structure would somehow be less opaque to songwriters.

d. Dr. Ghose Endorses Dr. Ramaprasad's Flawed Calculation of a Per-Play Rate for Subpart B Interactive Streaming Services

172. Dr. Ghose reviewed Dr. Ramaprasad's calculation of a per-play rate for Subpart B interactive streaming services, which is based on the $0.091 per download Subpart A rate and a supposed comparable benchmark for streams-to-downloads of 100:1, and which resulted in a rate for Subpart B interactive streaming services of $0.00091 per stream consistent with Apple's proposed rate. Dr. Ghose concludes that "Dr. Ramaprasad's finding is sound and I therefore conclude that Apple's proposal is also reasonable in that it is consistent with accepted benchmarks."[245]

173. As I will discuss below under my specific criticisms of the Ramaprasad Expert Report, Dr. Ramaprasad's calculation, which Dr. Ghose endorses, is based on an outdated streams-to-download ratio of 100:1.

C. Specific Criticisms of the Ramaprasad Expert Report

1. Overview of the Ramaprasad Expert Report

174. Dr. Ramaprasad is of the opinion, similar to Dr. Ghose, that the value of a stream is the same regardless of the interactive streaming service's business model, and that a per-play rate

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[244] 37 CFR Part 385, *Determination of Rates and Terms for Use of Musical Works Under Compulsory License for Making and Distributing of Physical and Digital Phonorecords* (Phonorecords I), Docket No. 2006-3 CRB DPRA, Federal Register Vol. 74 No. 15, January 26, 2009.

[245] Expert Report of Anindya Ghose, November 1, 2016, ¶ 85.

structure "would make royalty payments to songwriters simpler, less variable, and more predictable (for a give number of streams)."[246]

175. Dr. Ramaprasad also gives the opinion that the interactive streaming industry is a robust and mature industry and, therefore, "payments to songwriters by interactive streaming services should be consistent with a robust industry and similar to royalty structures of other major forms of music delivery."[247] Dr. Ramaprasad further asserts that because interactive streaming and downloads are substitutes, "songwriters need predictable and fair compensation for interactive streaming commensurate with their compensation for digital downloads."[248] As evidence for the fact that interactive streaming and downloads are substitutes, Dr. Ramaprasad points to industry sales trends from the RIAA and academic research from Luis Aguiar and Joel Waldfogel.[249] According to Dr. Ramaprasad, because revenues from digital downloads have been declining since 2013 while revenues from interactive streaming have been increasing since 2013, interactive streaming services could be considered a substitute for digital downloads.[250] Dr. Ramaprasad also asserts, without support, that given the investments and technological innovations made by interactive streaming service providers, a per-play rate structure provides a fair return to songwriters and interactive streaming service providers.[251]

176. Based on her opinion that digital downloads are a substitute for interactive streaming, Dr. Ramaprasad references Subpart A rates for downloads. Dr. Ramaprasad specifically uses a

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[246] Expert Report of Jui Ramaprasad, November 1, 2016, ¶ 49.

[247] Expert Report of Jui Ramaprasad, November 1, 2016, ¶ 68.

[248] Expert Report of Jui Ramaprasad, November 1, 2016, ¶ 61.

[249] Expert Report of Jui Ramaprasad, November 1, 2016, ¶ 60.

[250] Expert Report of Jui Ramaprasad, November 1, 2016, ¶ 60.

[251] Expert Report of Jui Ramaprasad, November 1, 2016, ¶ 84.

streams-to-download ratio of 100:1 in her calculation when applying Subpart A rates for downloads (i.e., $0.091 per download) to interactive streaming, resulting in a per-stream royalty rate of $0.00091 (= $0.091 / 100).[252] As I will discuss further below, Dr. Ramaprasad adopts, without explanation, an outdated streams-to-download ratio of 100:1 rather than the more current rates used in the industry.

177. In the following sections, I provide specific criticisms of the Ramaprasad Expert Report.

2. Dr. Ramaprasad's Calculation of a Per-Play Rate for Subpart B Interactive Streaming Services Is Based on an Outdated 100:1 Streams-to-Download Ratio

178. Dr. Ramaprasad's calculation of a per-play rate for Subpart B interactive streaming services relies on a 100:1 streams-to-download ratio used by the U.K. Official Singles Chart in its calculation of the best-selling U.K. singles. Specifically, Dr. Ramaprasad divides the Subpart A $0.091 per download royalty rate by 100 streams to calculate a per-stream rate of $0.00091, consistent with the per-stream rate being proposed by Apple for Subpart B interactive streaming services.[253] Dr. Ramaprasad's calculation, as well as Apple's calculation, is based on an outdated streams-to-download ratio; and more current ratios, including ones identified in Dr. Ramaprasad's own report, are higher than 100:1 and result in much lower per-stream rates based on the Subpart A $0.091 per download benchmark. Furthermore, the U.K.-based ratio used by Dr. Ramaprasad has recently increased to 150:1, effective January 2017,[254] further illustrating that Dr. Ramaprasad's 100:1 ratio is outdated.

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[252] Expert Report of Jui Ramaprasad, November 1, 2016, ¶ 95.

[253] Expert Report of Jui Ramaprasad, November 1, 2016, ¶¶ 91-92.

[254] "Chart Company Changes Formula to Reflect Rise in Streaming," BBC News, December 19, 2016. ("Currently, 100 streams count as one 'sale' of a song. From January, the ratio will become 150:1.") ("Announcing the changes to the chart formula, Martin Talbot, chief executive of the Official Chart Company, said: 'It is testament

179. Dr. Ramaprasad identifies two other streams-to-download benchmarks in her report. First, she identifies a streams-to-download ratio of 137:1 based on academic research; in particular, a paper by Luis Aguiar and Joel Waldfogel entitled, "Streaming Reaches Flood Stage: Does Spotify Stimulate or Depress Music Sales?"[255] In this paper, the authors found that Spotify use displaces permanent downloads – specifically, 137 Spotify streams appear to reduce digital track sales by 1 unit; but the losses from displaced sales are roughly outweighed by the gains in streaming revenue. In addition, they also showed that Spotify use displaces music piracy. Second, Dr. Ramaprasad identifies a streams-to-download ratio of 150:1, which is used by Billboard in the creation of its Top 200 Albums chart. Dr. Ramaprasad notes that in 2013 Billboard actually used a streams-to-download ratio of 200:1.[256]

180. Therefore, as discussed above and in the Ramaprasad Expert Report, benchmark streams-to-download ratios vary from 100:1 to 200:1. Dr. Ramaprasad relies on the lowest such ratio (i.e., 100:1); and a ratio that is outdated as it was recently changed to 150:1. Dr. Ramaprasad provides no explanation for why 100:1 is the most appropriate benchmark ratio. In my opinion,

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to the rapidly changing nature of music consumption in the UK - and the huge shift we are seeing towards streaming - that we are updating the way we measure the contribution of streams to the make-up of the official charts as quickly as we are.'").

[255] Expert Report of Jui Ramaprasad, November 1, 2016, ¶¶ 93-94; Luis Aguiar and Joel Waldfogel, "Streaming Reaches Flood Stage: Does Spotify Stimulate or Depress Music Sales?" Working Paper, National Bureau of Economic Research, October 2015.

[256] Expert Report of Jui Ramaprasad, November 1, 2016, ¶¶ 88-90. I note that on February 1, 2016, the RIAA announced that it would use streams to calculate its gold and platinum album awards for the first time. It also announced a change in its 2013 formula for singles from 100 on-demand streams for 1 download to 150 on-demand streams to 1 download. The reason given was "to reflect the enormous growth of streaming consumption in the two plus years since that ratio was set." The Chairman and CEO, Cary Sherman, said of the change: "We know that music listening – for both albums and songs – is skyrocketing, yet that trend has not been reflected in our album certifications." The RIAA emphasized that the formula is based on consumption patterns, not on the financial value of streams and downloads. See "RIAA Debuts Album Award with Streams," RIAA, February 1, 2016; "RIAA Adds Digital Streams to Historic Gold & Platinum Awards," RIAA, May 9, 2013.

other benchmarks are just as relevant for purposes of establishing a Subpart B interactive streaming per-stream royalty rate. For example:

- 137:1 – Based on the academic research relied on by Dr. Ramaprasad, which measures the change in music consumption behaviors from PDDs to streaming of a representative user.
- 150:1 – Based on the ratio used by Billboard and the RIAA, and now used by the U.K. Officials Singles Chart, which is the source used by Dr. Ramaprasad.

181. I have calculated the per-stream royalty rates based on the Subpart A $0.091 rate and using 137:1 and 150:1 streams-to-download ratios. The results are per-stream rates equal to $0.00066 and $0.00061, respectively. The resulting per-stream royalty rates for interactive streaming are substantially lower than Dr. Ramaprasad's and Apple's proposed $0.00091 per-stream rate.

3. Dr. Ramaprasad's Opinions Regarding a Per-Play Rate Structure for Subpart B Interactive Streaming Services Are Unsupported

a. There Is No Valid Economic Reason Why Songwriters Should Receive the Same Exact Royalty for Every Stream of a Song

182. Dr. Ramaprasad states that due to the various factors (e.g., number of streams by users, number of streams by songs, relevant service revenues, number of subscribers, and sound recording royalty payments) necessary to calculate mechanical royalties for musical works under the current Section 115 percentage of revenue structure, "songwriters are unable to reconcile the number of times their songs have been streamed with the ultimate compensation they receive for mechanical royalties."[257] In contrast, according to Dr. Ramaprasad, "Apple's per-play rate for

[257] Expert Report of Jui Ramaprasad, November 1, 2016, ¶ 47.

interactive streaming would make royalty payments to songwriters simpler, less variable, and more predictable (for a given number of streams)."[258]

183. This opinion is simply incorrect. As I understand it, an interactive streaming service's royalty payments to publishers are allocated among musical works based on the number of times each work was streamed. Thus, contrary to Dr. Ramaprasad's claim, there is a direct link between the payment a musical work receives and the number of times it was streamed. In contrast, with a digital download, while there is a link between the payment and the number of downloads, there is no link between the payment and the number of times the track is actually played. Dr. Ramaprasad ignores this fact.

184. In addition, Dr. Ramaprasad's opinion is similar to one of Dr. Ghose's opinions; in particular, that the value of a stream should remain constant regardless of any other factors, and that variability in the royalties received by songwriters is problematic and typically caused by different business models of service providers (e.g., paid subscription based versus ad-supported). As I previously discussed in my rebuttal of the Ghose Expert Report, there is no valid economic reason why songwriters should receive the same exact royalty for the streams that occur on different interactive streaming services or on services with different business models.

[258] Expert Report of Jui Ramaprasad, November 1, 2016, ¶ 49.

b. Dr. Ramaprasad's Claim that Apple's Proposal, "Compensates Both Songwriters and Interactive Streaming Service Providers for Their Contributions Given the Recent Developments in the Music Industry," Is Unsupported

i. Dr. Ramaprasad's Claim that the Interactive Streaming Industry Is a Robust and Strong Industry and, Therefore, This Necessitates a Reassessment of How Royalties for Songwriters Should Be Determined, Has No Economic Support

185. Dr. Ramaprasad states:

> The evolution of the interactive streaming industry over the last few years, and the fact that interactive streaming services are attracting an increasing number of paying subscribers, indicates that the streaming industry has outgrown its nascent stage and is showing the sort of sustained growth consistent with a robust, strong industry. Therefore, the royalty rate and the royalty structure for payments to songwriters by interactive streaming services should be consistent with a robust industry and similar to the royalty structures of other major forms of music delivery.[259]

I disagree with Dr. Ramaprasad's opinion.

186. Dr. Ramaprasad's analysis of the interactive streaming industry focuses primarily on the growth in paying subscribers, and ignores the fact that interactive streaming service providers have not yet reached any level of profitability, let alone sustained profitability, in part due to the royalty burden faced by providers. See my opening reports where I discuss the lack of profitability of interactive streaming service providers.[260] Therefore, given the current and foreseeable lack of profitability for the interactive music streaming industry as whole, Dr. Ramaprasad's premise that the interactive streaming industry is a robust and strong industry is incorrect.

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[259] Expert Report of Jui Ramaprasad, November 1, 2016, ¶ 68.

[260] Expert Witness Statement of Dr. Gregory K. Leonard, November 1, 2016, ¶¶ 96-99; Amended Expert Witness Statement of Dr. Gregory K. Leonard, January 25, 2017, ¶¶ 98-101.

ii. Dr. Ramaprasad Ignores the Investments and Technological Innovations Made by Interactive Streaming Service Providers and Others that Have Driven the Success of Interactive Streaming

187. Although Dr. Ramaprasad discusses extensively the investments, technological innovations, and interactive streaming features developed by service providers that have led to the success of interactive streaming, she does not justify how Apple's $0.00091 per-stream proposal properly compensates service providers for these investments, innovations, and features. Rather, she simply states, without support, that "[a] per-play rate structure [including what is proposed by Apple] also would provide a fair return to interactive streaming services."[261]

188. For example, Dr. Ramaprasad makes the following statements regarding the innovations and technical developments made by interactive streaming service providers:

- "It is clear that interactive streaming services have increased consumer access to a larger catalogue and, therefore, a greater variety of music."[262]
- "Finally, there is a large list of features around catalogue and variety that are increasing in popularity among Spotify users, including the depth of the catalogue, the integration with online social networks, the creation and sharing of playlists, and recommendations. In addition to Spotify, whose purchase of EchoNest demonstrated their investment in music recommendations, the other main interactive streaming sites are investing in improving their 'intelligent' recommendation systems: Google purchased Songza and Apple acquired Semetric."[263]
- "Together, it is clear that due to the size and variety of the catalogue available, interactive streaming services provide enhanced opportunities for music discovery."[264]
- "Academic research has found that interactive streaming leads to a 43% increase in overall music consumption, and the benefits offered by interactive streaming services, including the increased variety of music and the reduced search costs to discover new music, increase consumer welfare."[265]

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[261] Expert Report of Jui Ramaprasad, November 1, 2016, ¶ 84.

[262] Expert Report of Jui Ramaprasad, November 1, 2016, ¶ 72.

[263] Expert Report of Jui Ramaprasad, November 1, 2016, ¶ 73.

[264] Expert Report of Jui Ramaprasad, November 1, 2016, ¶ 74.

[265] Expert Report of Jui Ramaprasad, November 1, 2016, ¶ 75.

- "Research has shown that because of music discovery and the enhanced experience enabled by interactive streaming services, smaller, or more 'niche' artists are more likely to be discovered and sampled."[266]
- "Academic research has also found that expansion in listening variety could ultimately increase competition, such that niche artists would have an opportunity to compete with mainstream artists."[267]
- "Thus, interactive streaming services have played, and will continue to play, an important role in enabling consumers to discover music and enabling musicians to reach larger and more diverse audiences. Interactive streaming services have had to incur costs to test and create a product that would offer benefits to consumers and musicians. Therefore, they would expect to earn a fair economic return for their contributions, without which their incentive to innovate would decrease."[268]

189. Dr. Ramaprasad performs no analysis to establish that interactive streaming service providers are properly compensated for all of these types of investments and innovations/technical developments, or would be under Apple's proposal. As a result, her analysis of Apple's proposal, and her claim that it compensates both songwriters and interactive streaming service providers for their contributions is unsupported.

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[266] Expert Report of Jui Ramaprasad, November 1, 2016, ¶ 76.

[267] Expert Report of Jui Ramaprasad, November 1, 2016, ¶ 77.

[268] Expert Report of Jui Ramaprasad, November 1, 2016, ¶ 81.

Before the
United States Copyright Royalty Judges
The Library of Congress
Washington, D.C.

In the Matter of: **Determination of Royalty Rates and Terms for Making and Distributing Phonorecords (Phonorecords III)**	**Docket No. 16-CRB-0003-PR (2018-2022)**

Declaration of Gregory K. Leonard

I, Gregory K. Leonard, declare under penalty of perjury that the statements contained in my written rebuttal statement in the above-captioned proceeding are true and correct to the best of my knowledge, information, and belief. Executed this 15th day of February, 2017 in San Francisco, California.

Gregory K. Leonard

Appendix A

GREGORY K. LEONARD

Gregory K. Leonard is a Partner at Edgeworth Economics specializing in applied microeconomics and econometrics.

Dr. Leonard has written widely in the areas of antitrust, industrial organization, econometrics, intellectual property, class certification, and labor economics. His publications have appeared in the *RAND Journal of Economics*, the *Journal of Industrial Economics*, the *Journal of Econometrics*, the *International Journal of Industrial Organization*, the *Journal of Public Economics*, *Annales Economie et de Statistique*, the *Journal of Labor Economics*, the *International Journal of the Economics of Business*, *Antitrust Law Journal*, *Antitrust*, *Antitrust Source*, the *Journal of Economic Analysis & Policy*, *Journal of Competition Law and Economics*, the *Journal of Economic Surveys*, *法学家 (Jurists' Review)*, *Antitrust Chronicle*, the *Berkeley Technology Law Journal*, the *Columbia Science and Technology Law Review*, the *European Competition Law Review*, *les Nouvelles*, *Landslide*, *Managing Intellectual Property*, *Legal Issues of Economic Integration*, *Kokusai Shoji Houmu (International Business Law and Practice)*, and the *George Mason Law Review*. Dr. Leonard authored two chapters and co-authored another chapter in the American Bar Association Section of Antitrust Law (ABA) volume *Econometrics* (2nd Ed., 2014), co-authored two chapters in the ABA volume *Issues in Competition Law and Policy*, and co-authored the "Econometrics and Regression Analysis" chapter of the ABA volume *Proving Antitrust Damages* (2nd Ed., 2010). He co-edited *Economic Approaches to Intellectual Property: Policy, Litigation, and Management* and authored or co-authored three of its chapters. One of these chapters (co-authored with Lauren J. Stiroh) was cited by the Court of Appeals for the Federal Circuit in its *Uniloc* decision. Dr. Leonard is a Senior Editor of the *Antitrust Law Journal* and has served as a referee for numerous economics journals.

Dr. Leonard was invited to speak on merger simulation at the 2004 US Department of Justice and Federal Trade Commission (FTC) Merger Workshop, the econometrics of evaluating competition in local retail markets at the 2008 FTC Retail Mergers Workshop, and the calculation of patent damages at the 2009 FTC Hearings on the Evolving IP Marketplace. The 2011 FTC report resulting from the latter hearings cited Dr. Leonard extensively. In 2005, Dr. Leonard served as a consultant on the issue of immunities and exemptions to the Antitrust Modernization Commission (AMC), which was tasked by Congress and the President with developing recommendations for changes to the US antitrust laws. He testified before the AMC in December 2005. Dr. Leonard gave an invited presentation on the use of natural experiments in antitrust at the European Commission's Directorate General for Competition (DG Comp) in 2014.

Dr. Leonard has extensive experience with international antitrust and intellectual property issues, particularly in Asia. He has been retained by the Anti-Monopoly Bureau of China's Ministry of Commerce (MOFCOM) as an outside economics expert to assist in merger reviews. Dr. Leonard has given invited presentations at MOFCOM, the Supreme People's Court of China, Renmin University, the Chinese Academy of Social Sciences, and the University of Political Science and Law. He was a member of ABA and US Chamber of Commerce delegations to joint workshops with the Chinese antitrust agencies, MOFCOM, NDRC, and SAIC, and served on the working groups of the ABA's Sections of Antitrust Law and International Law that prepared comments on MOFCOM's and SAIC's draft regulations. Dr. Leonard has also given presentations to the Japan Fair Trade Commission and the India Competition Commission.

Dr. Leonard has experience in a broad range of industries, including pharmaceuticals, telecommunications, airlines, semiconductors, hedge funds, securities, commercial and recreational fishing, medical devices, professional sports, credit card networks, payment systems, information services, computer software, computer hardware, chemicals, plastics, flat glass, retailing, advertising, beef processing, fertilizers, printing, petroleum, steel, beer, cereals, cosmetics, athletic apparel, film, milk, canned fish, vitamins, animal feed supplements, tissue, paperboard, industrial gas, concrete, automobiles, contact lens cleaners, sports beverages, soft drinks, diapers, tobacco products, graphite and carbon products, and modems, among others.

Dr. Leonard has provided written and oral testimony and presentations before federal and state courts, government agencies, and arbitration panels on issues involving antitrust, damages estimation, statistics and econometrics, surveys, valuation, and labor market discrimination.

Prior to joining Edgeworth, Dr. Leonard was a Senior Vice President at NERA and Lexecon Inc., a founding member and Director of Cambridge Economics, Inc., and an Assistant Professor at Columbia University, where he taught statistics, econometrics, and labor economics.

Dr. Leonard received an Sc.B. in Applied Mathematics-Economics from Brown University and a Ph.D. in Economics from the Massachusetts Institute of Technology, where he was a National Science Foundation Graduate Fellow and an Alfred P. Sloan Foundation Fellow.

EDUCATION

Massachusetts Institute of Technology

PhD, Economics, 1989
Alfred P. Sloan Foundation Fellowship, 1988-1989
National Science Foundation Graduate Fellowship, 1985-1988

Brown University

ScB, Applied Mathematics-Economics, 1985
Rohn Truell Memorial Premium in Applied Mathematics, 1985

PROFESSIONAL EXPERIENCE

2012-	Partner, Edgeworth Economics
2008-2012	Senior Vice President, NERA Economic Consulting
2004-2008	Vice President, NERA Economic Consulting
2000-2004	Senior Vice President, Lexecon, Inc.
1991-2000	Director, Cambridge Economics, Inc.

1990-1991 Senior Analyst, NERA Economic Consulting

1989-1990 Assistant Professor, Columbia University (Teaching Areas: Econometrics, Statistics, Labor Economics)

PAPERS AND PUBLICATIONS

"A Proposed Method for Measuring Competition Among Imperfect Substitutes," *Antitrust Law Journal* 60, 1992, pp. 889-900 (with J. Hausman and D. Zona).

"Issues in the Contingent Valuation of Environmental Goods: Methodologies for Data Collection and Analysis," in *Contingent Valuation: A Critical Assessment*, Ed. by J. A. Hausman, North Holland Press, 1993 (with D. McFadden).

"Assessing Use Value Losses Due to Natural Resource Injury," in *Contingent Valuation: A Critical Assessment*, ed. by J. A. Hausman, North Holland Press, 1993 (with J. Hausman and D. McFadden).

"Does Contingent Valuation Measure Preferences? Experimental Evidence," in *Contingent Valuation: A Critical Assessment*, ed. by J. A. Hausman, North Holland Press, 1993 (with P. Diamond, J. Hausman, and M. Denning).

"Competitive Analysis with Differentiated Products," *Annales d'Economie et de Statistique* 34, 1994, pp. 159-180 (with J. Hausman and D. Zona).

"A Utility Consistent, Combined Discrete Choice and Count Data Model: Assessing Recreational Use Losses Due to Natural Resource Damage," *Journal of Public Economics* 56, 1995, pp. 1-30 (with J. Hausman and D. McFadden).

"Market Definition Under Price Discrimination," *Antitrust Law Journal* 64, 1996, pp. 367-386 (with J. Hausman and C. Vellturo).

"Achieving Competition: Antitrust Policy and Consumer Welfare," *World Economic Affairs* 1, 1997, pp. 34-38 (with J. Hausman).

"Economic Analysis of Differentiated Products Mergers Using Real World Data," *George Mason Law Review* 5, 1997, pp. 321-346 (with J. Hausman).

"Superstars in the NBA: Economic Value and Policy," *Journal of Labor Economics* 15, 1997, pp. 586-624 (with J. Hausman).

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"On Nonexclusive Membership in Competing Joint Ventures," *RAND Journal of Economics* 34, 2003 (with J. Hausman and J. Tirole).

"Correcting the Bias When Damage Periods are Chosen to Coincide With Price Declines," *Columbia Business Law Review*, 2004, pp. 304-306 (with D. Carlton).

"Competitive Analysis Using a Flexible Demand Specification," *Journal of Competition Law and Economics* 1, 2005, pp. 279-301 (with J. Hausman).

"Using Merger Simulation Models: Testing the Underlying Assumptions," *International Journal of Industrial Organization* 23, 2005, pp. 693-698 (with J. Hausman).

"Application of Empirical Methods in Merger Analysis," report to the Fair Trade Commission of Japan, June 27, 2005 (with C. Dippon and L. Wu).

"A Practical Guide to Damages," in *Economic Approaches to Intellectual Property, Policy, Litigation and Management*, ed. by G. Leonard and L. Stiroh, 2005 (with L. Stiroh).

"Applying Merger Simulation Techniques to Estimate Lost Profits Damages in Intellectual Property Litigation," in *Economic Approaches to Intellectual Property, Policy, Litigation and Management*, ed. by G. Leonard and L. Stiroh, 2005.

"Antitrust Implications of Pharmaceutical Patent Litigation Settlements," in *Economic Approaches to Intellectual Property, Policy, Litigation and Management*, ed. by G. Leonard and L. Stiroh, 2005 (with R. Mortimer).

"Framework for Policymakers to Analyze Proposed and Existing Antitrust Immunities and Exemptions," report to the Antitrust Modernization Commission, October 24, 2005 (with D. Bush and S. Ross).

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"The Google Books Settlement: Copyright, Rule 23, and DOJ Section 2 Enforcement," *Antitrust*, Summer 2010, pp. 26-31.

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"Merger Assessment and Frontier of Economic Analyses (5): Empirical Methods in Antitrust Merger Review," *Kokusai Shoji Houmu (International Business Law and Practice)*, Vol. 40, No. 4, 2012, pp. 557-564 (with L. Wu).

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"The Econometric Framework," in *Econometrics: Legal, Practical and Technical Issues*, ABA Section of Antitrust (2nd Edition), 2014.

"Applying Econometrics to Estimate Damages," in *Econometrics: Legal, Practical and Technical Issues*, ABA Section of Antitrust (2nd Edition), 2014 (with J. Langenfeld, W. Li, and J. Morris).

"Determining RAND Royalties for Standard-Essential Patents," *Antitrust*, Fall 2014, pp. 86-94 (with M. Lopez).

"Reflections on the Debates Surrounding Standard-Essential Patents," *The Antitrust Source*, August 2015.

"Turning Daubert on Its Head: Efforts to Banish Hypothesis Testing in Antitrust Class Actions," *Antitrust*, Spring 2016, pp. 53-59.

"A Comparison of the Almost Ideal Demand System and Random Coefficients Logit Models For Use with Retail Scanner Data," NERA Working Paper, 2007 (with F. Deng).

PRESENTATIONS

"Merger Analysis with Differentiated Products," paper presented to the Economic Analysis Group of the US Department of Justice, April 1991 (with J. Hausman and D. Zona).

"Assessing Use Value Losses Due to Natural Resource Injury," paper presented at "Contingent Valuation: A Critical Assessment," Cambridge Economics Symposium, April 3, 1992 (with J. Hausman and D. McFadden).

"Contingent Valuation and the Value of Marketed Commodities," paper submitted to the Contingent Valuation Panel of the National Oceanic and Atmospheric Administration, U.S. Department of Commerce, August 12, 1992 (with J. Hausman).

"Economic Analysis of Differentiated Products Mergers Using Real World Data," paper presented to the George Mason University Law Review Antitrust Symposium, October 11, 1996 (with J. Hausman).

"Documents Versus Econometrics in Staples," paper presented to a program of the Economics Committee of the ABA Antitrust Section, September 5, 1997 (with J. Hausman).

Discussant, "New Developments in Antitrust" session, AEA meetings, January 7, 2000.

"In Defense of Merger Simulation," Department of Justice and Federal Trade Commission Merger Workshop, Unilateral Effects Session, February 18, 2004.

Discussant, "Proving Damages in Difficult Cases: Mock Trial & Discussion," NERA Antitrust & Trade Regulation Seminar, July 10, 2004.

"Network Effects, First Mover Advantage, and Merger Simulation in Damages Estimation," LSI Workshop on Calculating and Proving Patent Damages, July 16, 2004.

"Early Exchange of Documents," LSI Workshop on Pre- and Early Stage Patent Litigation, July 23, 2004.

"Lessons Learned From Problems With Expert Testimony: Antitrust Suits," LSI Workshop on Effective Financial Expert Testimony, November 4, 2004.

"Price Erosion and Convoyed Sales," LSI Workshop on Calculating & Proving Patent Damages, January 19, 2005.

"Economic Analysis of Rule 23(b)(3)," LSI Litigating Class Action Suits Conference, June 6, 2005.

"Early Exchange of Documents," LSI Workshop on Pre- & Early-Stage Patent Litigation, July 22, 2005.

"Issues to Consider in a Lost Profits Damages Analysis," Patent Litigation 2005, Practicing Law Institute, September 30, 2005.

"Antitrust Issues in Standard Setting and Patent Pools," Advanced Software Law and Practice Conference, November 3, 2005.

"New Technologies for Calculating Lost Profits," LSI Workshop on Calculating & Proving Patent Damages, February 27, 2006.

"Estimating Antitrust Damages," Fair Trade Commission of Japan, April 21, 2006.

"Economic Analysis of Rule 23(b)(3)," LSI Litigating Class Action Suits Conference, May 11, 2006.

"Permanent Injunction or Damages: What is the Right Remedy for Non-Producing Entities?," San Francisco Intellectual Property Law Association/Los Angeles Intellectual Property Law Association Spring Seminar, May 20, 2006.

"Antitrust Enforcement in the United States" and "Economic Analysis of Mergers," Sino-American Symposium on the Legislation and Practice of Anti-Trust Law, Beijing Bar Association, Beijing, People's Republic of China, July 17, 2006.

"Economic Analysis in Antitrust," Chinese Academy of Social Sciences, Beijing, People's Republic of China, July 20, 2006.

"Issues to Consider in a Lost Profits Damages Analysis," Patent Litigation 2006, Practicing Law Institute, September 26, 2006.

"Comparison of the Almost Ideal Demand System and Random Coefficient Models for Use With Retail Scanner Data," Pacific Rim Conference, Western Economic Association, Beijing, People's Republic of China, January 12, 2007 (with F. Deng).

Discussant, "Applied Economics" Session, Pacific Rim Conference, Western Economic Association, Beijing, People's Republic of China, January 12, 2007.

"Balancing IPR Protection and Economic Growth in China," International Conference on Globalization and the Protection of Intellectual Property Rights, Chinese University of Political Science and Law, Beijing, People's Republic of China, January 20, 2007.

"The Use and Abuse of Daubert Motions on Damages Experts: Lessons from Recent Cases," LSI Workshop on Calculating & Proving Patent Damages, February 27, 2007.

"Will Your Licenses Ever be the Same? Biotechnology IP Strategies," BayBio 2007 Conference, April 26, 2007.

"Tension Between Antitrust Law and IP Rights," Seminar on WTO Rules and China's Antimonopoly Legislation, Beijing, People's Republic of China, September 1, 2007.

"Issues to Consider in a Lost Profits Damages Analysis," Patent Litigation 2007, Practicing Law Institute, September 25, 2007.

Discussant, "Dominance and Abuse of Monopoly Power" Session, China's Competition Policy and Anti-Monopoly Law, J. Mirrlees Institute of Economic Policy Research, Beijing University, and the Research Center for Regulation and Competition, Chinese Academy of Social Sciences, Beijing, People's Republic of China, October 14, 2007.

"Opening Remarks," Seminar on China's Anti-monopoly Law and Regulation on Abuse of Intellectual Property Rights, Beijing, People's Republic of China, April 26, 2008.

"Issues to Consider in a Reasonable Royalty Damages Analysis," Patent Litigation 2008, Practicing Law Institute, October 7, 2008.

"Econometric Evaluation of Competition in Local Retail Markets," Federal Trade Commission and National Association of Attorneys General Retail Mergers Workshop, December 2, 2008

"Merger Review Best Practices: Competitive Effects Analysis," International Seminar on Anti-Monopoly Law: Procedure and Substantive Assessment in Merger Control, Beijing, People's Republic of China, December 15-17, 2008.

"The Use of Natural Experiments in Antitrust," Renmin University, Beijing, People's Republic of China, December 18, 2008.

"China's Antimonopoly Law: An Economist's Perspective," Bloomberg Anti-Monopoly Law of China Seminar, January 29, 2009.

Panelist, "Standards for Assessing Patent Damages and Their Implementation by Courts," FTC Hearings on the Evolving IP Marketplace, February 11, 2009.

"Economic Analysis of Agreements Between Competitors" and "Case Study: FTC Investigates Staples' Proposed Acquisition of Office Depot," Presentation to Delegation of Antitrust Officials from the People's Republic of China, Washington, DC, March 23, 2009.

"Reasonable Royalties in the Presence of Standards and Patent Pools," LSI Workshop, April 20, 2009.

Presentations on Unilateral Effects, Buyer Power, and the Intellectual Property-Antitrust Interface to Delegation from the Anti-Monopoly Bureau of MOFCOM of the People's Republic of China, Washington, DC, May 10-11, 2009.

Panelist, "The Use of Economic and Statistical Models in Civil and Criminal Litigation," Federal Bar Association, San Francisco, May 13, 2009.

"Trends in IP Rights Litigation and Economic Damages in China," Pursuing IP in the Pacific Rim, May 14, 2009.

Presentation on the Economics of Antitrust, National Judicial College of the People's Republic of China, Xi'an, People's Republic of China, May 25-26, 2009.

"Case Study: The Use of Economic Analysis in Merger Review," Presentation to the Anti-Monopoly Bureau of MOFCOM, Beijing, People's Republic of China, May 27, 2009.

"Economics and Antitrust Law," China University of Political Science and Law, Beijing, People's Republic of China, September 21, 2009.

"Case Study: Economic Analysis of Coordinated Interaction," Presentation to the Anti-Monopoly Bureau of MOFCOM, Beijing, People's Republic of China, September 22, 2009.

"Relevant Market Definition," 4th Duxes Antitrust Law Seminar, Beijing, People's Republic of China, September 26, 2009.

"Expert Economic Testimony in Antitrust Litigation," Supreme People's Court, Beijing, People's Republic of China, February 2, 2010.

"New Case Law for Patent Damages," Law Seminars International Telebriefing, April 28, 2010.

"China/India: Sailing in Unchartered Waters: Regulating Competition in the Emerging Economies – New Laws, New Enforcement Regimes and No Precedents," The Chicago Forum on International Antitrust Issues, Northwestern University School of Law Searle Center, May 20, 2010.

"Antitrust and Intellectual Property," Supreme People's Court, Beijing, People's Republic of China, May 26, 2010.

"Cartel Enforcement Trends in the United States," 2nd Ethical Beacon Anti-Monopoly Summit, Beijing, People's Republic of China, May 27, 2010.

Panelist, "The Future of Books and Digital Publishing: the Google Book Settlement and Beyond," 2010 American Bar Association Annual Meeting, August 7, 2010.

"Coordinated Effects" and "Non-Horizontal Mergers," Presentations to Delegation from India Competition Commission, US Chamber of Commerce, Washington, DC, October 26, 2010.

"UPP and Merger Simulation," Annual Conference of the Association of Competition Economics, Norwich, UK, November 11, 2010.

"Uniloc v. Microsoft: A Key Ruling For Patent Damages," Law Seminars International Telebriefing, January 21, 2011.

"Correlation, Regression, and Common Proof of Impact," New York City Bar Association, January 19, 2011.

"Private Litigation Under China's New Antimonopoly Law," Bar Association of San Francisco, February 17, 2011.

"Competition Law and State Regulation: Setting the Stage and Focus on State-Owned Enterprises," Competition Law and the State: International and Comparative Perspectives, Hong Kong, People's Republic of China, March 18, 2011.

Panelist, “Booking it in Cyberspace: The Google Book Settlement and the Aftermath,” American Intellectual Property Law Association, San Francisco, May 13, 2011.

“Econometric Estimation of Cartel Overcharges,” ZEW Conference on Economic Methods and Tools in Competition Law Enforcement, Mannheim, Germany, June 25, 2011.

Panelist, “Antitrust and IP in China,” Antitrust and IP in Silicon Valley and Beyond, American Bar Association and Stanford University, Palo Alto, October 6, 2011.

Panelist, University of San Diego School of Law Patent Law Conference: The Future of Patent Law Remedies, January 18, 2013.

“Economics Framework,” US-China Workshop on Competition Law and Policy for Internet Activities, China’s State Administration for Industry and Commerce (SAIC) and the U.S. Trade and Development Agency (USTDA), Shenzhen, People’s Republic of China, June 4-5, 2013.

Panelist, “China Inside and Out,” American Bar Association, Beijing, People’s Republic of China, September 16-17, 2013.

Panelist, “Remedies in Patent Cases,” Fifth Annual Conference on The Role of the Courts in Patent Law & Policy, Berkeley and Georgetown Law Schools, November 1, 2013.

“Royalty Base,” LeadershIP Conference, Qualcomm Incorporated, March 21, 2014.

“Reflections on Natural Experiments,” DG Comp, April 8, 2014.

Panelist, “Antitrust in Asia: China,” American Bar Association Section of Antitrust Law, Beijing, People’s Republic of China, May 21-23, 2014.

Panelist, “Patent Damages Roundtable,” 2015 Intellectual Property Institute, University of Southern California Gould School of Law, Los Angeles, March 23, 2015.

Panelist, “IP and Antitrust - The Current State of Economic Analysis,” Global Competition Review Live 2nd Annual IP & Antitrust USA, Washington, DC, April 14, 2015.

Panelist, “FRAND Royalty Rates After Ericsson v. D-Link,” American Bar Association, May 15, 2015.

PROFESSIONAL ACTIVITIES

Member, American Economic Association

Member, Econometric Society

Member, American Bar Association

Contributor, www.antitrust.org

Contributor, ABA Section of Antitrust Law, *Econometrics*, 2005

Associate Editor, *Antitrust*, 2007-2010

Senior Editor, *Antitrust Law Journal*, 2012-; Associate Editor, 2010-2012

Co-Editor, ABA Section of Antitrust Law Economics Committee Newsletter, 2009-2012

Member, Economics Task Force, ABA Section of Antitrust Law, 2011-2012

Member, ABA Delegation to International Seminar on Anti-Monopoly Law: Procedure and Substantive Assessment in Merger Control, Beijing, People's Republic of China, December 15-17, 2008

Member, Working Group for drafting the "Joint Comments of the American Bar Association Section of Antitrust Law and Section of International Law on the MOFCOM Draft Guidelines for Definition of Relevant Markets," 2009

Member, Working Group for drafting the "Joint Comments of the American Bar Association Section of Antitrust Law and Section of International Law on the SAIC Draft Regulations on the Prohibition of Acts of Monopoly Agreements and of Abuse of Dominant Market Position," 2009.

Member, Working Group for drafting the "Joint Comments of the American Bar Association Section of Antitrust Law and Section of International Law on the SAIC Draft Regulations on the Prohibition of Acts of Monopoly Agreements and of Abuse of Dominant Market Position," 2010.

Referee: *Econometrica*, *Review of Economics and Statistics*, *International Journal of Industrial Organization*, *Review of Industrial Organization, Journal of Sports Economics*, *Journal of Environmental Economics and Management*, *Research in Law and Economics*, *Labour Economics*, *Eastern Economic Journal*, *Journal of Forensic Economics, Antitrust, Antitrust Law Journal, Journal of Competition Law and Economics, Advances in Econometrics.*

TESTIMONY IN THE LAST FIVE YEARS

In re: Budeprion XL Marketing and Sales Practices Litigation, Civil Action 2:09-CV-2811, MDL Docket No. 2017, 2011 (Deposition).

Convolve, Inc. v. Dell Inc., et al., United States District Court, Eastern District of Texas, Marshall Division, Case No. No. 2:08-cv-244, 2011 (Deposition, Trial Testimony).

In the Matter of CERTAIN WIRELESS COMMUNICATION DEVICES, PORTABLE MUSIC AND DATA PROCESSING DEVICES, COMPUTERS AND COMPONENTS THEREOF, before the United States International Trade Commission, Investigation No. 337-TA-745, 2011 (Deposition).

In the Matter of CERTAIN MOBILE DEVICES, ASSOCIATED SOFTWARE, AND COMPONENTS THEREOF, before the United States International Trade Commission, Investigation No. 337-TA-744, 2011 (Deposition).

Oracle America, Inc. v. Google, Inc., United States District Court, Northern District for California, Case No. 3:10-CV-03561-WHA, 2011 (Deposition), 2016 (Deposition, Trial Testimony).

In the Matter of CERTAIN GAMING AND ENTERTAINMENT CONSOLES, RELATED SOFTWARE, AND COMPONENTS THEREOF, before the United States International Trade Commission, Investigation No. 337-TA-752, 2011 (Deposition).

General Atomics v. Paul Banks and TetraVue, Inc., Superior Court of the State of California, Case No. 37-2009-00084081-CU-BC-CTL, 2011 (Deposition, Trial Testimony).

Apple Inc., v. Motorola, Inc., United States District Court, Western District of Wisconsin, Case No. 10-CV-662 (BBC), 2011 (Deposition).

Genentech, Inc. and City of Hope v. Glaxo Group, Limited, et al., United States District Court, Central District of California, Western Division, Case No. 2:10-CV-02764-MRP (FMOx), 2011 (Deposition).

In the Matter of CERTAIN HANDHELD COMPUTING DEVICES, RELATED SOFTWARE, AND COMPONENTS THEREOF, before the United States International Trade Commission, Investigation No. 337-TA-769, 2011 (Deposition, Trial Testimony).

In the Matter of CERTAIN EQUIPMENT FOR COMMUNICATIONS NETWORKS, INCLUDING SWITCHES, ROUTERS, WIRELESS ACCESS POINTS, CABLE MODEMS, IP PHONES, AND PRODUCTS CONTAINING SAME, before the United States International Trade Commission, Investigation No. 337-TA-778, 2012 (Deposition).

Plantronics, Inc. v. Aliph, Inc., United States District Court for the Northern District of California, San Francisco Division, Case No. C09-01714 BZ, 2012 (Deposition).

Commonwealth Scientific and Industrial Research Organization v. Lenovo, Inc., et al., United States District Court for the Eastern District of Texas, Tyler Division, Case No. 6:09-cv-00400-LED, 2012 (Deposition).

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Apple, Inc. v. Motorola, Inc., United States District Court, Northern District of Illinois, Case No. 11-c-08540, 2012 (Deposition).

ITT Manufacturing Enterprises, Inc. v. Cellco Partnership, et al., United States District Court, District of Delaware, Civil Action No. 09-190-LPS, 2012 (Deposition).

Shelbyzyme LLC v. Genzyme Corporation, United States District Court, District of Delaware, Civil Action No. 09-768 (GMS), 2012 (Deposition, Trial Testimony).

In the Matter of CERTAIN DEVICES FOR IMPROVING UNIFORMITY USED IN A BACKLIGHT MODULE AND COMPONENTS THEREOF AND PRODUCTS CONTAINING THE SAME, before the United States International Trade Commission, Investigation No. 337-TA-805, 2012 (Deposition, Trial Testimony).

Rachel Eastman, et al. v. First Data Corporation, et al., United States District Court, District of New Jersey, Case No. 2:10-cv-04860 (WHW) (MCA), 2012 (Deposition).

In the Matter of CERTAIN COMMUNICATIONS EQUIPMENT COMPONENTS THEREOF, AND PRODUCTS CONTAINING THE SAME, INCLUDING POWER OVER ETHERNET TELEPHONES, SWITCHES, WIRELESS ACCESS POINTS, ROUTERS AND OTHER DEVICES USED IN LANs, AND CAMERAS, before the United States International Trade Commission, Investigation No. 337-TA-817, 2012 (Deposition).

Fujitsu Limited v. Belkin, et al., United States District Court, Northern District of California, San Jose Division, Case No. 10-cv-03972-LHK(PSG), 2012 (Deposition, Trial Testimony).

Medivation, Inc. v. The Regents of the University of California, et al., Superior Court of the State of California, Case No. CGC-11-510715, 2012 (Deposition, Trial Testimony).

In Re Photochromic Lens Antitrust Litigation (Direct Purchaser Action), United States District Court for the Middle District of Florida, Tampa Division, MDL Docket No. 2173, 2012 (Deposition, Hearing Testimony).

In Re Photochromic Lens Antitrust Litigation (Indirect Purchaser Actions), United States District Court for the Middle District of Florida, Tampa Division, MDL Docket No. 2173, 2012 (Deposition, Hearing Testimony).

In the Matter of CERTAIN PRODUCTS CONTAINING INTERACTIVE PROGRAM GUIDE AND PARENTAL CONTROL TECHNOLOGY, before the United States International Trade Commission, Investigation No. 337-TA-845, 2012 (Deposition, Trial Testimony).

In the Matter of CERTAIN COMPUTERS AND COMPUTER PERIPHERAL DEVICES AND COMPONENTS THEREOF AND PRODUCTS CONTAINING THE SAME, before the United States International Trade Commission, Investigation No. 337-TA-841, 2012-2013 (Trial Testimony).

Gemalto SA v. HTC Corporation, et al., United States District Court for the Eastern District of Texas, Tyler Division, Civil Action No. 6:10-CV-561-LED, 2013 (Deposition).

Adobe Systems Incorporated v. Wowza Media Systems, LLC, et al., United States District Court for the Northern District of California, Oakland Division, Case No. cv 11-02243, 2013 (Deposition).

In the Matter of CERTAIN AUDIOVISUAL COMPONENTS AND PRODUCTS CONTAINING THE SAME, before the United States International Trade Commission, Investigation No. 337-TA-837, 2013 (Deposition).

Ericsson Inc., et al. v. D-Link Corporation, et al., United States District Court for the Eastern District of Texas, Tyler Division, Civil Action No. 6:10-cv-473, 2013 (Deposition, Trial Testimony).

Edwards Lifesciences v. Medtronic CoreValve, et al., United States District Court for the District of Delaware, Case No. 12-23 (GMS), 2013 (Deposition, Trial Testimony).

Intellectual Ventures I LLC v. Trend Micro Incorporated and Trend Micro, Inc. (USA), United States District Court for the District of Delaware, C. A. No. 12-cv-1581-LPS, 2013 (Deposition).

The Money Suite Company v. Insurance Answer Center, LLC, et al., United States District Court for the Central District of California, Southern Division – Santa Ana, Lead Case No. 11-SACV-01847 AG (JPRx), 2013 (Deposition).

ParkerVision Inc. v. Qualcomm Incorporated, United States District Court for the Middle District of Florida, Jacksonville Division, Case No.: 3:11-cv-719-J-37-TEM, 2013 (Deposition, Trial Testimony).

Medtronic, Inc. v. Edwards Lifesciences Corporation, et al., United States District Court for the Central District of California, Case No.: SACV 12-00327 JVS (JPRx), 2013 (Deposition).

Microsoft Corporation v. Motorola Inc., et al., United States District Court for the Western District of Washington, Seattle Division, Case No. C10-1823JLR, 2013 (Deposition, Trial Testimony).

In the Matter of CERTAIN INTEGRATED CIRCUIT CHIPS AND PRODUCTS CONTAINING SAME, before the United States International Trade Commission, Investigation No. 337-TA-859, 2013 (Deposition, Trial Testimony).

Realtek Semiconductor Corporation v. LSI Corporation and Agere Systems, Inc., United States District Court Northern District of California, San Jose Division, Case No. 5:12-cv-03451 RMW, 2013 (Deposition, Trial Testimony).

Acer Inc., Acer America Corporation, and Gateway Inc. v. Technology Properties Limited, Patriot Scientific Corporation, and Alliacense Limited, United States District Court for the Northern District of California, San Jose Division, Case No. 5:08-cv-00877 PSG, 2013 (Deposition).

Intervet Inc. d/b/a Merck Animal Health, The Arizona Board of Regents on behalf of The University of Arizona v. Boehringer Ingelheim Vetmedica, Inc., United States District Court for the District of Delaware, Case No. 11-595-LPS, 2013 (Deposition).

In Re Innovatio IP Ventures, LLC Patent Litigation, United States District Court for the Northern District of Illinois, Case No. 1:11-cv-09308, 2013 (Deposition, Trial Testimony).

In the Matter of CERTAIN OMEGA-3 EXTRACTS FROM MARINE OR ACQUATIC BIOMASS AND PRODUCTS CONTAINING THE SAME, before the United States International Trade Commission, Investigation No. 337-TA-877, 2013 (Deposition).

Open Text SA v. Box Inc., United States District Court for the Eastern District of Virginia, Norfolk Division, Civil Action No. 2:13-CV-00319-MSD-DEM, 2013-2015 (Deposition, Trial Testimony).

Apple Inc. and Apple Sales International v. Motorola Mobility LLC, United States District Court for the Southern District of California, Case No. 3:12-cv-00355-GPC-BLM, 2013 (Deposition).

iControl Networks, Inc. v. Alarm.com Incorporated and Frontpoint Security Solutions, LLC, United States District Court for the Eastern District of Virginia, Alexandria Division, Case No. 1:13cv834 (LMB-IDD), 2013 (Deposition).

Affinity Labs of Texas, LLC v. General Motors LLC, United States District Court for the District of Eastern District of Texas, Beaumont Division, C.A. No. 1:12-cv-00582-RC, 2014 (Deposition).

W.L. Gore & Associates, Inc. v. C.R. Bard, Inc. and Bard Peripheral Vascular, Inc., United States District Court for the District of Delaware, C.A. No. 11-515-LPS-CJB, 2014 (Deposition).

Richard Noll and Rhythm Motor Sports, LLC v. eBay Inc., eBay Europe S.A.R.L., and eBay International AG, Inc., United States District Court for the Northern District of California, San Jose Division, Case No. 5:11-CV-04585-EJD, 2014 (Deposition).

Bristol-Myers Squibb Company v. Genentech Inc. and City of Hope, United States District Court for the Northern District of California, Western Division, Case No. 2:13-CV-05400-MRP (JEMx), 2014 (Deposition).

Eli Lilly and Imclone v. Genentech Inc. and City of Hope, United States District Court for the Northern District of California, Western Division, Case No. 2:13-CV-07248-MRP, 2014 (Deposition).

Graftech International Ltd. and Graftech International Holdings Inc. F/K/A UCAR Carbon Company Inc. v. Carbone Savoie, Alcan France and Rio Tinto Alcan, International Chamber of Commerce, International Court of Arbitration, Case Ref.: 19798/AGF, 2014 (Hearing Testimony).

Samsung Electronics Co., Ltd. (Korea) v. Nokia Corporation (Finland), International Chamber of Commerce, International Court of Arbitration, Case Ref.: 19602/AGF/RD (c.19638/AGF), 2015 (Hearing Testimony).

In the Matter of CERTAIN NETWORK DEVICES, RELATED SOFTWARE, AND COMPONENTS THEREOF (I), before the United States International Trade Commission, Investigation No. 337-TA-944, 2015 (Deposition).

Broadband iTV, Inc. v. Hawaiian Telecom, Inc., Oceanic Time Warner Cable, LLC, and Time Warner Cable, Inc., United States District Court for the District of Hawaii, Case No. 14-00169 ACK-RLP, 2015 (Deposition).

In the Matter of CERTAIN NETWORK DEVICES, RELATED SOFTWARE, AND COMPONENTS THEREOF (II), before the United States International Trade Commission, Investigation No. 337-TA-945, 2015 (Deposition, Hearing Testimony).

SRI International, Inc. v. Cisco Systems, Inc., United States District Court for the District of Delaware, Case No. 13-1534 (SLR), 2016 (Deposition, Trial Testimony).

ChriMar Systems, Inc., et al. v. Cisco Systems, Inc., et al., United States District Court for the District of Northern California, Oakland Division, Case No. 4:13-cv-01300-JSW, 2016 (Deposition).

TCL Communication Technology Holdings, LTD., et al., v. Telefonaktiebolaget LM Ericsson, et al., United States District Court for the Central District of California, Southern Division, Case No. SACV14–00341 JVS (DFMx), 2016 (Deposition).

Chervon North America, Inc., Positec Tool Corporation, Positec USA, Inc. and Hilti, Inc. v. Milwaukee Electric Tool Corporation, United States Patent and Trademark Office Before the Patent Trial and Appeal Board, Case IPR2015-00595, Case IPR2015-00596, and Case IPR2015-00597, 2016 (Deposition).

Sanofi-Aventis U.S. LLC and Regeneron Pharmaceuticals, Inc. v. Genentech, Inc. and City of Hope, United States District Court, Central District of California, Western Division, Case No. 2:15-CV-05685, 2016 (Deposition).

Irori Technologies, Inc. v. Procopio, Cory, Hargreaves & Savitc, LLP, and Eleanor Musick, JAMS Arbitration Reference No. 1240022033, 2016 (Deposition).

SD3, LLC and SawStop LLC v. Black and Decker (U.S.), Inc., et al., United States District Court for the Eastern District of Virginia, Civil Action No.: 1:14-cv-00191, 2016 (Deposition).

Intellectual Ventures II LLC v. Nextel Operations, Inc., Sprint Spectrum L.P., Boost Mobile LLC, and Virgin Mobile USA, L.P., United States District Court for the District of Delaware, Civil Action No. 13-cv-1635-LPS, 2016 (Deposition).

In Re Lidoderm Antitrust Litigation, United States District Court for the District of Northern California, Case No. 14-MD-02521-WHO, 2016 (Deposition).

The Dow Chemical Company, Dow Global Technologies Inc. and Dow Chemical Canada ULC v. Nova Chemicals Corporation, Federal Court of Canada, Federal Court File No.: T-2051-10, 2016 (Trial Testimony).

SELECTED MERGER EXPERIENCE

R.R. Donnelley/Meredith Burda (1990-1993): Merger of printing companies. Reviewed by the FTC. Preliminary Injunction Hearing. Part III Hearing.

Kimberly-Clark/Scott (1995): Merger of manufacturers of tissue products. Reviewed by the DOJ and the European Commission.

Staples/Office Depot (1996-1997): Proposed merger of office supply retailers. Reviewed by the FTC. Preliminary injunction hearing.

IMC/Western Ag (1997): Merger of mining companies. Reviewed by the DOJ.

Dow/Union Carbide (1999-2001): Merger of chemical manufacturers. Reviewed by the FTC.

Volvo/Scania (2000): Merger of truck manufacturers. Reviewed by the European Commission.

First Data/Concord (2003-2004): Merger of companies involved in merchant acquiring and payment networks. Reviewed by the DOJ.

Bumble Bee/Connors (2004): Merger of canned seafood manufacturers. Reviewed by the DOJ.

Sonaecom/Portugal Telecom (2006): Merger of telecommunications companies. Reviewed by the Portuguese Competition Authority.

Graphic Packaging/Altivity (2007-2008): Merger of paperboard manufacturers. Reviewed by the DOJ.

Inbev/Anheuser-Busch (2008): Merger of beer manufacturers. Reviewed by the DOJ, the UK Competition Commission, and MOFCOM.

Serta/Simmons (2009): Merger of mattress manufacturers. Reviewed by the FTC.

Coty/OPI (2010): Merger of nail polish manufacturers. Reviewed by the DOJ.

Knowles/NXP (2011): Knowles acquired the speaker/receiver business of NXP. Reviewed by MOFCOM.

AT&T/T-Mobile (2011): Consulted for the DOJ regarding the proposed deal between the two wireless service providers.

Confidential engagement for consumer product manufacturer (2012): Consulted for a consumer product manufacturer considering an acquisition with potential overlap in various jurisdictions around the world.

Confidential engagement for consumer product manufacturer (2012): Consulted for a consumer product manufacturer considering an acquisition with potential overlap in numerous product lines in the US.

UPS/TNT (2013): Consulted for the Ministry of Commerce of the People's Republic of China regarding the proposed deal between two package delivery services.

Thermo Fisher/Life Technologies (2014): Consulted for the Ministry of Commerce of the People's Republic of China regarding the proposed deal.

Seagate/Samsung (2014-2015): Consulted for Ministry of Commerce of the People's Republic of China regarding whether "hold separate" conditions should be lifted.

Western Digital/Hitachi (2014-2015): Consulted for Ministry of Commerce of the People's Republic of China regarding whether "hold separate" conditions should be lifted.

Confidential engagement for consumer product manufacturer (2016): Consulted for a consumer product manufacturer concerning possible acquisition in the US.

Appendix B

Appendix B
Documents Considered

Bates Documents

APL-PHONO_00006700	KOBALT00000408	KOBALT00000950	KOBALT00001340
APL-PHONO_00006828	KOBALT00000409	KOBALT00000951	KOBALT00001341
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Exhibits

Exhibit 5
U.S. Music Industry Sales of Ringtones and Ringbacks

2005 - 2015

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
Revenue (M)	$ 422	$ 774	$ 1,056	$ 977	$ 703	$ 448	$ 276	$ 167	$ 98	$ 66	$ 55
Units (M)	170	315	434	405	294	189	115	69	39	27	22
Average Price	$ 2.48	$ 2.46	$ 2.43	$ 2.41	$ 2.39	$ 2.38	$ 2.39	$ 2.41	$ 2.49	$ 2.49	$ 2.49

Source: "U.S. Sales Database," The Recording Industry Association of America, https://www.riaa.com/u-s-sales-database/. Last accessed September 21, 2016.

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IN THE MATTER OF:)

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DETERMINATION OF RATES) Docket No.

AND TERMS FOR MAKING AND) 16-CRB-0003-PR

DISTRIBUTING PHONORECORDS) (2018-2022)

(PHONORECORDS III),)

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4 IN THE MATTER OF:)
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7 AND TERMS FOR MAKING AND) 16-CRB-0003-PR
8 DISTRIBUTING PHONORECORDS) (2018-2022)
9 (PHONORECORDS III),)
10 ----------X
11 BEFORE: THE HONORABLE SUZANNE BARNETT
12 THE HONORABLE JESSE M. FEDER
13 THE HONORABLE DAVID R. STRICKLER
14 Copyright Royalty Judges
15
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23 VOLUME V
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1 P R O C E E D I N G S
2 (9:10 a.m.)
3 JUDGE BARNETT: Good morning. Please be
4 seated.
5 Mr. Steinthal, you changed.
6 MR. STEINTHAL: Yes. Mr. Wetzel will be
7 taking the next witness.
8 JUDGE BARNETT: Okay. Mr. Wetzel?
9 MR. WETZEL: Google calls Dr. Greg
10 Leonard.
11 JUDGE BARNETT: Please raise your right
12 hand.
13 Whereupon--
14 GREGORY K. LEONARD,
15 having been first duly sworn, was examined and
16 testified as follows:
17 JUDGE BARNETT: Please be seated.
18 MR. JANOWITZ: Good morning, Your Honor.
19 JUDGE BARNETT: Good morning.
20 MR. JANOWITZ: Bright and early. We
21 received the slides that accompany Dr. Leonard's
22 testimony last night, and looking through them,
23 there are two, I think two, perhaps it's only one --
24 it's only one that we have an objection to, which is
25 on page 21 of the set of slides. And it addresses

1 the Subpart A ringtone settlement.
2 MR. WETZEL: Yes, so we're not seeking to
3 introduce these slides into evidence. This is a
4 demonstrative for the purposes of accompanying
5 Dr. Leonard's testimony in response to
6 Dr. Eisenach's criticism of Dr. Leonard's
7 application of the Subpart A benchmark in his direct
8 testimony.
9 MR. JANOWITZ: Yes. I understand what --
10 what you have in mind. The problem with it is, and
11 I understand it's not evidence, but clearly it's
12 intended to be part of his testimony, and I thought
13 that our agreement pertained to allowing the witness
14 to address things that came later, say, in rebuttal,
15 which he would otherwise not have an opportunity to
16 deal with.
17 In this case, the ringtone issue was
18 contained in Dr. Eisenach's direct report and was
19 responded to, as best I can recall, in Dr. Leonard's
20 rebuttal. So as far as I'm concerned, we don't have
21 the kind of situation we were talking about. And so
22 I don't think it's appropriate for him to address it
23 in his direct today.
24 JUDGE BARNETT: I'm sorry, I'm going to
25 sneeze. While I'm waiting to sneeze, Mr. Wetzel,

1 would you like to respond?
2 MR. WETZEL: Yes, our understanding was
3 that the -- the witnesses, the expert witnesses on
4 direct would have an opportunity to address
5 criticisms of their direct testimony made in
6 rebuttal by -- by the opposing side's experts for
7 the purposes of -- of joining issue, and so that is
8 -- that's the sole purpose for this slide and for
9 the testimony that's going to accompany it.
10 MR. JANOWITZ: I don't think it was part
11 of his direct.
12 MR. WETZEL: Well, the -- the application
13 of the Subpart A benchmark was part of his direct.
14 And Dr. Eisenach's criticism of -- of his
15 application of the Subpart A benchmark was that he
16 did not apply the ringtone component of that
17 benchmark in his analysis.
18 JUDGE STRICKLER: So, basically,
19 Dr. Eisenach, in essence, restated his ringtone
20 reliance in the nature of a criticism of
21 Dr. Leonard?
22 MR. WETZEL: Correct.
23 JUDGE STRICKLER: And we're talking about
24 page 21 here of the -- of the slides, correct?
25 MR. WETZEL: Yes.

1 JUDGE STRICKLER: And am I correct that
2 the entirety of page 21 is a determination in the
3 prior proceeding?
4 MR. WETZEL: That's my understanding.
5 JUDGE BARNETT: The objection is
6 overruled.
7 MR. JANOWITZ: Yeah, I -- I still have my
8 objection. I understand, obviously, that the -- you
9 know, the nature of what's here is not so much
10 troublesome because it's -- you know, it's available
11 publicly. I just don't think that this is an
12 appropriate time to take Dr. Leonard through this
13 particular piece of testimony because he will deal
14 with it on his rebuttal. That's my only point.
15 JUDGE BARNETT: This direct/rebuttal,
16 rebuttal/direct/rebuttal, surrebuttal/direct is
17 always problematic. So we're going to allow it just
18 for the sake of efficiency. But thank you. Your
19 objection is on the record.
20 MR. JANOWITZ: Thank you very much, Your
21 Honor.
22 MR. WETZEL: Thank you, Your Honor.
23 JUDGE BARNETT: Let's begin with the
24 witness stating his name, please.
25 THE WITNESS: Gregory Keith Leonard.

1 JUDGE BARNETT: Thank you.
2 DIRECT EXAMINATION
3 BY MR. WETZEL:
4 Q. Good morning, Dr. Leonard.
5 A. Good morning.
6 Q. Could you please --
7 JUDGE BARNETT: And --
8 MR. WETZEL: Oh, sorry.
9 JUDGE BARNETT: Sorry. Counsel, you
10 should also identify yourself for the record.
11 MR. WETZEL: Sure, I'm Joe Wetzel from
12 King & Spalding on behalf of Google.
13 BY MR. WETZEL:
14 Q. Dr. Leonard, could you please briefly
15 describe your education for us?
16 A. Yes. I received a Bachelor of Science
17 degree in applied math and economics from Brown
18 University and a Ph.D. in economics from the
19 Massachusetts Institute of Technology, or MIT.
20 Q. And since receiving your Ph.D., what has
21 been the focus of your work?
22 A. The focus of my work, my areas of
23 expertise are microeconomics, which is the study of
24 the behavior of consumers and the behavior of
25 companies, and econometrics, which is the

1 application of statistical methods to economics
2 data. And I started off my career in academics as
3 an associate assistant at Columbia, and then I moved
4 into economic consulting, and I'm now at a
5 consulting firm called Edgeworth Economics.
6 Q. Have you published any works relating to
7 the fields of study that you just mentioned?
8 A. Yes. I have over 60 publications in
9 professional and scholarly journals.
10 Q. Generally speaking, what are some of the
11 subject matters of the topics addressed in your
12 published articles?
13 A. I do a lot of work in competition
14 economics and in intellectual property. Those would
15 be the areas that are relevant for this proceeding.
16 Q. Have you been accepted by other courts as
17 an economic expert in different matters?
18 A. Yes, I have.
19 Q. Approximately how many times?
20 A. I have testified in, I haven't counted
21 exactly, but something over 35 proceedings of one
22 type or another.
23 MR. WETZEL: Your Honors, we offer
24 Dr. Leonard as an expert in applied microeconomics,
25 econometrics, industrial organization economics, and

1 the economics of intellectual property.
2 MR. JANOWITZ: No objection.
3 JUDGE BARNETT: Dr. Leonard is so
4 qualified. Thank you.
5 BY MR. WETZEL:
6 Q. Dr. Leonard, please turn to Google
7 Exhibit 695 in your binder. What is Google
8 Exhibit 695?
9 A. This is my amended expert witness
10 statement.
11 Q. And if you'd turn to the declaration
12 following page 76 of your amended expert witness
13 statement, is that your signature on that
14 declaration?
15 A. Yes, it is.
16 Q. Is Google Exhibit 695 still true and
17 correct to the best of your knowledge, information,
18 and belief?
19 A. Yes, it is.
20 MR. WETZEL: Your Honors, Google moves to
21 admit Exhibit 695.
22 MR. JANOWITZ: No objection.
23 JUDGE BARNETT: 695 is admitted.
24 (Google Exhibit Number 695 was marked and
25 received into evidence.)

1 BY MR. WETZEL:
2 Q. Dr. Leonard, what was your assignment in
3 this case?
4 A. My assignment was to evaluate the -- what
5 I'll call the Google proposal, and, in particular,
6 evaluate its reasonableness in light of -- of the
7 801(b)(1) factors.
8 Q. And did you have some demonstrative
9 slides prepared to accompany your testimony today?
10 A. Yes, I did.
11 Q. What does slide 2 depict?
12 A. This depicts Google's proposal,
13 specifically for the Subpart B standalone portable
14 subscription service. There are a number of
15 different buckets, but for this particular bucket,
16 this is -- this is what the proposal looks like.
17 Q. Can you briefly describe in your words
18 how you understand Google's Subpart B proposal to
19 operate in this particular bucket?
20 A. Sure. I'm happy to -- definitely, it's a
21 little bit complicated. I guess the easiest way to
22 think about it, perhaps, is the first step, you look
23 at what's the greater of two things. The first
24 thing is 10.5 percent of revenue.
25 The second thing is itself the lesser of

1 13.5 percent of sound recording royalty payments, or
2 I think what's called TCC, and an 80 cent per
3 subscriber. So you take the lesser of those latter
4 two things, you compare it to 10.5 percent;
5 whichever is greater you would then proceed with.
6 From that number you would then subtract
7 royalties for public performance rights. And then
8 that leaves you with a royalty for mechanical
9 rights.
10 Q. How, if at all, is Google's proposal in
11 this proceeding for Subpart B different from the
12 existing Subpart B regulations?
13 A. Well, it's similar in a lot of ways, but
14 there are a few differences. So this slide, I
15 think, puts them side-by-side. And you can see that
16 the -- the two primary differences are that the --
17 on the percentage of TCC, so what forms part of the
18 lesser of calculation on the right-hand side,
19 instead of 21 percent of TCC, which was in the
20 current rate structure, Google is proposing lowering
21 that number to 13.5 percent.
22 And then the second big change is that
23 the current rate structure has what's called a
24 mechanical or what I'll call, maybe, a mechanical
25 per-subscriber minimum of 50 cents. So if after

1 doing, you know, the greater of, then minus public
2 performance, if you end up with a number that's less
3 than 50 -- 50 cents per subscriber, then the
4 mechanical royalty would be bumped up to that floor.
5 Google's proposal is that that floor be
6 eliminated. So that's the second big change.
7 Q. And are there any differences with
8 respect to the revenue definitions?
9 A. Yes. So that's -- that's probably --
10 that's a third change. So the third change is that
11 -- that the revenue be subject to a deduction for
12 certain costs that are really related to the
13 generation of that revenue, up to an amount of
14 15 percent. So it could, of course, be zero. And
15 it would be restricted to certain categories, which
16 this slide here suggests. It's things like carrier
17 billing costs, credit card commissions, app store
18 commissions. That sort of thing would be deductible
19 up to 15 percent from revenue before doing the
20 10.5 percent.
21 Q. What did you ultimately conclude about
22 the reasonableness of Google's proposal?
23 A. My conclusion is that -- again, in light
24 of the 801(b)(1) factors, that it is, in fact,
25 reasonable.

1 MR. WETZEL: Your Honors, I'm going to
2 have a brief portion now that -- that covers some
3 restricted material. But we can cover it all in one
4 chunk and then have everybody come in, if we could
5 clear the courtroom.
6 JUDGE BARNETT: Yes. Anyone in the
7 courtroom who is not allowed to see restricted --
8 restricted material or hear restricted information,
9 if you could wait outside, please.
10 (Whereupon, the trial proceeded in
11 confidential session.)
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1 O P E N S E S S I O N
2 BY MR. WETZEL:
3 Q. Now, because we're in open court, we're
4 going to cover this at a level of generality. You
5 mentioned that you considered other direct licenses
6 besides Google's in -- in supporting the structure
7 of Google's proposal here. Can you specify which
8 other Services' direct licenses you looked to?
9 A. I mean, there were various parties that
10 produced licenses. You know, one that might be
11 relevant to some degree is the Pandora agreement
12 because it -- there are some Pandora agreements that
13 have certain elements in it that relate to the
14 Google's proposal that -- that that would be an
15 example.
16 Q. And what --
17 JUDGE BARNETT: Excuse me.
18 MR. WETZEL: I'm sorry.
19 JUDGE BARNETT: Could someone move that
20 chair from in front of the fire door? That needs to
21 be clear at all times. Thank you.
22 BY MR. WETZEL:
23 Q. Why did you conclude that some of the
24 other Services' direct licenses that you looked to
25 were -- were good comparables or benchmarks?

1 A. Well, it was really the same basic
2 reasons that the rights, parties, other elements of
3 the agreement, in general, the economic conditions
4 surrounding them were -- you know, were comparable
5 and similar. So, you know, that again makes them
6 useful comparables.
7 Q. And I believe the third category of
8 benchmark you mentioned were the Phonorecords I and
9 II settlements. What -- what about those
10 settlements led you to consider them good benchmarks
11 here?
12 A. Really the same -- same basic ideas.
13 They are the -- you know, rights and usage, again,
14 are the same or similar. The -- the parties were
15 the same or similar. It was, you know, 2012 versus
16 now, and there are certain things that one would
17 want to look at there, although part of that would
18 go to what the -- whether the minimum floor should
19 be -- sorry, the mechanical minimum floor should be
20 gotten rid of and things like that, that we've
21 talked about a bit.
22 But, overall, again, I think it's a
23 useful comparable and certainly something to look
24 at.
25 Q. And as between Phonorecords I and II, was

1 -- was there one that you found to be a better
2 benchmark?
3 A. Well, I'd say Phonorecords II, simply
4 because it's closer in time, although I understand
5 that, you know, a lot of the elements are very much
6 the same.
7 Q. How does the fact that a lot of the
8 elements are very much the same affect the later
9 settlement's suitability as a benchmark, in your
10 view?
11 A. Well, it's interesting, because it means
12 that between, I think it was, I don't know, 2008 or
13 something like that, and 2012, when the two
14 settlements were entered into, you know, the parties
15 implicitly agreed that not a lot had changed that
16 would cause you to want to change the terms of that.
17 If something huge had happened, they would have, you
18 know, reached a different settlement.
19 Q. I think you -- you discussed the concept
20 of revealed preference in discussing your first
21 opinion. What did -- what did you mean by -- by
22 revealed preference?
23 A. Well, revealed preference is just the
24 idea that when we see somebody do something, if they
25 prefer product A to B -- or, sorry, if they buy

1 product A when they could have bought product B, it
2 means they preferred product A to B.
3 Here you have two parties interacting, so
4 obviously there's a tradeoff between their
5 preferences, but at the end of the day, if they
6 agreed to a particular structure, it means they both
7 found it agreeable. And I think that's an important
8 thing to look at.
9 Q. If we could go back --
10 JUDGE STRICKLER: Do you --
11 MR. WETZEL: I'm sorry.
12 JUDGE STRICKLER: I'm sorry. You said a
13 moment ago that in the context of that revealed
14 preference, that the 2012 settlement basically
15 continued the rates and terms under the Subpart B.
16 So that showed to you that there was no big change,
17 I think that was the phrase you used, there was no
18 big change that would -- that caused the parties to
19 deviate in 2012.
20 THE WITNESS: Correct.
21 JUDGE STRICKLER: Excuse me. In 2012
22 from 2008. So if we use the same analysis that you
23 used, in comparing 2008 to 2012 as a revealed
24 preference to maintain the status quo, if you will,
25 our task would be -- if we adopted your way of

1 looking at it, would be to see whether there was any
2 quote, unquote, big change between the 2012
3 settlement and today, to see whether the -- there's
4 -- the 2012 settlement constitutes an appropriate
5 benchmark. Would that be a fair statement?
6 THE WITNESS: I -- I would say so, as far
7 as the structure, again, goes. You know, because
8 I'm using the Phonorecords II and I primarily for
9 those elements of the structure.
10 And, again, we've seen that Google
11 agreements, for instance, which are more recent, in
12 some cases, than the 2012 Phonorecords that have a
13 similar structure so, again, I would say that's
14 another element in which you can say: Well, you
15 know, in terms of the structure, things haven't
16 changed that much in a way that would cause the
17 parties to want to do something different.
18 JUDGE STRICKLER: You would only do that
19 sort of, for lack of a better phrase, big change, in
20 quotes, big change analysis as it relates to the
21 rate structure and not to the rates themselves
22 within the structure?
23 THE WITNESS: Well, again, I've -- I've
24 suggested that there are certain things that change
25 that should cause us to change some of the numbers

1 in the structure. So I think there are some things
2 one would want to look at to adjust those.
3 But in terms of the overall idea of a
4 percentage of revenue with a minimum that serves as
5 a backstop and that the minimum itself may have both
6 a TCC and per-subscriber component, I think that
7 those are -- that structure is something we see
8 continuously from 2008 forward.
9 JUDGE STRICKLER: So it's the still same
10 temporal -- temporal analysis, the 2012 settlement
11 compared to now, both with regard to rate structure
12 and with regard to the rates in the structure. What
13 you're saying, though, is when you apply that
14 analysis, the structure you think should remain
15 essentially the same but the rates within, then,
16 there have been, in your opinion, big enough changes
17 in the market that the rates within the existing
18 rate structure need to be tweaked in some way?
19 THE WITNESS: Yeah. And then I guess the
20 one change to the structure itself is getting rid of
21 the mechanical-only floor. And I've explained how I
22 do think something has changed there, which would
23 raise concerns about whether that should be in there
24 or not.
25 JUDGE STRICKLER: Thank you.

1 BY MR. WETZEL:
2 Q. If we can go back to your summary of
3 opinions. What was the basis for your second
4 opinion listed on this slide?
5 A. So this is the basis for the second
6 opinion. This is starting to get into more what the
7 numbers within the structure should be. And so for
8 that, I'm using the 2016 Subpart A settlement
9 concerning permanent digital downloads, or PDDs, as
10 a benchmark.
11 Q. Why did you use the Subpart A settlement
12 as a benchmark to assess the -- the topline rates?
13 A. Well, I went through the same list of
14 factors. So let's start with what's being conveyed.
15 The musical works at issue are the same.
16 The rights that are being conveyed are the rights to
17 use -- on the one hand, use as musical works in a
18 PDD service, versus a streaming service. And, you
19 know, at some level, of course, those aren't exactly
20 the same, but I think they're quite similar when you
21 think about what's going on.
22 And in the case of a PDD, and streaming,
23 in both cases you're getting -- it's really about
24 on-demand listening. So in the one case, I'm paying
25 for a PDD. I then get to listen to that as often as

1 I like, basically, for the rest of my life, I guess.
2 In the other case, you're in the
3 streaming service. If you're a subscriber, you pay
4 a fee. And you get to listen to any song in the
5 library as often as I like for the period covered by
6 the subscription fee. And if I kept paying that
7 fee, I would be able to do that for the rest of my
8 life too.
9 So in both cases, you're really getting
10 to listen to what you want to listen to. And, you
11 know, there, of course, again, are differences, but
12 I think in both cases you can think about it as I'm
13 paying for the rights of access to some musical
14 works. And so in that case, they're very similar.
15 And I think, therefore, the Subpart A provides a
16 very good benchmark on that basis.
17 You know, the licensors in both cases are
18 the same. They're the -- the Copyright Owners on
19 the musical works side. In one case, my
20 understanding is Subpart A, the -- you know, it's
21 the -- the licensee side, I guess it's the label
22 because they end up paying, and streaming, of
23 course, it's a Service, so that is somewhat
24 different there. I don't think enough to really
25 matter.

1 It's, you know, a very recent settlement,
2 so it's 2016. And, you know, again, the catch-all
3 category, I think, from my point of view, it's, you
4 know, again, similar economic circumstances. It's a
5 slightly different service but not in a way that
6 really matters. We're talking about cases, about
7 people being able to listen to songs.
8 JUDGE STRICKLER: You mentioned access in
9 your answer. Do you distinguish -- this is not for
10 the moment Subpart A versus Subpart B, but do you
11 distinguish in your analysis between the value of
12 access and the value of use?
13 THE WITNESS: I mean, I think the value
14 of access is that I have some option value. In the
15 case of -- you know, versus use. So, in other
16 words, it might have value to me, even if I never
17 turn out to -- to use it. And that option value can
18 be important.
19 I think, you know, one of the advantages
20 of streaming is that you've got the option, as a
21 subscriber, to listen to the -- to the library. And
22 that's one thing that has made it incredibly
23 popular, one thing that has reduced piracy, one
24 thing that has expanded streaming revenues
25 substantially over, I think, what would be happening

1 with just PDDs.
2 So, you know, there is some value to
3 that, yeah.
4 JUDGE STRICKLER: Do you think the value
5 of access to streaming is greater than the value of
6 access when you have a digital download?
7 THE WITNESS: Well, you're -- you're
8 getting access to a library. So in that sense, yes.
9 JUDGE STRICKLER: Which one are you
10 talking -- you're talking the Subpart B streaming?
11 THE WITNESS: Streaming, yes, sorry.
12 Now, of course, you'll see I'm going to talk about
13 here ratios of a royalty to a revenue. And, of
14 course, you know, to the extent there's value in
15 access, that's going to -- you know, that's wider --
16 a little bit wider for one than the other, that's
17 going to be present in both the numerator and
18 denominator and kind of cancel out.
19 So I think the fact that PDDs are just --
20 the access there is limited to just the song that
21 we're talking about is not enough to disqualify it
22 when you look at it the way I'm looking at it, which
23 is the ratio of the -- of a royalty to a revenue.
24 Particularly because I think if you think about it,
25 the idea of providing somebody access to the

1 library, which, again, has been so popular, that's
2 part of the streaming company's business model.
3 And, you know, I think at some level, you
4 can say they deserve credit for that in terms of the
5 contributions. So to the extent that they basically
6 created this additional value, managed to get more
7 revenues from streaming than might exist if only
8 PDDs were out there is something that, of course,
9 they deserve credit for.
10 Now, by using a percentage of revenue,
11 I'm going to be giving some of that -- not I -- of
12 course, the Google proposal will be giving some of
13 that to the -- to the Copyright Owners as well. So,
14 again, I think percentage of revenue has that nice
15 feature about it, that increases in value get split
16 automatically between -- between the parties.
17 BY MR. WETZEL:
18 Q. Just referring quickly to your fourth
19 bullet there, in evaluating the comparability of
20 Subpart A, what were some of the economic
21 circumstances that you considered in arriving at the
22 -- the conclusion that Subpart A was a good
23 comparable for Subpart B?
24 A. You mean besides the one I've talked
25 about already?

1 Q. Yes. Were there -- were there any other
2 economic circumstances in forming your conclusion
3 that Subpart A was a good comparable for Subpart B?
4 A. I'm trying to think what I've said
5 already, if there's anything else. I don't know.
6 Not -- not anything I can think of at the moment.
7 Q. We can come back to that in a bit.
8 So how -- how does the Subpart A
9 settlement ultimately inform your analysis of the
10 appropriate headline rate to use for Subpart B?
11 A. Well, so what I ended up doing here,
12 again, is -- is thinking about it this way, and if
13 you take a bunch of rights to the musical works, you
14 combine them with the assets of the Service, and at
15 the end of that comes out some revenue because
16 you've created something that's attractive to -- to
17 consumers who want to listen to music. And so PDDs,
18 you've got that kind of service. And streaming,
19 you've got a different kind of service.
20 And the question, again, is how to break
21 up that revenue, what percentage of that do we
22 assign to each of the parties. How do we apportion
23 it, is another way to think about it.
24 And, you know, the sort of percentage of
25 revenue or apportionment or contribution of the

1 musical work for streaming, I think, is quite
2 comparable to think about it in terms of what's
3 going on in Subpart A because of PDDs, that the
4 percentage of revenue, that the apportionment should
5 be roughly the same.
6 Now, as I mentioned, I think there are
7 reasons to think the streaming service could say,
8 wait a minute, we're -- we're actually doing a lot
9 more than the people who sell PDDs; we deserve a
10 bigger apportionment. But as we'll see, Google's
11 proposal is actually quite conservative in that
12 regard.
13 Q. And sitting here now, are you able to --
14 to walk us through some of your calculations
15 applying the Subpart A benchmark to the Subpart B
16 context?
17 A. Yes, sure, please. So the first part of
18 this, as I mentioned, I'm going to be looking at the
19 percentage of revenue that the royalty is for
20 musical works for PDDs, and that's going to serve as
21 a benchmark for what the percentage of revenue
22 should be on the streaming side.
23 So I need to do two things. First of
24 all, I need to figure out what is the -- the royalty
25 payment for musical works and I need to determine

1 what the price per PDD is.
2 So my first, for the latter thing, what's
3 the price of a PDD, that's the revenue side. I
4 looked at data from the RIAA. They get some
5 information on revenue and shipments for singles and
6 albums. I ultimately need to get to a price per
7 song, so, I made some assumptions about how many
8 songs per album there were on average and -- and
9 then took a weighted average between albums and
10 singles. And that led me to the price of a song, as
11 you can see in the red box here.
12 It started off for PDDs, you paid about
13 99 cents for a song on average. And then it has
14 increased a bit over time. And by 2015, it was
15 $1.10.
16 Q. And just for reference, this slide,
17 without the red box, depicts Exhibit 7 from Google
18 Exhibit 695; is that correct?
19 A. That's correct, yes.
20 JUDGE STRICKLER: Dr. Leonard, you said
21 you made an assumption about how many songs there
22 were per album. How did you arrive at your
23 assumption?
24 THE WITNESS: I believe that's an
25 assumption that's actually -- if I'm remembering

1 right, is used by the RIAA. And I did some
2 sensitivities to, you know, see if it was 11 versus
3 9, whether that would matter too much. And it
4 doesn't matter too much.
5 JUDGE STRICKLER: Thank you.
6 BY MR. WETZEL:
7 Q. What was the next step of your
8 calculation?
9 A. So the next step is I've got to figure
10 out what the musical work royalty is. And I guess I
11 should step back for a moment and say here on the
12 PDD side, there only is, as I understand it, a
13 mechanical right, that that's all you need to sell a
14 PDD.
15 So I know that, you know, there's -- on
16 the interactive streaming side, there's a mechanical
17 and a performance, but as I think has been talked
18 about already, you know, they're perfect
19 complements. So, I mean, a mechanical right, when
20 there's two of them, a mechanical right is pretty
21 worthless unless I have the performance right.
22 So if you only need one of those rights,
23 that is effectively the all-in royalty for a musical
24 work. So that's an important point to make as well.
25 But, anyway, on the -- on the PDD side, the question

1 is what is the royalty for a PDD?
2 And there's a formula that comes out of
3 the Subpart A numbers. And basically what it is, is
4 you pay 9.1 cents for any song that's less than or
5 equal to five minutes. And then for songs that have
6 a length greater than five minutes, you basically
7 round up to the higher number of minutes, so
8 something that's, say, five minutes and 1 second
9 gets rounded up to 6. And then you -- you
10 multiply .0175 times the six minutes, and then you
11 do that for the song.
12 Then you do a similar thing for songs
13 that are up to seven minutes -- between six and
14 seven minutes long, et cetera, et cetera. And then
15 you add up all those numbers and divide by the
16 number of tracks. And that gives you an average
17 royalty per -- per PDD. And it turns out to be
18 about 9.5 cents.
19 Q. Just going back to that last slide for a
20 minute, just to be clear, this slide is not
21 suggesting that seven minutes was the longest song
22 that you encountered in your analysis, was it?
23 A. No, the three dots, little black dots
24 there at the bottom means this goes out as long as
25 there are songs, you know, until you reach the

1 longest possible song in the data set.
2 Q. And how, if at all, did you account for
3 non-music tracks or for other tracks that wouldn't
4 require a Section 115 license when you were
5 performing this calculation?
6 A. Yeah, there's no real way to identify
7 those and pull them out like you might want to do.
8 So I just, you know, implicitly left them in the
9 calculation. But that was likely to be conservative
10 because, you know, public --- public domain works
11 like classical works tend to be longer, of course,
12 so they would add incrementally to this.
13 Q. And ultimately going to the next slide,
14 again, what is 9.5 cents per download as a
15 percentage of the sales price of downloads in each
16 of 2006 and 2015?
17 A. Yeah, so if you take the price numbers
18 that were in that spreadsheet that had all the
19 numbers in it, and you divide that into the 9.5
20 cents per song, which -- the one assumption I should
21 point out I'm making here is that the -- sort of
22 distribution of song length hasn't changed markedly
23 over 2006 to 2015. So that I can use the 9.5 cents
24 in both -- both years.
25 But if you divide that by the price in

1 each year, you get 9.6 percent in 2006 and
2 8.7 percent in 2015. So these would be the
3 percentages that the musical work royalty is as a
4 percentage of the revenue from physical downloads --
5 I'm sorry, permanent digital downloads.
6 Q. And how did you ultimately arrive at your
7 ultimate range of 11.3 percent and 10.2 percent of
8 revenue?
9 A. Well, so to make this more comparable to
10 Google's proposal, if you'll remember the proposal
11 had a potential deduction of 15 percent from
12 revenue, so what you would want to do is -- is to
13 make it comparable and ask, you know, what would
14 these percentages be if there was an allowable
15 15 percent deduction from revenue.
16 So I basically redid the math but taking
17 15 percent off of 99 cents and $1.10 respectively.
18 And that increases the percentages to 11.3 percent
19 in 2006, which it declined to 10.2 percent by 1015.
20 So Google's 10.5 percent, if applied to
21 revenue after a 15 percent deduction, you know,
22 their 10.5 percent number is in this range here.
23 Q. What, if anything, is your understanding
24 of -- of whether Google, in particular, would be
25 entitled to take the full 15 percent deduction that

1 it's proposing?
2 A. I think if you look at what -- those
3 categories of deductions that Google is proposing to
4 be allowed, really the only one Google, as I
5 understand it, would qualify for are the -- the
6 credit card fees, which tend to be in the 1 to
7 3 percent range. So for Google, it would be
8 substantially less than 15 percent.
9 Q. And in -- sorry, go ahead?
10 JUDGE STRICKLER: A question, just so I
11 understand. I think some of the summary, correct me
12 if I'm wrong, is on page 48 --
13 THE WITNESS: Of my report, you mean?
14 JUDGE STRICKLER: Yeah, I'm actually
15 looking at your original one, and I know you
16 supplemented or amended it, so hopefully I'm right.
17 And at paragraph 76 in that -- I should
18 look at your -- you amended one, so I get it
19 correctly.
20 MR. JANOWITZ: Your Honor, if I could
21 help, we did the conversion. So paragraph 76 of the
22 original is now paragraph 78 of the amended.
23 JUDGE STRICKLER: I'd like you to look at
24 paragraph 78 of the amended.
25 THE WITNESS: Okay, I'm there.

1 JUDGE STRICKLER: Okay. So if I
2 understand correctly, then, one of -- one of your
3 opinions here is, looking at the first bold dot
4 there, you have the economically appropriate all-in
5 minimum royalty for a Section 115 license. Do you
6 see that?
7 THE WITNESS: Yes.
8 JUDGE STRICKLER: And then in the second
9 dot underneath that, you say "the upper end of this
10 range, 15.5 percent."
11 Do you see that?
12 JUDGE FEDER: 15.8.
13 THE WITNESS: Yeah, I would --
14 JUDGE STRICKLER: Maybe -- maybe it has
15 changed since. It's 15.8 on the amendment?
16 THE WITNESS: It is. Can I also say this
17 is the -- the part that's addressing percent of TCC,
18 I believe.
19 JUDGE STRICKLER: It's just service
20 payments?
21 THE WITNESS: Yeah. So the part that
22 we're talking about right now comes earlier, and
23 it's -- it's in my paragraph 73 of the amended
24 report. I'm not sure what that would translate to.
25 JUDGE STRICKLER: Maybe 75.

1 THE WITNESS: But it would be right under
2 -- the section heading is C, and then there's a
3 subsection 1, benchmark, all-in topline royalty
4 rate. That -- what I'm talking about now
5 corresponds to that part.
6 JUDGE STRICKLER: Thank you.
7 BY MR. WETZEL:
8 Q. Now, the moment we've been waiting for.
9 In his rebuttal testimony at paragraphs 46 and 47,
10 Dr. Eisenach criticized your application of the
11 Subpart A benchmark because you did not rely on
12 Subpart A's rate that pertains to ringtones. How --
13 how would you respond to that criticism?
14 A. Well, I would say that the usage of the
15 musical work in the ringtone context is -- is very,
16 very different. And so it's -- you know, from that
17 perspective, it's not a good comparable. People
18 aren't buying ringtones to listen to music. They're
19 buying them to be ringtones.
20 Q. And was there anything else that informed
21 your decision that -- or your conclusion that --
22 that ringtones were not good comparables for use in
23 evaluating Google's proposal under Subpart B?
24 A. Well, I would say I just -- there was a
25 CRB decision that, you know, basically makes the

1 same point I'm making right now, which is that --
2 they're calling it master tones, but this would be a
3 ringtone, is not a substitute for somebody who wants
4 to listen to music. You know, you're not going to
5 go out and buy a bunch of ringtones in order to
6 listen to music.
7 And as a result of that the -- you know,
8 as I understood, the CRB declined to use ringtone --
9 they used certain ringtone agreements as comparables
10 for ringtones, but they declined to use those for
11 other things such as PDDs.
12 Q. And as an economic matter, do you agree
13 with the conclusions reached by -- by the Board in
14 this determination?
15 A. Absolutely, yes.
16 Q. Now, in his rebuttal testimony at
17 paragraphs 48 to 52, Dr. Eisenach also criticized
18 the use of the Subpart A benchmarks for Subpart B
19 and C services because of differences between the
20 concepts of ownership and access.
21 How would you respond to that criticism?
22 A. You know, I'm an economist, not a lawyer.
23 So I can't really opine on legal aspects, but, you
24 know, again, at the end of the day, somebody is
25 buying a PDD, is buying it to listen to it.

1 Somebody who is -- you know, on demand, as many
2 times as they want. Somebody who is subscribing to
3 a streaming service is doing that so they can listen
4 to music, again, any song in the library as often as
5 they want.
6 You know, to the extent that ownership
7 provides some small incremental benefit, you know,
8 that, again, should be reflected in both the
9 numerator and the denominator of the ratios that I'm
10 looking at here and, therefore, kind of cancels out.
11 I don't think that's enough of an issue
12 to disqualify it as a benchmark in this proceeding.
13 I think it's still a very, very useful benchmark.
14 Q. Now, after determining that Subpart A
15 supported Google's percentage of revenue proposal or
16 that portion of its proposal, what other parts of
17 Google's proposal did you evaluate using Subpart A
18 as a benchmark?
19 A. You can also use it to evaluate the
20 13.5 percent of TCC, which is part of the minimum
21 prong.
22 Q. And what conclusion did you reach about
23 Google's proposal with respect to the TCC prong?
24 A. Again, I think in light of what has
25 happened on the Subpart A side of things with

1 physical PDDs, that it has -- that -- you know, that
2 it justifies the 13.5 percent as reasonable.
3 Q. How did you reach your conclusion?
4 A. I went through a very similar exercise as
5 I talked about before, but now instead dividing the
6 musical work royalty by the -- by the price of a PDD
7 or the revenue that is generated by the PDD, I
8 divided the musical work royalty by, effectively,
9 the sound recording royalty rate, which as I
10 understand it to be, you know, 70 percent, out of
11 which the musical work royalty is paid. So you have
12 to make an adjustment for that.
13 But the ratio of the musical works to the
14 sound recording royalties, once you've done all
15 that, is -- was 15.8 percent in 2006, and it
16 decreased to 14.2 percent by 2015.
17 Q. Google's proposal for its TCC prong is
18 outside of this range that you just identified. Why
19 did you nevertheless conclude that it was
20 reasonable?
21 A. It's reasonable because -- even though
22 it's outside the range, because the -- you do see a
23 decline from 2006 to 2015, which is being driven by
24 the fact that the musical work royalty has basically
25 remained constant, while the price of a PDD has

1 increased, and because the sound recording royalty
2 is based on a percentage of that, the sound
3 recording -- recording royalties have increased as a
4 result.
5 And so that's why the percentage has
6 fallen. But the fact that it has fallen and it
7 looks like, you know, in 2016 it will likely fall
8 again suggests the 13.5 percent on a going-forward
9 basis is a reasonable number.
10 Q. And what -- what is your understanding of
11 how the -- of what the rate will be for -- for the
12 mechanical royalty associated with download sales
13 through the end of the license period here in 2022?
14 A. Well, it will remain, again, subject to
15 small changes in the distribution of music, the
16 length of songs, assuming that doesn't change, the
17 royalty basically is going to remain the same over
18 time at a -- in a dollar level.
19 And, again, PDDs are, you know, likely to
20 increase. They've increased in 2016. So that would
21 suggest, again, that this ratio is going to continue
22 to fall.
23 Q. Okay. Now I'd like to discuss the third
24 of your summarized opinions. You also considered
25 the -- the 801(b) factors as part of your

1 benchmarking analysis; is that correct?
2 A. Yes, I did.
3 Q. And are these the factors that you
4 considered on this slide?
5 A. They are.
6 Q. How, if at all, did your analysis factor
7 in the 801(b)(1) factors?
8 A. Well, you want to look at -- at Google's
9 proposal and ask, you know, does it meet these
10 factors? Is it consistent with them? Will it
11 further them? And that's one of the things I looked
12 at.
13 Q. Starting with the first of the 801(b)(1)
14 factors, how did you interpret this factor for
15 purposes of your analysis?
16 A. Yeah, and the -- the question is the
17 availability of music works to the public. And, you
18 know, as in a lot of things, this has two sides.
19 You've got the -- the people who write the songs,
20 but, of course, then you also have the Services that
21 provide the streaming services that people are
22 actually using.
23 And, you know, one of the things that
24 we've seen under the existing structure is that
25 there are, you know, a number of competing streaming

1 services out there. They all tend to offer
2 something somewhat different in some way. So it's
3 so-called differentiated product offerings.
4 And that's something that, you know, I
5 personally have studied, you know, how important
6 product differentiation is for consumers, because
7 what you have are products with different
8 characteristics and different attributes, and you
9 have people, consumers, with different preferences.
10 And when you're able to match up people's
11 preferences to a bunch of, you know, different
12 plans, you're able to satisfy consumers' desires
13 better. And that leads to better, you know,
14 economic outcomes from an economist's point of view.
15 So, you know, that's what we see now.
16 We've got something like Spotify, which is a pure
17 standalone service. That's what they do. They've
18 got both an ad-supported component that, you know,
19 would appeal to consumers with lower willingness to
20 pay for music. They've got the subscription
21 offering that appeals to people with greater
22 willingness to pay. That's fantastic because now
23 everybody gets to stream, subject to, you know,
24 their willingness to pay and their -- and, you know,
25 the prices obviously differ for that.

1 You have other Services, you know, such
2 as Amazon that's doing something different than
3 Spotify is doing. You have Google and Apple that
4 are themselves doing something and leveraging their
5 brand names and their platforms that they have
6 already, which may make them able to offer a better
7 service or one that's attractive to certain customer
8 segments.
9 So all of these things are good and have
10 happened under the existing structure, and at the
11 end of the day, Google's proposal, by sticking with
12 the similar structure and by sticking with numbers
13 that are in the end pretty similar to what we've
14 had, I think is going to continue this -- this
15 situation, which is a good one.
16 I should also point out that the
17 all-you-can-eat plans, I think, are a crucial
18 element of this too because as we talked about
19 having access to the library, it has value, it has
20 the option values, encourage people to listen to
21 songs they probably would never have listened to,
22 you know, allows them to listen to more, from my
23 perspective, again, from the point of view of an
24 economist, availability. You know, it's part of the
25 availability. If I can and do listen to more music,

1 that's a good thing under this factor.
2 Now, on the other side, you've got the --
3 you know, the songwriters. And, you know, I've
4 looked at the numbers. There is really no evidence
5 that, for instance, you know, songwriters are --
6 under the existing situation, you know, are being
7 harmed. Certainly, the publishers aren't being
8 harmed. They appear to be profitable.
9 JUDGE STRICKLER: I have a question for
10 you --
11 THE WITNESS: Yes.
12 JUDGE STRICKLER: -- about that, they
13 appear to be profitable. So if we define
14 profitability as the absence of harm, then, of
15 course, you're correct. But there's always the
16 question of, for example, substitution or more
17 broadly the question of opportunity cost.
18 THE WITNESS: Correct.
19 JUDGE STRICKLER: Did you examine whether
20 or not the Copyright Owners have been harmed in
21 terms of incurring an opportunity cost that caused
22 their profits to be lower than they otherwise would
23 be because of this existing rate structure?
24 THE WITNESS: No, I think it's exactly
25 the opposite, actually. So, I mean, what we've seen

1 is, before streaming really became what it is today,
2 you had PDDs and those revenues from that were
3 declining and -- and royalties from that were
4 declining. Streaming became more popular. That has
5 turned around that trend. And you see that, I
6 think, everybody, maybe outside of this proceeding,
7 acknowledges that -- that streaming has benefitted
8 owners of -- of copyrights, both on the performance
9 side -- I'm sorry, on the sound recording side and
10 on the publishing side for the musical works side.
11 So I think the -- the structure, to the
12 extent that, again, it has led to something like the
13 all-you-can-eat plan, which is very attractive,
14 which then gets people away from piracy, which gets
15 people willing to listen to music more and pay that
16 money, you know, are people who, again, weren't, you
17 know, willing to pay that money but they are willing
18 to endure some ads.
19 Okay. So the ads generate money on those
20 people. That, to the extent that the existing
21 structure is part of what enabled that, and I think
22 it is, then that's something that has benefitted
23 musical work Copyright Owners.
24 JUDGE STRICKLER: I think a criticism --
25 and it may come up in your testimony now, but a

1 criticism made by -- by Dr. Eisenach is that when
2 you have an all-you-can-eat type of plan -- and
3 unless I'm mistaken, I think he may have made the
4 point literally an all-you-can-eat plan is a -- is a
5 buffet lunch. All-you-can-eat, you pay a fixed
6 price, then you can eat all you want.
7 But the ingredients that go into the
8 all-you-can-eat buffet are not paid for. The
9 suppliers are not paid as a percentage of the
10 revenue, necessarily, for other people who come in
11 and buy the lunch at retail, who supply the salad,
12 the meats, the dressings, what have you. They all
13 get paid on a per unit basis.
14 So why is it necessary on an
15 all-you-can-eat basis type of economic structure at
16 the retail level to have a percentage of revenue
17 approach in the upstream market?
18 THE WITNESS: Well, two things. One is,
19 you know, the -- the incremental cost or marginal
20 cost to a musical works rights owner of having one
21 more stream is -- you know, for someone who is in a
22 plan like that is zero. So, you know, the right way
23 we think about those things I think typically is to
24 say, look, you know, we can't have, obviously, the
25 price for streaming be zero. I totally agree with

1 that.
2 But the right way to price it is to have
3 price for access to the library and then let
4 somebody listen as much as they want. That's very
5 attractive to the user. It doesn't punish
6 additional usage. It's -- under this factor we're
7 talking about here, it's -- it's fantastic because
8 people can listen more.
9 JUDGE STRICKLER: Are you distinguishing
10 there between -- using the analogy that I made,
11 which I think I got from Dr. Eisenach, that the
12 supplier who supplies tomatoes to the literal
13 all-you-can-eat buffet has a positive marginal cost
14 to -- to grow and transport and deliver the -- the
15 tomatoes as opposed to the marginal physical cost of
16 an extra layer on top?
17 THE WITNESS: Yeah, I think, exactly,
18 that's an important distinction. And, I mean, it's,
19 you know, not uncommon to see in intellectual
20 property licenses that people pay a lump-sum royalty
21 and then on -- you know, the user gets to use it as
22 much as they want.
23 That's not exactly uncommon for exactly
24 this reason, is you really don't want to punish the
25 usage because, again, marginal cost is zero. You'd

1 like to collect at the access point and then make
2 the product as attractive as possible thereafter.
3 JUDGE STRICKLER: Is that in the nature
4 of price discrimination, which is a result of the
5 fact that marginal physical cost is zero?
6 THE WITNESS: Well, I would say that the
7 -- I don't know if it's price discrimination. It's
8 just the idea that in that kind of situation, you
9 want to provide or pay -- you want to collect at the
10 access point. And then by allowing somebody, since
11 it doesn't cost you anything more at that point, to
12 listen as much as they want, it's much -- the whole
13 package is much more attractive to them. And then
14 they're going to be willing to pay more at the
15 access point.
16 JUDGE STRICKLER: They pay more at the
17 access points, but the units they consume, once they
18 have access, the price varies depending on how --
19 the more they use, the cheaper the unit price. So
20 that would be price -- effectively price
21 discrimination.
22 THE WITNESS: Oh, I see what you're
23 saying. I see. Yeah, and that's -- but then,
24 again, what we can do is have different plans with
25 different types of access that are priced

1 differently. So the ad-supported where you're not
2 actually paying a price but you have to endure the
3 ads, versus, you know, something where you're paying
4 for a subscription and then you've got the family
5 plans that might be priced differently.
6 So through the access and the way you
7 charge for that and the way those plans are set up,
8 you can do some price discrimination at that point.
9 Again, the idea of offering different plans to
10 different people with different willingness to pay.
11 JUDGE STRICKLER: Thank you.
12 BY MR. WETZEL:
13 Q. Now, I believe you've touched on this in
14 the -- in the course of responding to Judge
15 Strickler, but what is the interplay of royalty
16 rates and structure with the ability to engage in
17 product differentiation?
18 A. Well, so, again, if you have a percentage
19 of revenue type royalty, you can offer a plan, for
20 instance, at a lower price that's targeted at
21 customers with lower willingness to pay.
22 Basically, what we're saying is customers
23 like that are going to have lower value for the
24 music, even though it's the same -- same music. You
25 would like to be able to get them onboard by being

1 able to charge them a lower price. The musical work
2 should get a lower dollar royalty because the works
3 have less value in that context.
4 And a percentage of revenue royalty may
5 not sound perfect, but it does achieve that kind of
6 flexibility that I can -- you know, I offer a lower
7 price, I pay a lower royalty, it's the same
8 percentage, but I pay a lower dollar royalty, and
9 it's a much more attractive for me to offer that
10 kind of plan than if I were paying, for instance, a
11 fixed dollar royalty regardless of -- of the revenue
12 I was generating.
13 Q. And in your opinion, what does the
14 current state of the industry with respect to
15 Services' profitability tell us about the current
16 rates and rate structure as they pertain to the
17 objectives of -- of factor A?
18 A. Well, you know, I think it's well
19 acknowledged in the industry that, you know, none of
20 the Services are making any -- making any money.
21 And so, you know, it tells you that, if anything,
22 the existing rate structure might be a little bit
23 too high.
24 But from my perspective, you know, one
25 thing that's nice, I guess, about this, is that,

1 whatever it is, five years, this can all be
2 re-evaluated. So, again, I think in Google's
3 proposal, there might be a -- depending on the
4 amount of that deduction, there might be a small
5 reduction in the royalties that are paid, but, you
6 know, largely it's keeping that -- that structure
7 intact.
8 Q. Now, the second 801(b) factor you
9 considered was the -- the fair return factor, we'll
10 call it.
11 How, if at all, did this factor influence
12 your analysis?
13 A. Yeah, so this is -- I put here the fair
14 return and the relative contributions sort of
15 together. As an economist, I kind of think about
16 them together. So, you know, I think what you would
17 look at here, what I looked at here were, you know,
18 the fact that service providers, as we were just
19 saying, are -- do not appear to be profitable, at
20 least to date. You know, again, that could change.
21 And, you know, we can look at things at some later
22 point in time if they have changed substantially.
23 You know, in terms of the percentage
24 rate, again, I mentioned this a bit before, I think
25 there's an argument that the contributions of

1 service providers are in some sense greater here
2 than they are in the context of a PDD, and yet the
3 percentage rate that I'm using or that Google is
4 proposing, I should say, is -- is a bit higher than
5 -- than the PDD numbers that we looked at.
6 And, you know, lastly, you know, again,
7 under the existing structure, it does not appear
8 that the music publishers are themselves
9 unprofitable.
10 So I think that, again, it says the
11 existing structure probably looks pretty good, maybe
12 the rates are a little bit too high. But, again, I
13 think there's not a lot of evidence that, you know,
14 radical changes are needed. And, again, Google's
15 proposal, I don't think, makes radical changes to
16 the -- to the rates.
17 JUDGE STRICKLER: Would you describe,
18 Dr. Leonard, your opinion as you just gave it with
19 regard to fair returns and fair income, are those
20 economic -- does that require economic expertise or
21 is that more -- maybe a better way to ask the
22 question is can an economist identify what
23 constitutes a fair return or a fair income?
24 THE WITNESS: Yeah, that's a -- that's a
25 good -- good question. And I think economists, I

1 would say, you know, typically don't do fair, is
2 what I would say. My concept of fair, what I took
3 to mean here and what I think a lot of economists
4 would say is that if you have -- again, putting two
5 factors together, if you have a negotiation between
6 two parties and there are no, you know, constraints
7 such as holdup, you know, which is a concern, of
8 course, in patent licensing, and there's no market
9 power or any of that, you know, that will lead to a
10 split that's -- that's in accordance are the
11 relative contributions, and then that, itself -- you
12 know, again I hesitate to use the word, so maybe
13 I'll put it in quotes, would be fair. Because, you
14 know -- to an economist, what we want is for -- when
15 different parties come together, they both make a
16 contribution, we really want the return that they
17 get out of it to be in proportion to their relative
18 contribution. That's how we get the right
19 incentives lined up.
20 JUDGE STRICKLER: When -- when you
21 wrestle with the question as an economist of having
22 to figure out what would be a "fair return" or "fair
23 income," do you conceptualize one of the dichotomies
24 that exists in economics between positive economics
25 and normative economics?

1 THE WITNESS: Yeah, good question. Well,
2 I think I would, again, define fair the way I did,
3 which is -- I mean, I think the idea that, I mean,
4 that's -- saying that, you know, I think if there's
5 no market power, then we get to a -- an outcome that
6 would split or apportion the returns in relation to
7 relative contributions, I guess that's probably, you
8 know, somewhat of a positive view, but then to say
9 that that itself is what I might call fair maybe is
10 more of a normative one.
11 And I think as an economist, again,
12 that's probably kind of the best I can do.
13 JUDGE STRICKLER: You mentioned market
14 power in your answer, and I was going to wait, but
15 now you've -- you've mentioned it and so opened the
16 door a little bit.
17 THE WITNESS: Sure.
18 JUDGE STRICKLER: This goes back -- goes
19 into your testimony. You talk -- you seem to talk
20 about market power in two different places in your
21 report. And I don't see where you pick up the
22 thread again. I want to see, make sure I got that
23 right.
24 And, again, I apologize I'm looking at
25 your original report. So, counsel, I'm going to ask

1 you for your help again. Paragraph 14 of the
2 original report. It starts with "music publishers
3 are entities." 15, 15.
4 THE WITNESS: 15?
5 JUDGE FEDER: It's on page 8.
6 JUDGE STRICKLER: Page 8.
7 THE WITNESS: Oh, so I -- I'm there.
8 JUDGE STRICKLER: Okay. Towards the end
9 of the paragraph, you have a sentence that reads --
10 that begins with "these firms hold." Do you see
11 that sentence?
12 THE WITNESS: Yes.
13 JUDGE STRICKLER: Okay. You say, "These
14 firms hold a significant combined position,
15 controlling the majority of the U.S. music
16 publishing market." By "these firms," you're
17 referring to the three immediately above that,
18 Sony/ATV, Warner/Chappell, and Universal Music
19 Publishing.
20 Do you see that?
21 THE WITNESS: I do.
22 JUDGE STRICKLER: You mention that. Does
23 the fact that you understood that they had
24 significant -- a significant combined position
25 controlling the majority of the U.S. music

1 publishing market inform you in any way as to your
2 opinion in this proceeding?
3 THE WITNESS: Well, I think it to some
4 extent goes to, you know, the market power question
5 and what could happen on the performance side that
6 then is part of what I'm worried about regarding the
7 mechanical floor. So I would say, yes, you know,
8 this is just sort of just a statement about what
9 their -- what their share is, but as a general
10 matter, yeah, that market power concern is part of
11 what I'd be worried about.
12 JUDGE STRICKLER: Okay, but as opposed to
13 what you would be worried about and what you
14 declared yourself to be worried about in your
15 testimony, am I correct or incorrect that you never
16 say anywhere else in your -- in your testimony that
17 because these firms hold this significant combined
18 position, this impacts the market and the proposed
19 rates, following that. That -- you know, that I'm
20 correct that -- am I correct that you never pick up
21 on that thread later on in the -- in your report?
22 THE WITNESS: I confess I'm not sure I've
23 got sort of things I've said in this report in my
24 mind separated out from what I might have said in my
25 deposition or my second report. So I'd have to kind

1 of go through here and see.
2 JUDGE STRICKLER: Well, you'll probably
3 be on for a few hours and we'll have a -- maybe you
4 will be on after lunch. So if you want to take a
5 look if there's anything where it picks up.
6 THE WITNESS: Okay. Sure, I will do
7 that.
8 JUDGE STRICKLER: And while we're on such
9 a subject, paragraph -- I guess it will be 18 now.
10 I'm going to try to make an educated guess.
11 MR. JANOWITZ: Formerly 17, Your Honor.
12 JUDGE STRICKLER: We'll see. Thanks.
13 Towards the end of -- of that paragraph, it's the
14 paragraph, I should say, where the words begin -- I
15 apologize. It begins -- the paragraph is numbered
16 probably 18, "a record company (or label)."
17 Do you see that one?
18 JUDGE BARNETT: That is 18.
19 JUDGE STRICKLER: Paragraph 18.
20 THE WITNESS: Yeah.
21 JUDGE STRICKLER: Okay. So I'm going to
22 -- you don't have to read the whole paragraph. I'm
23 just -- I'm taking you down to --
24 THE WITNESS: Oh, I'm sorry. Yeah.
25 JUDGE STRICKLAND: I just want to have

1 you locate the paragraph.
2 THE WITNESS: I have.
3 JUDGE STRICKLER: To help me out since I
4 was remiss in not going to your amended report.
5 About a little more than halfway down, you say,
6 "There are major record labels." Do you see that?
7 THE WITNESS: Yes, I do.
8 JUDGE STRICKLER: Okay. So it says,
9 "There are major record labels and independent
10 record labels. Universal Music Group, Sony Music
11 Entertainment, and Warner Music Group are the
12 primary major record labels. These major record
13 labels share common corporate ownership with the
14 major music publishers discussed above -- for
15 example, Sony Corporation owns SME and half of
16 Sony/ATV; Universal Music Group owns Universal Music
17 Publishing; and Warner/Chappell is a division of
18 Warner Music group."
19 Do you see that?
20 THE WITNESS: I do.
21 JUDGE STRICKLER: Okay. Same question as
22 I asked you before with regard to picking up on the
23 thread of something. Do you utilize your
24 understanding of this common corporate ownership to
25 inform you in your report as to what the rate

1 structure should be in this proceeding? Or the
2 rates themselves?
3 THE WITNESS: Again, it plays a role, I'm
4 quite confident, somewhere in one of my reports.
5 Whether it's here or not is -- in this particular
6 initial report, I don't know. So I'll have to take
7 a look too, if I have the opportunity.
8 JUDGE STRICKLER: Okay, thank you.
9 BY MR. WETZEL:
10 Q. Dr. Leonard, the -- the last 801(b)(1)
11 factor that you considered was the -- was the
12 disruption factor. How did that factor influence
13 your analysis of -- of the benchmarks?
14 A. You know, again, I looked at Google's
15 proposal, and I looked at, you know, the way things
16 are currently being done. And, again, there aren't
17 enormous changes there.
18 And so from that perspective, I think
19 it's unlikely to be very -- very disruptive. You
20 know, I think it's important for the reasons I
21 mentioned to keep, you know, a percentage of royalty
22 structure. You know, for various reasons, I think
23 it is important to have the minima in there too, and
24 both of those things would be maintained.
25 The minimum that, in Google's case, for

1 instance, has -- has come into play has really been
2 the 80 cent per-subscriber minimum, you know, which
3 would remain at the same level under Google's
4 proposal.
5 So, you know, all of those things, I
6 think, suggest that Google's proposal wouldn't be
7 very disruptive; whereas, you know, shifting
8 substantially to a different kind of structure, in
9 particular, a per-stream or per-play royalty, you
10 know, I think would be changing things around a lot
11 for the Services.
12 And, you know, it's hard to say what
13 would happen exactly, but it certainly would
14 eliminate a lot of the things that are great about
15 the current system in terms of, you know, the
16 payment for access, but then being able to do
17 whatever you want, I think, Services would have the
18 incentive to try to limit usage in various ways,
19 which, you know, would not be good for availability
20 and would be disruptive. It also changes the
21 Services' cost structure around quite a bit.
22 And then, you know, I think there's
23 another, you know, point here, which is the
24 Services, you know, have made certain investments.
25 You know, I don't -- there are obviously no

1 guarantees in life, but one would think they -- that
2 they, in making those investments, were not
3 anticipating that there would be tremendous changes
4 in the structure, particularly perhaps because
5 Phonorecords I and II themselves were very similar.
6 So if you, you know, again, change around
7 a lot, I think that that would not only potentially
8 disrupt things now, but, you know, could cause
9 people to be -- have much more uncertainty about
10 investments, making investments in the space. And
11 that could be -- could be a bad thing.
12 Q. And did the benchmarks that you examined
13 tend to contain percentage of revenue-based
14 royalties or per-play royalties?
15 A. They, you know, again, tend to be a
16 percentage of royalty, again, with some sort of
17 minimum structure and usually the same kind of
18 thing, percentage of TCC and 80 cent per -- in the
19 case of sort of the standard subscription case, 80
20 cents per-subscriber minimum.
21 Q. Why did you reach the conclusion that a
22 shift to a per-stream royalty would -- would be
23 particularly disruptive?
24 A. Well, again, it just changes around the
25 way things work at the level of the service.

1 Instead of paying a percentage of royalty, you're
2 now paying depending on what users actually end up
3 streaming. So given that they pay, you'd actually
4 like them not to stream anything, because then you
5 would make the subscription revenue and incur no
6 cost.
7 So there are going to be incentives to --
8 to limit the amount of streaming that goes on
9 somehow. And, again, that just is contrary to the
10 first factor.
11 And it also make the costs much more
12 uncertain for the Services. Again, if you know,
13 look, I'm going to basically pay a percentage of my
14 -- my revenue, I have a good idea about what my
15 costs are going to be. If it depends on what my
16 users actually do, then there's some uncertainty
17 about that.
18 And, you know, I think the worst outcome
19 of all would be if it suddenly -- instead of having
20 the all-you-can-eat type situation, they go to plans
21 that actually charge users per play. I think that
22 would really -- would be something that would reduce
23 the actual consumption in music quite a bit.
24 Q. Taken all together, how did the 801(b)(1)
25 factors enter your analysis of the comparability of

1 -- of the various benchmarks that you analyze for
2 purposes of your work?
3 A. Well, again, I think it -- it goes to
4 saying we have an existing structure; you know, how
5 different is Google's proposal from that? There are
6 clearly some differences, but I don't think they're
7 big enough to suggest that, you know, it would be
8 disruptive, particularly given that, again, we
9 get -- I guess, somebody gets to do this again in
10 five years.
11 I think for the next five years, Google's
12 proposal is quite a reasonable one.
13 JUDGE STRICKLER: May I?
14 MR. WETZEL: Go ahead.
15 JUDGE STRICKLER: Thank you. In -- in
16 this section where you talk about the disruption
17 factor, factor D, it's paragraph 131 in your amended
18 report, just on the bottom.
19 THE WITNESS: I think I can find that
20 one. Okay.
21 JUDGE STRICKLER: You -- the first
22 sentence in that paragraph, you say, "A further
23 consideration under the 'disruption factor' is
24 whether one service provider may attempt to
25 manipulate the regulatory process to weaken its

1 rival."
2 THE WITNESS: Yes.
3 JUDGE STRICKLER: And then you go on to
4 discuss the pre- -- excuse me -- the per-stream rate
5 structure proposed by Apple. Do you see that?
6 THE WITNESS: I do.
7 JUDGE STRICKLER: But you don't actually
8 do a particular critique of the Apple proposal in
9 your -- in your testimony, do you?
10 THE WITNESS: I don't think at this point
11 I had their, I don't know, final proposal.
12 JUDGE STRICKLER: The disruption that you
13 speak of, does that fall under the rubric of what
14 economists analyze as raising -- the problem of
15 raising rivals' cost?
16 THE WITNESS: Yes, that would be exactly
17 that concept.
18 JUDGE STRICKLER: Is there -- is there
19 any report that you've provided, amended,
20 supplemental, rebuttal, or otherwise in this
21 proceeding, in which you specifically addressed
22 whether the Apple proposal and its per-stream
23 structure constitutes an attempt to raise rivals'
24 costs?
25 THE WITNESS: I think in seeing Google --

1 Apple's proposal, I do address certain aspects of it
2 in my -- the second report.
3 JUDGE STRICKLER: The second one being
4 the amended one?
5 THE WITNESS: No, sorry, the rebuttal
6 report.
7 JUDGE STRICKLER: Rebuttal?
8 THE WITNESS: Right. And, you know,
9 there are certain elements of -- you know, you can
10 calculate what the per-play rate is. And I think
11 then elsewhere I might calculate what the per-play
12 rates are for various Services.
13 So I think you could do that maybe based
14 on the numbers in my report. I don't believe I got
15 into that too much in my rebuttal report.
16 JUDGE STRICKLER: And with regard to your
17 testimony just a moment ago, you said that if there
18 was a transition from a percent of revenue rate to a
19 per-stream rate, were you -- were you referring to
20 the downstream retail market or the upstream
21 mechanical rate that we're talking about here?
22 THE WITNESS: Well, I was first starting
23 off with a change to the mechanical rate. But then
24 I was saying that could actually lead to a change in
25 the way things are charged downstream too, which,

1 again, I think would -- from my perspective as an
2 economist, would not be a good thing.
3 JUDGE STRICKLER: And if I heard you
4 correctly, you -- one of the reasons why you said it
5 wouldn't be a good thing would be because it would
6 discourage the consumption of music, discourage
7 music listening, right?
8 THE WITNESS: Yes.
9 JUDGE STRICKLER: Well, positive market
10 prices always ration and always discourage some use,
11 so the mere fact that it would cause arguably less
12 listening doesn't make it economically
13 inappropriate; it just -- it would be a positive
14 price that rations listening according to people's
15 willingness to pay, ability to pay. Don't we need
16 to know more, not that you haven't talked about, a
17 great deal more in your report, but the mere fact
18 that it creates a higher positive price doesn't ipso
19 facto make it bad; it just makes it a price that may
20 or may not be the price that the market would set?
21 THE WITNESS: Yeah, but I would say the
22 right price to set is the price for access. Let's
23 worry about those things, set the price of access,
24 and then allow people -- again, because, you know,
25 the marginal cost, when somebody is in the service

1 of giving them another stream, is zero. Let's let
2 them do as much listening as they want there. You
3 know, that has very good economic efficiency
4 properties.
5 JUDGE STRICKLER: So it sounds like
6 whenever we come up with these type of issues of --
7 of how to price positively in the market, we're
8 always drawn back, if I understand your testimony
9 correctly, to the -- to the core issue of the fact
10 that the marginal cost of providing the recording,
11 once there is access, is zero, provided there's no
12 -- there's no substitution or opportunity cost?
13 THE WITNESS: Yeah, again, for somebody
14 in the service, once they're in the service, the
15 opportunity cost actually might be negative, you
16 know, to the extent there's some evidence, I think,
17 that people, once they start streaming, they may
18 actually buy PDDs. I don't think that's a huge
19 effect.
20 But, yeah, that's -- that's part of it,
21 that in that kind of situation, you know, the amount
22 of revenue -- so the amount of consumption, the
23 amount of actual revenue that could be generated by
24 the Service and, therefore, also actually the
25 percentage of revenue or, sorry, the royalty, if

1 100 percent is your revenue basis, could end up
2 certainly being higher than in a situation where you
3 charged people for every stream that they -- they
4 incurred.
5 JUDGE STRICKLER: Thank you.
6 MR. WETZEL: I'll pass the witness.
7 JUDGE BARNETT: Thank you. I think this
8 is the appropriate time for us to take our morning
9 recess. We will recess for 15 minutes.
10 (A recess was taken at 10:41 a.m., after which
11 the hearing resumed at 11:01 a.m.)
12 JUDGE BARNETT: Is someone going to
13 cross-examine this witness?
14 MR. JANOWITZ: That would be me, Your
15 Honor.
16 JUDGE BARNETT: Thank you. I should have
17 guessed by this weighty binder there would be
18 cross-examination.
19 MR. JANOWITZ: Yes, yes. It's not that
20 weighty.
21 CROSS-EXAMINATION
22 BY MR. JANOWITZ:
23 Q. Good morning, Dr. Leonard.
24 A. Good morning.
25 Q. Dr. Leonard, you -- you talked a little

1 bit about your background this morning. I'd just
2 like to ask you a couple more questions.
3 A. Sure.
4 Q. Have you ever testified in a case
5 involving music royalties before?
6 A. No.
7 Q. Have you ever written a paper about music
8 royalties?
9 A. No. No, I don't think so.
10 Q. Is this the first engagement in which
11 you've been asked to testify as an expert in
12 connection with music royalties?
13 A. Yes.
14 Q. Now, I'm going to take this a little out
15 of order, but, you know, that's what always happens.
16 When I read your written direct
17 statement, I saw that you were relying on some
18 benchmarks. And if you look at your written direct
19 statement --
20 JUDGE BARNETT: The amended?
21 MR. JANOWITZ: -- page --
22 JUDGE BARNETT: Amended?
23 MR. JANOWITZ: Amended, yes.
24 JUDGE BARNETT: Thank you.
25 BY MR. JANOWITZ:

1 Q. Exactly. This would be -- I'm not sure
2 the page has been changed, but it's -- it's number
3 5, Roman V, on which paragraph 38 begins, which is
4 in the neighborhood of page 23, may still be page
5 23, for all I know.
6 JUDGE STRICKLER: Page 24?
7 MR. JANOWITZ: Thank you, yes.
8 JUDGE STRICKLER: Now you owe me one.
9 MR. JANOWITZ: I know, I know. I
10 appreciate it.
11 BY MR. JANOWITZ:
12 Q. So you -- this is the heading. It says
13 benchmark analysis for the rates and terms for the
14 Section 115 compulsory license. Then it says "A,
15 continuation of the current rates in Section 385,
16 Subpart A -- physical -- physical Phonorecord
17 deliveries, permanent digital downloads and
18 ringtones." So that's one benchmark, right?
19 A. Well, this is one set of things I
20 considered. As I mentioned, I don't think ringtones
21 are ultimately a very good benchmark, but it's --
22 Q. Sure, I get that. But this is -- this
23 describes one of your benchmarks?
24 A. Yeah. I mean, at a high level, yes.
25 Q. And then you describe another benchmark a

1 few pages later. It's where paragraph 47 begins.
2 It's B, my page has so many notes on it the page
3 number is obliterated. But it says "existing
4 agreements involving licenses to mechanical rights
5 and musical works for digital interactive music
6 streaming services."
7 And so you take that group of -- of
8 agreements and that's your other benchmark, correct?
9 A. Again, this, I would say, is a set of
10 things I've looked at.
11 Q. Yeah, I said it's -- it's a bunch of
12 agreements?
13 A. Yes, it is.
14 Q. Yeah. So, generally speaking, there are
15 two benchmarks. When you were testifying earlier
16 and looking at your slides, I'm seeing reference to
17 Phonorecords I and II, and I also recall -- you can
18 see that on your slide 5, for example. And I recall
19 some testimony regarding the 2012 settlement. I
20 don't know if you remember that. It was
21 particularly a discussion you had with Judge
22 Strickler.
23 A. Okay, yes.
24 Q. And -- and, frankly, I was a little
25 confused, and I'm trying to understand it better. I

1 -- I recall that Dr. Katz based his benchmark on the
2 2012 settlement. Are you familiar with his report?
3 A. At some level, yes, not the details,
4 perhaps.
5 Q. Sure. Perhaps you can recall that that's
6 what he did and we had quite a bit of testimony on
7 Monday concerning the suitability of the 2012
8 benchmark.
9 A. Okay.
10 Q. But you're not -- you're not relying on
11 the 2012 settlement as a benchmark in this case, are
12 you?
13 A. Well, I think, again, it has that
14 structure, and I mean, I think if you look at page
15 47 of my report, I do talk about Phonorecords II
16 supporting the rate structure proposed by Google, at
17 the very bottom of page 47.
18 Q. But when you -- when you refer to your
19 benchmarks, that's not, you know, in the -- when you
20 introduce them and the heading and so forth, that's
21 not what you're primarily relying on, is it? I'm
22 not saying that it's irrelevant.
23 A. Yeah.
24 Q. I'm not saying you can't mention it. I'm
25 just saying that doesn't seem to be how your report

1 is constructed. Isn't that correct?
2 A. I -- yeah, I would -- I would say that
3 the way I, you know, talked about agreements was,
4 you know, the -- the Subpart A settlement, the
5 existing Google agreements. You know, I clearly
6 mention Phonorecords II. I wouldn't say it's as
7 central to what I'm doing, perhaps, as it might be
8 to other people, but, you know, I can't -- I
9 haven't, again, looked with that question in mind at
10 what Professor Katz was doing.
11 Q. Okay. Because I just -- I'm just trying
12 to understand how your testimony works.
13 A. Sure.
14 Q. So I'd like to focus on -- on your
15 proposal for Subpart B under -- Google's proposal
16 for Subpart B. Google has a proposal for Subpart C
17 too, doesn't it?
18 A. It does.
19 Q. But to the best of my recollection, I
20 didn't see that addressed today.
21 A. I did not go through every, you know, if
22 you'll call it category under which -- under B and C
23 for which -- I think Google has a proposal for each
24 category.
25 Q. Correct. But you didn't go through C at

1 all today, correct?
2 A. I did not go through C, that's correct.
3 Q. That didn't -- that didn't show up.
4 A. It did not.
5 Q. But you did reference C in your report,
6 correct?
7 A. Yes, I believe so.
8 Q. Okay. So trying to be responsive to your
9 testimony, I will focus on B. And that is for
10 standalone portable subscriptions mixed use, which
11 is, I think, probably the first demonstrative --
12 maybe it's the second demonstrative in your binder.
13 It's in your second demonstrative.
14 In any event, I have one as well. And if
15 you look in your binder, you know, just for a
16 starting point, if you -- if you look at
17 demonstrative 1, I think, you'll see a chart that we
18 have all become very familiar with.
19 A. So when you say my binder, you mean the
20 cross binder?
21 Q. Correct.
22 A. Okay, sorry, yeah. All right.
23 Q. So, hopefully, there's a tab in there.
24 A. There's -- actually, it seems to be
25 slipped in here.

1 Q. Good enough.
2 A. But it's demonstrative 1, yes.
3 Q. Okay. Great. So just to have a starting
4 point, that's -- that's what the current regulation
5 is, correct? That's what the current calculation
6 is?
7 A. Let's see. I believe that's right, yes.
8 Q. Okay. And Google's proposal is the
9 greater of 10 and a half percent of service revenue
10 and the lesser of 13 and a half percent of the total
11 amount paid for sound recording rights or TCC, which
12 is a term you're comfortable with, correct?
13 A. Yes.
14 Q. And the existing per month minima set
15 forth in the current regulation, which is 80 cents
16 per subscriber per month, correct?
17 A. Correct.
18 Q. So that's your proposal. You were also
19 proposing, or Google is also proposing, that the
20 resulting royalty pool would be subject to a
21 deduction for payments made for public performance
22 rights, correct?
23 A. Correct.
24 Q. That's not a change from the existing
25 regulation?

1 A. I think that's right.
2 Q. And Google is also proposing that when
3 you calculate revenues, so that what goes into that
4 very first part A calculation of 10 and a
5 half percent of music service revenue, that there be
6 a deduction of 15 percent of revenue for certain
7 costs of revenue such as app store fees, credit card
8 transaction fees, and carrier billing rates. Is
9 that right?
10 A. Yes, I think you read that correctly.
11 Q. And do I understand correctly that you'd
12 probably make that deduction right off the top?
13 A. Well, you make the deduction before
14 applying the 10.5 percent. And then that's what
15 would be in, I guess, what's here is A.
16 Q. Exactly. And, lastly, Google is
17 proposing that the 50 cent mechanical-only floor be
18 eliminated, correct?
19 A. Correct.
20 Q. So I've -- I've accurately described the
21 proposal?
22 A. I believe so, yes.
23 Q. Okay. So in order to compare Google's
24 proposal with the existing calculation, the first
25 thing we do is we deduct the 15 percent of revenue

1 shown in part A, and then -- correct?
2 A. No.
3 Q. No? Okay. Tell me where I'm wrong.
4 A. Well, you deduct what a given Service
5 might have as the applicable categories. As I
6 mentioned for Google, they would be, you know, 1 to
7 3 percent. For another Service, it could be
8 different but --
9 Q. Right.
10 A. So it's not necessarily 15 percent.
11 Q. I got it. So it's up to 15 percent?
12 A. Correct, which, you know, is one input
13 when you say clearly includes the number zero, but,
14 yes, it could be up to 15 percent.
15 Q. Sure, but -- but might more often include
16 the number 15?
17 A. It could if you have enough in those
18 categories.
19 Q. Right.
20 A. But, again, Google would not, for
21 instance.
22 Q. And it presents a sort of an attractive
23 target, doesn't it? If you know that you can deduct
24 15 percent pursuant to the statute, you might look
25 for ways to do it, correct?

1 A. You know, potentially but, again, you
2 have to fit into those categories.
3 Q. Sure.
4 A. In a reasonable way.
5 Q. In a reasonable way?
6 JUDGE STRICKLER: Who would -- who would
7 monitor whether -- under your proposal, whether or
8 not Google, for example, is falling into those cost
9 categories in a reasonable way?
10 THE WITNESS: I think it's probably a
11 legal question. I'm not maybe the best person to
12 answer, but I imagine there's some sort of
13 enforcement mechanism in general. I don't know that
14 that's the case, but, you know, in general, you
15 would hope there was some sort of enforcement
16 mechanism to -- you know, that people could
17 adjudicate disputes.
18 JUDGE STRICKLER: Let's stay in your
19 ballpark. Let's stay in the economics ballpark.
20 Isn't there a problem generally when you have -- in
21 the somewhat analogous of field rate regulation,
22 when there's -- when there's a question of including
23 costs to determine the appropriate rate of return,
24 that the -- that the calculation of costs becomes
25 problematic because there's an issue of raising

1 costs to reduce the -- the utility rate?
2 THE WITNESS: There is, but I think
3 that's because there -- there's a lot more
4 ambiguity. I mean, here these are pretty defined
5 categories that I think are well accepted in the,
6 you know, Internet and more generally areas.
7 And so I think it would be hard to make
8 up some new costs and try to pound it into one of
9 these categories. I think it's -- you know, they're
10 pretty circumscribed. But, you know, again,
11 hopefully, there's some mechanism to resolve any
12 kind of disputes that would arise.
13 JUDGE STRICKLER: You wouldn't have to
14 make up a new cost; you could just inflate an
15 existing cost, correct? Pay more than you otherwise
16 will, knowing that you'll get a rate benefit out of
17 it?
18 THE WITNESS: I mean, the problem is --
19 let's take something like credit card costs. I
20 mean, if you're Google and you go to the credit card
21 company, you know, I think it would be hard to argue
22 for a different rate for the subscription payments
23 than for other things. And you certainly don't want
24 to raise your rates for credit card expenses on
25 other things that you're doing.

1 So, you know, is it possible? I -- I
2 suppose. And as usual, maybe some sort of
3 benchmarking analysis could be used to make sure
4 somebody isn't doing that, but I don't view that as
5 too much of a concern.
6 JUDGE FEDER: Let's take app store fees
7 as an example. Google Play is effectively an app
8 store. Do they impute an app store fee to their
9 sales of music in order to reduce the amount of
10 revenue subject to the royalty?
11 THE WITNESS: I don't know. I'd have to
12 go back and look at how that -- that works and what
13 they're doing. You know, look, I would certainly be
14 -- it would be a concern, I think, if somebody -- if
15 you look and see somebody changing the way they're
16 doing something after -- after a regulation like
17 this changed. I mean, that would be something --
18 again, if I were somebody receiving the royalties, I
19 might say: Wait a minute, you know, we need to look
20 more deeply at that.
21 So I don't know enough about the
22 specifics to how that could possibly work to be able
23 to really tell you.
24 JUDGE FEDER: Okay.
25 BY MR. JANOWITZ:

1 Q. Dr. Leonard, still on the 15 percent
2 cost, you've said today and it's in your report that
3 the credit card fees are fairly small, between 1 and
4 3 percent, correct?
5 A. Yeah, I mean, credit card fees typically
6 are that level.
7 Q. Right. There are certainly a lot of
8 these -- these subscriptions are sold through the
9 app stores, correct?
10 A. Again, I would have to look at the
11 details of how the subscriptions are -- are done.
12 Q. Do you know whether or not subscriptions
13 are sold through app stores?
14 A. Well, again, if you're saying -- I'd have
15 to look at how -- for instance, Google Music, does
16 it count that subscription as going through the app
17 store in the same sense that other things go through
18 the app store? That I'm not quite sure of.
19 Q. That's a -- that's a different issue.
20 That's -- that's whether Google puts on a charge for
21 its own app store but it sells --
22 A. Right.
23 Q. I get that. But there are other
24 subscriptions; for example, Spotify.
25 A. Right.

1 Q. You can get Spotify from the Apple --
2 from iTunes, correct?
3 A. Yeah. I -- again, I'd have to go back
4 and check the details, but I think there were some
5 issues about they -- Spotify trying to move out of
6 that situation so they didn't have to pay those app
7 store fees.
8 Q. But that indicates that, in fact, those
9 fees have been paid?
10 A. Yes, it's possible Spotify paid those
11 fees.
12 Q. And also others may well have paid those
13 fees?
14 A. It's possible.
15 Q. Do you know what those fees are?
16 A. I haven't looked at what the Spotify fees
17 are that I can recall. I'm afraid I can't give you
18 an answer on that.
19 Q. Do you know whether or not they are
20 substantially in excess of 1 to 3 percent?
21 A. Again, I would have to go back and look.
22 I wouldn't feel comfortable giving you a yes or no
23 on that.
24 Q. So sitting here, do you have any sense,
25 if we had 15 percent as sort of the maximum, what

1 the likelihood is that we'd reach that maximum?
2 What the -- have you valued the components that
3 would go into that to give us a sense of whether or
4 not we're talking about 3 percent, 5 percent,
5 8 percent, or 15 percent?
6 A. Again, I've done it for Google in the
7 sense that my understanding is that it would be
8 limited to the credit card fees. For other
9 Services, I haven't looked at the details of that.
10 Q. Well, what you're saying is it's 1 to
11 3 percent for credit card fees. But what about the
12 other things? Because you're asking that other
13 things also be permitted to be deducted. So I'm
14 asking you have you valued and calculated what those
15 other things are and how much of the 15 percent
16 potential they would absorb?
17 A. And I'm saying for Google, there wouldn't
18 be any others, as I understand. It for other
19 Services, I can't say one way or another because I
20 haven't analyzed those other Services.
21 Q. Okay. So continuing in the changes to
22 the existing calculation, in item 2 -- and you
23 actually show this in a chart that's kind of helpful
24 in your presentation -- you -- you would change the
25 TCC, which is currently either 21 percent or

1 17.36 percent, and you would change that to a single
2 number, 13 and a half percent, correct?
3 A. Yeah. I mean, I should say I think the
4 reason there are two different numbers is it depends
5 on whether it's being applied to sound recording
6 payments before or after the -- certain things have
7 been removed, so that the 13.5 percent would
8 correspond to the 21 percent.
9 Q. That's what I was getting at. So -- so
10 it's a -- it's a diminution, not from 17.36 percent
11 but from 21 percent to 3 and a half -- 13 and a
12 half percent, correct?
13 A. That's -- that's correct.
14 Q. All right. And, of course, we eliminate
15 the mechanical-only floor.
16 So with respect to your reliance on the
17 Subpart A settlement, you provide an analysis, which
18 is your Exhibit 7 to your written direct statement,
19 which calculates -- let's take a look at it -- do
20 you have your -- do you have that from your --
21 A. Yes, I do. It's also stuck in the --
22 slipped in here.
23 Q. Let me see if I can find it. Okay. It's
24 your amended Exhibit 7, right?
25 A. Yes.

1 Q. Okay. And there are the two -- two forms
2 of it, which basically have the same numbers, it
3 would appear, but in the second one, you -- you
4 know, you highlighted a box on the price per song.
5 So then we'll -- we'll look at that one.
6 A. Okay, sure.
7 Q. All right? So what we have here is a
8 calculation based upon the royalty under Subpart A,
9 correct?
10 A. Yeah. I think -- I don't actually have
11 my demonstratives here in front of me, but I can do
12 it off of the exhibits.
13 Q. Do we have a demonstrative ourselves?
14 A. I do have Exhibit 7, so as long as it's
15 just -- yeah, we can put it up here. That's good
16 too.
17 Q. Is that the amended 7? I'm asking if our
18 demonstrative is the amended 7. It's a bit of a
19 problem.
20 I think we're safer using your exhibit.
21 A. Okay.
22 Q. If you don't mind.
23 A. Yeah, no, it's fine with me.
24 Q. Exhibit 7 as amended.
25 A. Yeah, I've got it, actually, because I do

1 have the amended report.
2 Q. Right.
3 A. -- in this binder here. So if I go to
4 Exhibit 7, I should be good. Okay.
5 Q. So we have a mechanical royalty rate
6 here, which is fixed by statute and which doesn't
7 change over time, correct?
8 A. Yeah, I mean, the structure of it, again,
9 because if one year they're longer songs --
10 Q. I understand. But subject to the fact
11 that there are longer songs and shorter songs --
12 A. Yes.
13 Q. -- it doesn't really change.
14 A. That's correct.
15 Q. So the -- what you're focusing on here is
16 the relationship between the royalty under the
17 statute and the price per song. And what you're
18 observing, if I understand you correctly, is that
19 the price per song from 2006 goes up to $1.10 in
20 2015, as a result of which you calculate that the
21 effective per song royalty is declining.
22 A. That is the result, yes.
23 Q. Okay. And if we look at the -- the last
24 line, you'll see that that effective rate goes from
25 9.6 percent in 2006, then it stays at 9.6 through

1 2008, and then it declines to 9.3, then to 8.8, then
2 to 8.7, then to 8.6, then to 8.5, and then in 2014,
3 it goes up to 8.8 percent. Then at 2015, it's down
4 a percentage, although it's higher than it was in
5 2013 and 2012 and as high as it was in 2011. Do you
6 see that?
7 A. I do.
8 Q. So did the -- nothing has happened to the
9 royalty rate, the actual -- not the rate, but the
10 royalty as fixed by statute during this time,
11 correct?
12 A. Yeah, basically, that's correct.
13 Q. So -- so the Copyright Owners are on this
14 ride up and down, as we can see from your Exhibit 7,
15 through no volition of their own; isn't that right?
16 A. Well, I mean, it's mainly down. You
17 know, there's obviously variation in the price for,
18 you know, the weighting between albums and singles
19 and whatnot. But, yeah, it has been down over time,
20 that's right.
21 Q. It has been down and it has been up?
22 A. Again, you know, it's a -- I'd say things
23 bounce around a bit, but it's definitely headed down
24 over time and continues to be in 2016.
25 Q. But -- but you -- you recognize that it

1 has gone up on occasion from year to year?
2 A. Yes, and the numbers have gone up on
3 certain occasions, but, again, the trend is down.
4 Q. And so -- and so whether it goes up --
5 whether the average effective number goes up or
6 whether it goes down has nothing to do with anything
7 that the Copyright Owners do, does it?
8 A. Well, but, I mean, you know, in an
9 apportionment situation, I can be providing a
10 certain piece of things and what other people are
11 providing can affect my apportionment -- the part
12 that's apportioned to me, and that can certainly
13 happen.
14 Q. Sorry, perhaps you didn't understand my
15 question. What I'm asking you is this calculation
16 that you do at the bottom of your Exhibit 7, where
17 the effective rate goes down, mainly; goes up a bit,
18 that has nothing to do with anything that the
19 Copyright Owners have done or not done, correct?
20 It's math. That's all it is?
21 A. I guess I disagree with that.
22 Q. Well, then tell me how.
23 A. Okay. Because the Copyright Owners have
24 agreed to the 9.1 cents, you know, and the rest of
25 the Subpart A structure as time has gone on. So

1 it's certainly as a result of something they've
2 done. They've agreed to that particular number,
3 knowing, again, what's -- what has happened over
4 time and, frankly, what's expected to happen in the
5 future.
6 Q. Well, are you telling me that they have
7 the right to opt out if they should decide -- if
8 they should perceive that the rate, that the
9 effective rate is declining?
10 A. I'm telling you that they settled for the
11 9.1 cents as recently as 2016.
12 Q. But your chart doesn't go to 2016. It
13 covers 2006 to 2015.
14 A. Correct.
15 Q. And so I'm asking you, very simply, it's
16 really a simple question, whether the -- the
17 percentages that you show here are anything that
18 during the time that the statute was in effect, the
19 Copyright Owners had any control over?
20 A. I mean, again, I would -- would just
21 reiterate my answer, that I think they had input
22 into the 9.1 cents. You know, they had control over
23 their actions as deciding, for instance, you know,
24 whether to litigate something, how to litigate that
25 -- that thing, whether to settle. And my

1 understanding is that -- you know, that, obviously,
2 certain decisions were made and we end up with the
3 9.1 cents continually throughout time.
4 That didn't just happen. It happened in
5 part because of decisions on the part of Copyright
6 Owners.
7 Q. All right. I don't want to waste any
8 more time on this point.
9 If the price of downloads declined during
10 this period of time because downloads fell out of
11 favor with the consumer, the copyright owner would
12 still get 9.1 cents per PDD; is that correct?
13 A. If the price of PDDs had fallen, then
14 that certainly would, again, be -- well, and the
15 same 9.1 cents had been agreed to, then that would
16 be the math, but, you know, maybe the 9.1 cents
17 wouldn't have been agreed to in that event. That's,
18 of course, not what really happened. And so it's
19 not a concern, I think.
20 Q. So -- but we're not dealing with a
21 hypothetical here, right? We're dealing with what
22 actually occurred in the period from 2006 to 2015?
23 You're putting this forth as real data, correct?
24 A. This, yeah, I mean, and no disrespect
25 intended, but, I mean, you asked me if prices of

1 PDDs had fallen. That is a hypothetical because,
2 you know, again, you're right in the sense that
3 there were times when it went down a little bit,
4 but, you know, the overall trend is clearly --
5 sorry, it went up a little bit, but the overall
6 trend is -- sorry.
7 The overall trend is upward. There were
8 few, occasional situations where it went down
9 because of the -- the weighting really.
10 Q. Dr. Leonard, the -- the price of PDDs
11 under Subpart A, that's a unit price, is it not?
12 A. The price for a PDD is the price for a
13 PDD. That's correct.
14 Q. Right.
15 A. And if your definition of unit is the
16 download itself, not -- not clearly the play of that
17 download.
18 Q. Sorry, I didn't -- I didn't quite hear
19 you.
20 A. It's not a price per play of the
21 download. It's a price for the download itself.
22 And then --
23 Q. Right.
24 A. -- the user is free to play it as many
25 times as the user would like.

1 Q. Right. But at the point where it's being
2 sold to the user, it's being sold on a unit basis,
3 correct? Unit being the download.
4 A. Yes, the price is paid for download, and,
5 you know, on the subscription price, the price is
6 for a subscriber. And, you know, those are the two
7 elements of -- of units in those cases.
8 Q. Does the fact that the PDD is a unit cost
9 or unit price, does that distort the market, in your
10 opinion?
11 A. Well, I would say, first of all, that's
12 a -- you know, again, not as much as a per play
13 would be. If you tried to charge per play on a PDD,
14 I think that would -- I'm not sure I'm going to
15 adopt the usage "distort," but I think that would
16 lead to less consumption of PDDs.
17 By pricing at the level of PDD and giving
18 people, you know, basically unlimited access to
19 listen as much as they want once you -- they
20 purchased the PDD, I think that's an improvement in
21 that sense that you'll get more consumption.
22 And streaming in some sense is the
23 evolution of next step and the evolution of that,
24 which is now we've got -- you know, somebody pays a
25 price for access to listen to the library as much as

1 they want. And, again, I think that's going to lead
2 to more consumption of music by consumers.
3 Q. So I take it that what your answer is
4 that no, the fact that the PDD is a unit price does
5 not lead to distortion with respect to PDDs,
6 forgetting about streaming for the moment?
7 A. I guess, again, it's -- you have to say
8 relative to -- to what?
9 Q. That's not my question.
10 A. Okay.
11 Q. I'm asking you consider it alone.
12 A. But, I mean, distortion means -- that
13 means you have something in mind that's, you know, a
14 but-for situation. It's hard to evaluate that
15 unless you tell me what the but-for situation is.
16 Q. All right. If you can't answer the
17 question, you can't answer the question.
18 The royalties on Subpart B are a
19 percentage of revenue, correct?
20 A. You mean under the current --
21 Q. Under the current.
22 A. Subject to the minima, yes.
23 Q. Yes, okay. So with respect to Subpart A
24 and PDDs, an entrepreneur who has a mechanical right
25 to a PDD can go out and sell it for as much as he

1 can get, correct?
2 A. I'm sorry, sell it to who?
3 Q. To a consumer.
4 A. Sorry, could you restate the question? I
5 think I'm confused as to --
6 Q. If you -- if a PDD is sold, say, on
7 iTunes --
8 A. Okay.
9 Q. -- right? The -- the person who controls
10 the PDD, can set that price, correct?
11 A. Oh, so you mean, sorry, like the retail
12 store selling the PDD --
13 Q. Correct.
14 A. -- can determine the price of that?
15 I think, ultimately, you know, there's a
16 lot of legal issues tied up in all this and there
17 have been various problems, both here and elsewhere.
18 But I think, ultimately, the retailer is supposed to
19 be able to determine the price.
20 Q. And if I had -- if I had my own, you
21 know, retail store, you know, digital retail store,
22 and I had music that I owned, that I controlled,
23 that I was going to sell through the store, I could
24 charge any price that I wanted and I could keep all
25 of the profit, correct? Certainly, as between -- as

1 between me, the -- the retailer, and the music --
2 the Copyright Owners?
3 MR. WETZEL: Objection to form of the
4 question.
5 THE WITNESS: So just to be clear, so
6 you're saying you're the retailer selling PDDs.
7 You've obtained the necessary rights.
8 BY MR. JANOWITZ:
9 Q. Mechanicals, exactly.
10 A. Okay. And I take it the sound recording
11 rights and whatever else you would need.
12 Q. Let's assume I have those too.
13 A. Okay. And your question is simply at
14 that point, I could charge as much as I wanted to
15 for the PDD? I mean, you know, I don't know whether
16 there are -- in those kind of agreements, whether
17 there can be, you know, restrictions on the price
18 that are paid at -- in other words, that can be
19 charged at retail, some sort of retail price
20 maintenance system --
21 Q. Assume there are none.
22 A. There are none, okay. So if there are no
23 legal constraints, then I think by definition the
24 retailer would be free to set whatever price they
25 wanted to.

1 Q. Right. And whatever profit that I as the
2 retailer would realize would be mine to keep; I
3 wouldn't have to share it with the Copyright Owners
4 who I got the mechanical royalty -- license from,
5 correct?
6 JUDGE STRICKLER: Are you talking about
7 under the Subpart A per unit?
8 MR. JANOWITZ: Subpart A, exactly, Your
9 Honor.
10 THE WITNESS: Assuming you've already
11 reached some sort of agreement with the rights
12 owners, you know, that already establishes the way
13 things are going to be shared, so whatever is left
14 over after that would be -- you know, again, subject
15 to whatever other obligations you have, I would
16 imagine would be the retailer's to keep, if that's
17 your question.
18 BY MR. JANOWITZ:
19 Q. Right. On the other hand, in the Subpart
20 B regulation as it exists and as Google proposes
21 that it continue, the streamer who is providing
22 access to the streams to the consumer has to share
23 revenues with the Copyright Owners, correct?
24 A. That's the way the -- again, the royalty
25 is calculated as a percentage of revenue, but,

1 again, you know, this is -- in a way, this is
2 semantics because you -- you know, you can either
3 have -- you can pay royalties in different ways.
4 Q. But I'm talking about the way that it is
5 currently paid under Subpart B. That's a percentage
6 of revenue. So when a dollar comes in, I have to
7 share -- and I'm the streaming company, I have to
8 share that on some basis as defined in Subpart B
9 with the Copyright Owners, correct?
10 A. Again, subject to the per-subscriber
11 minima --
12 Q. Of course.
13 A. -- and other things, but, yes.
14 Q. Okay. So that's different, isn't it,
15 from what goes on in Subpart A, where the person who
16 is selling on the music to the consumer has the
17 ability to recognize and keep whatever profits he
18 can because he doesn't have to share revenues with
19 -- with the people who are giving him the music,
20 right?
21 A. But in -- you know, selling a PDD, of
22 course, you're going to take into account the costs
23 that you're going to incur when you -- when you do
24 that, just like when somebody decides what price
25 they're going to charge for streaming, they're going

1 to take account of the fact that there's some
2 percentage of royalty that they're going to have to
3 -- to give up. So, I mean, the considerations are
4 similar.
5 Q. But when you --
6 JUDGE STRICKLER: Excuse me --
7 MR. JANOWITZ: I'm sorry, Your Honor.
8 JUDGE STRICKLER: May I?
9 MR. JANOWITZ: Of course.
10 JUDGE STRICKLER: Isn't one of the
11 differences between the Subpart A structure and the
12 Subpart B structure, beyond what we're talking about
13 now but as a necessary result of what we're talking
14 about now, a difference in the risk that's faced by
15 the copyright owner? The copyright owner under
16 Subpart A faces a risk in the change of quantity
17 sold downstream -- greater quantity, greater sales
18 per unit, more money; fewer sales, less money --
19 whereas under Subpart B, the risk is a revenue risk?
20 What is total revenue going to be? Are you going to
21 have more or less subscribers? Are you going to
22 have a higher or lower price per subscription, which
23 will impact revenue?
24 So when you make the comparison of
25 Subpart A to Subpart B, wouldn't it be necessary

1 from an economic point of view to analyze what the
2 difference is in the risk that's faced by the
3 copyright owner? And maybe "risk" is not quite the
4 right word; maybe it's the variance or the deviation
5 that they face in terms of return now that they've
6 exchanged one risk for another?
7 THE WITNESS: I mean, what's interesting,
8 though -- I mean, so if I reduce my price a little
9 bit or let's say -- sorry, let's say I increase my
10 price a little bit, the quantity goes down, right?
11 Revenue actually is going to change somewhat less
12 than that in some sense because the -- the higher
13 price offsets the lower quantity.
14 So I think it's a somewhat -- I mean, you
15 could do this. It doesn't seem to me that it's
16 going to matter a huge amount. And, you know,
17 percentage of revenue royalty structures I would say
18 are -- in my experience in IP licensing, are, you
19 know, obviously very prevalent and probably the most
20 prevalent method.
21 JUDGE STRICKLER: Are there particular
22 aspects of a -- of a market for intellectual
23 property downstream that make a percentage of
24 revenue approach more or less appropriate upstream?
25 THE WITNESS: You know, I think if there

1 are concerns about, you know, big changes occurring
2 in the marketplace, sometimes that leads to
3 gravitation towards a percentage royalty, but I
4 think it really can vary a lot in circumstances, and
5 it's hard to, I think, have a bunch of -- small set
6 of rules that would tell you which way one would go
7 versus the other.
8 JUDGE STRICKLER: Have those factors that
9 influence whether or not you have a personnel of
10 revenue royalty rate upstream -- those factors that
11 exist in the downstream market, have they changed
12 from the 2012 settlement to today?
13 THE WITNESS: I -- I don't believe so,
14 no.
15 JUDGE STRICKLER: Thank you.
16 BY MR. JANOWITZ:
17 Q. Dr. Leonard, the observed decline in the
18 effective royalty per play would not be observed
19 under the current Subpart B structure because
20 streaming royalties are paid on the basis of
21 revenue, correct?
22 So in your example, the increase in the
23 price of music to the consumer would actually result
24 in higher revenues to the Copyright Owners under
25 Subpart B? Is that correct?

1 A. Well, two things. I mean, one is the
2 higher revenue per unit but not necessarily higher
3 royalties overall because, you know, increase in
4 price may be leading to a decline in -- in
5 quantities, as we were just talking about. So it
6 would -- it would depend.
7 And then, secondly, I mean, again, I
8 think you can't assume that the 9.1 cent royalty was
9 set in a vacuum. I mean, it was set knowing facts
10 such as that, you know, PDD prices have gone up and
11 it's not too surprising that they would continue to
12 go up, and yet the Copyright Owners have agreed to
13 that structure in 2016.
14 So I think you have to take the whole
15 thing considered together and say there's an
16 implicit acknowledgment there that in this
17 percentage of royalty terms, when you converted it
18 to that, that the musical work is getting a smaller
19 percentage or is entitled to a smaller percentage of
20 that today than it was perhaps earlier on.
21 Q. Take a look at your amended Exhibit 7
22 again, which covers 2006 through 2015. If I was a
23 -- an owner of mechanical rights in 2006, I would
24 see -- presuming that this price per song were
25 evident in the market, I would see a price of 99

1 cents for the price per song as it was sold to the
2 consumer, correct?
3 A. That's correct.
4 Q. And in 2007, if I looked at the market
5 again, I would see that it was still 99 cents,
6 wouldn't I?
7 A. You would.
8 Q. And if I looked at it again in 2008, I
9 would see that it was still 99 cents, correct?
10 A. That's what it would say, yes.
11 Q. Okay. And so, as the rights owner, I
12 have limited vision. I can see what's going on
13 around me, correct?
14 A. Well, I mean --
15 Q. Put another way, would I know, would I
16 have a way of knowing, that in 2009, these records
17 would be selling for $1.03?
18 A. You may very well. I mean, there's
19 people --
20 Q. Tell me how I would know that.
21 A. Well, people do market analysis all the
22 time to have a sense of what's going to happen in
23 the future. But I mean, the other thing is by 2016,
24 they clearly know prices are, you know, at $1.10, or
25 I think they've gone up a little bit more since

1 then.
2 Q. That's not a question I asked you,
3 Dr. Leonard.
4 A. Okay.
5 Q. Thank you. Dr. Leonard, you didn't use
6 this observed decline in the effective royalty rate
7 per song to arrive at the Google proposal, did you?
8 A. To arrive at the Google proposal?
9 Q. Correct.
10 A. I did not, no.
11 Q. And to your knowledge, Google didn't use
12 this analysis to arrive at a rate either, did it?
13 A. I can't say I know exactly how Google
14 arrived at its proposal.
15 Q. Do you know anything about how Google
16 arrived at the proposal?
17 A. No. I mean, I don't know what was in the
18 minds of whoever at Google signed off on the
19 proposal.
20 Q. And, In fact, with respect to the
21 percentage of revenue headline rate, the 10 and a
22 half percent, Google is proposing that it remain the
23 same and notwithstanding the analysis you did in
24 Exhibit 7, and you are supporting that proposal,
25 correct?

1 A. That's correct. Well, in the sense that
2 I think that that's reasonable in light of such
3 things as Exhibit 7.
4 Q. Right. So the purpose of the calculation
5 is to support an argument that if you compare
6 the percent of revenue received by the Copyright
7 Owners under Subpart A to the headline right -- rate
8 under Subpart B, the owners are well served by the
9 10 and a half percent of revenue, correct?
10 A. You know, I don't -- I think what I'm
11 looking at is that a reasonable rate in light of the
12 801(b)(1) factors, if what you mean is that
13 represents -- together with the minima, represents,
14 you know, a reasonable compensation for the
15 contribution of musical works, then I'd say yes to
16 that.
17 Q. Now I'd like to talk to you a little bit
18 about the factors which should be present in a
19 suitable benchmark. I've looked at your report, and
20 that's really what I'm working off, primarily, other
21 than the slides today --
22 A. Sure.
23 Q. -- which overlap. In paragraph 47, page
24 30, and I'm hoping that's amended version, I think
25 it is, you say that an agreement which is negotiated

1 -- and I'm going to give you these -- these as
2 factors that you considered --
3 A. Sure.
4 Q. -- as -- as leading to a suitable
5 benchmark. One is the absence of any constraints in
6 the -- in the negotiation, correct?
7 A. Yes.
8 Q. In an arm's-length negotiation, correct?
9 A. Yes.
10 Q. Negotiated in the open market, correct?
11 JUDGE STRICKLER: Which paragraph are you
12 on?
13 MR. JANOWITZ: I'm hoping I'm looking at
14 paragraph 47. I will take a look and make sure that
15 that's the case.
16 THE WITNESS: Yeah, it is 47, at least
17 the first two. Okay. I see the third one too.
18 BY MR. JANOWITZ:
19 Q. Okay.
20 A. Yeah, I think that is -- yeah, that's
21 there.
22 Q. Yes, it's in the section -- oh, you've
23 got it, okay.
24 And what you say is that these factors,
25 if present, can potentially be used to form a

1 benchmark, correct?
2 A. That's right.
3 Q. Not necessarily, but potentially,
4 correct?
5 A. Correct.
6 Q. Okay. In addition, at paragraph 73, page
7 46, when talking about using existing deals as
8 benchmarks, you rely upon the following factors.
9 Are you with me?
10 A. Let's see. Sorry, 73? Page 46? Yeah,
11 I'm -- I'm there.
12 Q. So that one is that they involve similar
13 parties. Another is that they're -- they are
14 similar services. And similar rights to those in
15 the 115 license. So let's take a look at Subpart A
16 -- Subpart A settlement in light of those standards.
17 In the case of the Subpart A settlement,
18 there were constraints on the Copyright Owners,
19 weren't there? In other words, the Subpart A
20 settlement was made in the shadow of the compulsory
21 license, correct?
22 A. Well, I think as far as constraints, I'm
23 talking more about in this -- when I mention that as
24 far as market power and holdup and that kind of
25 thing.

1 I mean, since one of the points here is
2 to get to a result that's consistent with the
3 801(b)(1) factors, to the extent that that played a
4 role in the settlement in 2016, that would be a
5 positive from my point of view. So that's not a
6 constraint in the sense I was referring to in that
7 earlier paragraph.
8 Q. Well, let's see if we can get on the same
9 page in terms of what a constraint means.
10 A constraint is simply something that
11 acts as a force on something else, right? It holds
12 something back or limits somehow the action of
13 somebody to do something. Is that a fair statement
14 of what a constraint is?
15 A. Well, there could be a distinction here
16 between, though, a general definition of constraint
17 and what I had in mind when I was writing this. So,
18 yes, I would say your description probably fits a
19 dictionary definition, but what I was talking about
20 are things like, you know, get market power and
21 holdup and things like that, that you would want to
22 read out in order to make sure that an agreement
23 reflected the appropriate relative contributions of
24 the parties.
25 Q. Well, I'm not -- I'm not necessarily

1 asking what you were thinking about --
2 A. Okay.
3 Q. -- as a constraint. I'm asking you
4 whether you would agree that the existence of the
5 statutory rate and the shadow thereof is a
6 constraint on bargaining with respect to a Subpart A
7 deal?
8 A. Well, so the settlement of the Subpart A
9 in 2016, I think it's -- certainly the parties would
10 have contemplated what would have happened, had the
11 proceeding gone through to the end, that that would
12 have been a -- played a factor in the negotiations.
13 But, again, from my perspective, that's a positive.
14 Q. Well, I understand constraints can be
15 positive or they can be negative. If somebody is
16 about to jump off a railroad platform in front of a
17 train and I stop them, that's a good thing. Right?
18 So I'm not -- I'm not -- I would hope --
19 A. Yes.
20 Q. So I'm not trying to inject value into
21 constraint at this point. I'm just trying to
22 understand how the parties are functioning. So
23 getting back to the statutory rate and the shadow of
24 the compulsory, you would agree, would you not, that
25 that would have an impact on the Copyright Owners'

1 negotiation of a settlement?
2 JUDGE STRICKLER: Is that a different
3 question you're asking him now as to whether or not
4 the shadow is a constraint or whether the shadow is
5 an impact?
6 MR. JANOWITZ: Impact and constraint, I'm
7 using -- they are not synonymous, but I'm using them
8 within the same question. In other words, I believe
9 it was a constraint, and that it had an impact.
10 So --
11 JUDGE STRICKLER: You believe it was a
12 constraint. If the witness --
13 MR. JANOWITZ: And I'm asking -- I'm
14 asking the witness.
15 JUDGE STRICKLER: If the witness doesn't
16 -- treats them as interchangeable, then I --
17 MR. JANOWITZ: Sure.
18 JUDGE STRICKLER: -- then I'll understand
19 the back and forth.
20 BY MR. JANOWITZ:
21 Q. Sure. I -- if you have a problem with my
22 using impact and constraint perhaps alternatively,
23 let me know. But if we put aside, you know,
24 constraint perhaps, because that's not the word you
25 were thinking about, that's not the way you were

1 thinking about the word "constraint," are you -- do
2 you -- do you agree that the existence of the
3 statutory rate and the shadow of it had an impact on
4 the Copyright Owners in their negotiations?
5 A. And we're talking now about the Subpart A
6 settlement --
7 Q. Correct.
8 A. -- in 2016? Well, I don't think the
9 existing rate necessarily did. What had a, you
10 know, constraint was that -- or what would have an
11 impact, I guess, potentially, is the concept if we
12 don't reach agreement, we're going to go into this
13 proceeding and a rate will be set according to the
14 801(b) factors.
15 Q. And would that have an impact?
16 A. It certainly could. I mean, I think if
17 you're the -- either party, you're not -- you're
18 going to say, look, we're not going to eventually
19 prevail if we offer some sort of setup that's -- I
20 mean, in the negotiation, if we offer some sort of
21 setup that's really far from where we think things
22 will end up in the rate setting. So that would --
23 that would certainly -- you know, it's -- it's like
24 any time there's a negotiation, if there is some
25 sort of backstop, that backstop can influence the

1 outcome of the negotiation.
2 Again, in this case, from my perspective,
3 that makes it a better benchmark.
4 Q. I understand.
5 JUDGE STRICKLER: Excuse me, counsel,
6 just so we can clarify and link up his oral
7 testimony with his written testimony.
8 Dr. Leonard, do you address the shadow or
9 the constraint or the -- the impact of the statutory
10 license on the negotiated settlement rates anywhere
11 in your direct testimony?
12 THE WITNESS: I -- I would have to go
13 back and -- again, I can't remember everything
14 that's in here versus in other places, but -- so,
15 again, maybe I can check at lunch and let you know.
16 But certainly, I think I said that those things, you
17 know, fell under the rubric of the 801(b)(1) factors
18 and that that -- as does -- you know, as we are
19 here, and that that's a -- you know, something that
20 adds to the usefulness of it as a benchmark.
21 JUDGE STRICKLER: Well, if you notice it
22 at lunch, you know --
23 THE WITNESS: Okay, I shall.
24 JUDGE STRICKLER: -- add it to your oral
25 testimony so we can find it.

1 THE WITNESS: Excellent.
2 MR. JANOWITZ:
3 Q. Talking again about the shadow of the
4 compulsory and the existence of the statute, do you
5 believe that that affects whether or not this is
6 truly an open market transaction, the settlement in
7 2016?
8 A. Well, I think it is -- I mean, it depends
9 what we're talking about here by open market
10 transaction. Again, there can be open market
11 transactions where one party, you know, has a
12 constraint on them so that -- you know, for
13 instance, they are subject to holdup by the other
14 party.
15 You can have an open market negotiation
16 that's affected by that constraint and you end up
17 with, you know, as the concern, standard essential
18 patents that people end up paying royalties that are
19 way too high. So I'm not sure what you mean
20 exactly.
21 Q. Okay. So the fact that there is a
22 constraint does not necessarily change it from an
23 open market transaction?
24 A. Again, it's certainly not -- I think if
25 you go back and read my description there, the open

1 market part was in a different sentence entirely
2 from the constraint part. So, yes, they're not
3 mutually exclusive.
4 Q. So if somebody is bound and gagged and,
5 you know, taken to the conference room to negotiate,
6 and the negotiation is, you know, open to the public
7 and it's maybe even televised, that could well be an
8 open market transaction?
9 A. It sounds to me like there was some
10 illegal activity there. But certainly, you know,
11 somebody who has a -- market power legally, for
12 instance, that's well accepted that that entity can
13 charge whatever price the market will bear.
14 And, you know, that's -- that's the
15 outcome. And I think in -- if the same is true in
16 situations of where it's holdup not created by
17 anything, subterfuge, but just a fact of life, then
18 I think at least in certain settings, the person who
19 has -- can use that as leverage can get a higher
20 price or lower price as the case may be.
21 JUDGE STRICKLER: You just used the
22 phrase "holdup," correct?
23 THE WITNESS: Yes.
24 JUDGE STRICKLER: What -- can you define
25 holdup?

1 THE WITNESS: Yeah. Holdup is when you
2 have two parties and they're thinking about entering
3 a transaction, and one of them has made some kind of
4 investment that's specific to the transaction and
5 that's, you know, irreversible or sunk.
6 And in that kind of case, they have a bit
7 less leverage in the negotiation because they can't
8 undo those -- those costs. If they wanted to, for
9 instance, do something different, they would have to
10 make a different set of specific investments. That
11 leaves them open to, depending on which side they're
12 on, if they're a buyer, of charging -- or being
13 charged a higher price than they would otherwise be
14 able to negotiate.
15 BY MR. JANOWITZ:
16 Q. With respect to the negotiation between
17 the Copyright Owners and the interactive service
18 providers, do you think that the Copyright Owners
19 have market power?
20 A. Sorry, in which negotiation? Just to be
21 clear.
22 Q. The negotiation that will take place in
23 -- a hypothetical negotiation that would take place
24 between the owners, the Copyright Owners, and the
25 interactive streamers with respect to establishing a

1 mechanical royalty.
2 JUDGE STRICKLER: Can I just get a
3 clarification on the question?
4 MR. JANOWITZ: Of course.
5 JUDGE STRICKLER: The hypothetical
6 negotiation that you have in mind, is that between a
7 discrete copyright owner -- a group of Copyright
8 Owners and one streaming service or all Copyright
9 Owners?
10 MR. JANOWITZ: All. Yes, all.
11 JUDGE STRICKLER: So it's an industry --
12 MR. JANOWITZ: Exactly.
13 JUDGE STRICKLER: It's the industry?
14 MR. JANOWITZ: Yes.
15 JUDGE STRICKLER: Okay.
16 THE WITNESS: That -- I wouldn't say
17 that's a question I've specifically analyzed, but I
18 think I would be concerned if a group of Copyright
19 Owners got together to jointly negotiate a price,
20 you know, particularly if they were -- just the
21 mechanical right was being negotiated.
22 BY MR. JANOWITZ:
23 Q. And you would be concerned why?
24 A. Because, potentially, individual works
25 are -- could be substitutes for each other. There's

1 the Cournot complements problem, you know, if one
2 group with market power is getting together and
3 negotiating the mechanical right and some other
4 groups are negotiating the performance rate, you
5 could end up with an overall royalty rate that's too
6 high. It's the royalty stacking problem.
7 Q. Let's look at the -- the parties to the
8 negotiations. With respect -- comparing the Subpart
9 A settlement to the proceeding we're in now --
10 JUDGE BARNETT: Before we get into the
11 parties, --
12 MR. JANOWITZ: Sorry.
13 JUDGE BARNETT: Why don't we take our
14 lunch break. We'll be at recess for an hour.
15 (Whereupon, at 12:01 p.m., a lunch recess
16 was taken.)
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1 AFTERNOON SESSION
2 (1:07 p.m.)
3 JUDGE BARNETT: Good afternoon. Please
4 be seated.
5 Mr. Janowitz, are we continuing with
6 cross-examination?
7 MR. JANOWITZ: Yes, Your Honor.
8 JUDGE BARNETT: I'm sorry, yes, please
9 proceed.
10 MR. JANOWITZ: Thank you.
11 BY MR. JANOWITZ:
12 Q. Good afternoon, Dr. Leonard.
13 A. Good afternoon.
14 Q. At the break I was just about to ask you
15 about the parties to the Subpart A settlement and to
16 this proceeding. They are not the same parties; is
17 that correct?
18 A. I would say the licensor in some sense is
19 the same. The licensee, at least as I understand
20 it, was not or the other counterparty was not.
21 Q. Okay. To be specific, the Copyright
22 Owners, I think when you say licensors, that's who
23 you are talking about?
24 A. Yes.
25 Q. So the Copyright Owners were in both --

1 are in both proceedings?
2 A. Correct.
3 Q. But the counterparties are different,
4 correct?
5 A. That's my understanding, yes.
6 Q. Okay. So in Subpart A, the
7 counterparties were the labels?
8 A. That's my understanding, yep.
9 Q. And the labels are actually licensors of
10 a product or of a right that is a complement to the
11 rights of the, what we refer to as the Copyright
12 Owners, correct?
13 A. Yes. Yes.
14 Q. Okay. And in this proceeding we have the
15 Copyright Owners and we have the interactive
16 streaming services, correct?
17 A. Correct.
18 Q. And they are not in the Subpart A
19 proceeding?
20 A. The streaming services were not, that's
21 right.
22 Q. And with respect to the services that are
23 being offered, and by that I mean the nature of the
24 services, rather than the identity of the people
25 providing it, right?

1 A. Yes.
2 Q. There is -- there is also no congruence
3 with respect to that; is that correct?
4 A. I guess you need to tell me what you mean
5 by the service.
6 Q. In other words, in the Subpart A
7 proceeding, they were setting the royalty for
8 downloads, and in the -- in this proceeding, we're
9 setting rates for a different kind of music service;
10 namely, interactive streaming?
11 A. Yes. So, again, I discussed that, those
12 are the different services, the two services that
13 were at issue in the respective proceedings.
14 Q. Right. And in the Subpart A settlement,
15 that applied to the sale of a single digital
16 download or CD track; isn't that correct?
17 A. The royalty was supposed to be per EDD.
18 Q. And in the Subpart A hearing and
19 settlement, the royalty confers an ownership
20 interest in the person who pays the royalty,
21 correct?
22 A. Sorry, in the subpart --
23 Q. In the Subpart A settlement, the royalty
24 confers an ownership interest, correct?
25 A. I'm not sure what you mean by that.

1 Q. In other words, a PDD is an ownership
2 interest? I think you testified to that this
3 morning.
4 A. Sorry, when you buy a PDD, the consumer
5 has --
6 Q. An ownership interest in the PDD?
7 A. There is some sort of ownership aspect to
8 it.
9 Q. Yes. And with respect to in the -- in
10 the interactive streaming, the consumer does not
11 acquire an ownership interest, correct?
12 A. Yeah, my understanding is not.
13 Q. Okay. Have you done any analysis to
14 determine the relationship between the downloading,
15 downloading a track and having access to a stream of
16 the same music that supports your analysis of the
17 relationship between revenues under Subpart A to
18 revenues under Subpart B?
19 A. Well, I think if you -- if I understand
20 what you are suggesting --
21 Q. What I am asking, Dr. Leonard, if it
22 isn't clear, I am asking if you, Dr. Leonard --
23 A. Yes.
24 Q. -- have performed such an analysis?
25 A. And, again, analysis, just so I have it

1 clear in my head?
2 Q. Of the relationship between downloading a
3 track and having access to a stream of the same
4 music.
5 A. Okay. And do you mean from a legal
6 perspective or any perspective?
7 Q. From -- presumably from the perspective
8 of an economist.
9 A. Okay. So, yes.
10 Q. You have done that?
11 A. Yes.
12 Q. You have done a study?
13 A. Well, I have done an analysis, yes.
14 Q. Have you -- have you included that
15 analysis in your report?
16 A. Again, I don't know to the extent to
17 which things are in this report or the rebuttal
18 report, but I think I certainly discussed why I
19 think they are comparable in important respects.
20 Q. And have you done an econometric study of
21 this?
22 A. I wouldn't say I have done an econometric
23 study, no.
24 Q. Let's take -- let's turn our attention
25 now to the 13 and a half percent TCC that is part of

1 the Google proposal. We're now looking, and if I
2 could direct your attention again to the calculation
3 that is demonstrative 1 of our booklet.
4 A. Oh, okay.
5 Q. And you also might want to look at the
6 demonstrative where you compare them in yours. It
7 is up to you.
8 A. Sure.
9 Q. So Google proposes to replace the TCC
10 prong, which is currently either 21 percent or
11 17.36 percent, depending upon whether there is a
12 pass-through of the mechanical royalty license,
13 correct?
14 A. Correct.
15 Q. And as I think we established earlier,
16 that would be replaced by a single number, which
17 would apply to, I guess, to the 21 percent, but
18 would also apply to the -- to the 13, 17.36 percent
19 too, right?
20 A. No, at least not in my view it shouldn't.
21 Q. Okay. So it applies to the 21 percent,
22 which is if licenses are not a pass-through?
23 A. That's correct.
24 Q. And that's where you would replace the
25 21 percent by the 13 and a half percent?

1 A. Right.
2 Q. Okay. And to be clear for the record, we
3 both understand that the TCC is a measure of the
4 payments by the interactive services to record
5 companies for sound recordings; is that correct?
6 A. That's what the 21 percent is applied to,
7 yes.
8 Q. Right. And that's also what the 13 and a
9 half percent would be applied to, correct?
10 A. Correct.
11 Q. All right. And as I recall, Google
12 proposes to keep the 80 percent -- I'm sorry, the 8
13 cents prong in place, correct?
14 A. The 80 cent prong, yes.
15 Q. Yes, 80 cents. And the 21 percent and
16 the 17.36 percent are sometimes referred to as
17 minima, are they not?
18 A. You know, together with the 80 cents
19 doing the lesser of --
20 Q. Yes.
21 A. -- that creates a minima, yes, minima
22 number.
23 Q. I understand. So the 13 and a
24 half percent would be the new minimum?
25 A. Well, I mean, unless the 80 cent -- 80

1 cents is binding, in which case that would -- the
2 minimum wouldn't change, but, yeah, 13.5 percent
3 replaces 21 percent in this formula.
4 Q. And the 80 cents acts as a cap on the
5 TCC, correct?
6 A. Yes, in the sense that if the percentage
7 of TCC part of this is greater than the 80 cents,
8 then the 80 cents applies.
9 Q. Okay. And this calculation, this prong
10 provides a means by which the Copyright Owners will
11 be protected from a decline of reported service
12 revenue past a certain point; is that correct?
13 A. Yeah, so just holding everything else
14 constant, if revenue, including subscribers' revenue
15 declines, then there will become a point at which
16 the minimum kicks in, yes.
17 Q. Okay. And we know that there is at least
18 one service, for example, that reports zero service
19 revenue, so in that kind of a situation, for
20 example, the minima would be triggered, right?
21 A. I believe there is -- yeah, I mean if
22 there is zero revenues, then you are looking at a
23 different way of figuring out the royalty. And,
24 yeah, obviously this would in that case the -- this
25 prong would apply.

1 Q. Obviously if there was zero revenue, you
2 would default immediately to the B calculation,
3 correct?
4 A. That's -- yeah, I mean, again in this
5 category, that's my understanding.
6 Q. Okay. Do you know how the existing
7 minima of 21 percent and 17.36 percent were selected
8 and calculated?
9 A. I don't think that I have knowledge of
10 what went into that.
11 Q. Okay. These are obviously not whole
12 numbers, so you would think that some process
13 resulted in their selection, wouldn't you?
14 A. I would. I guess I will take back one
15 thing. Given the 21 percent, I know how the
16 17.36 percent was come up with.
17 Q. You mean as compared to the 21 percent?
18 A. Yeah.
19 Q. Yeah, because that's the issue of
20 pass-through.
21 A. You are taking out -- yes, exactly.
22 JUDGE STRICKLER: And how do you
23 understand that amount was calculated?
24 THE WITNESS: So basically 17.36 percent
25 of the sound recording royalties that are kept by

1 the label, plus 21 percent of that same number gives
2 you 21 percent of the sound recording royalties. It
3 is just basically if you are not going to pass it
4 through, the 17.36 percent applied to the
5 non-passed-through number gives you the same as
6 21 percent applied to the sound recording royalties
7 after the pass-through.
8 JUDGE STRICKLER: And what is passed
9 through?
10 THE WITNESS: The sound recording -- I
11 mean, the musical work royalty. So it is kind of
12 circular but, you know, it works out, the math.
13 JUDGE STRICKLER: Performing rights
14 royalty?
15 THE WITNESS: This would be for all-in,
16 so this would be for the total, the all-in royalty.
17 JUDGE STRICKLER: Thank you.
18 JUDGE BARNETT: Let me be sure I
19 understand the Google proposal then. The Google
20 proposal would lower the 21 percent to 13 and a
21 half percent. Would there be a similar calculation
22 to reach a pass-through rate?
23 THE WITNESS: Yes. So if it -- you could
24 -- yes, you could come up with a new percentage that
25 would correspond to 17.36 percent. It would be

1 based on the 13.5. I'm afraid I can't do it in my
2 head, but --
3 JUDGE BARNETT: Okay.
4 THE WITNESS: -- it would be a lower
5 number. That would just be a mathematical
6 calculation.
7 JUDGE BARNETT: Okay. Thank you.
8 BY MR. JANOWITZ:
9 Q. Dr. Leonard, I asked you this morning
10 whether there was another number for the
11 pass-through, and you said no, there is only one
12 number, it is the 13 and a half percent number. Do
13 you remember that?
14 A. Yeah, I said that -- I guess, I guess
15 what I am saying is I think the -- I think what
16 specifies 13 and a half percent, and my
17 understanding of what that is supposed to apply to,
18 is the sound recording payments after any
19 pass-through.
20 So that's why it would -- or if there
21 were no pass-through. So that would be, would
22 correspond to the 21 percent number.
23 If somebody comes along and says: Well,
24 we only have the number before pass-through, then
25 that would have to be a lower number then.

1 Q. So, in other words, even though it -- you
2 would adjust it, even though the proposal as made by
3 Google doesn't provide for pass-through or
4 non-pass-through; is that what you are saying?
5 A. If you want to set it up so that it has
6 both then, yeah, you need a different number. And
7 it is, again, just math to calculate it.
8 Q. I understand. But what I am asking you
9 is what is Google's proposal? Is it just one or is
10 it both?
11 A. We could go back to check. I think what
12 the proposal is is that you apply 13.5 percent to
13 the portion of the sound -- of what the label
14 collects that reflects their sound recording royalty
15 payment, so it is after pass-through.
16 Q. This 13 and a half percent number, it is
17 a completely standalone number, isn't it? It is not
18 an adjustment of what exists today? Is that
19 correct?
20 A. Yes, I would say, right, it comes from
21 Subpart A is as I have described. And then that
22 suggests a particular percentage that should be
23 applied to the sound recording royalty payment. And
24 that's the number I'm proposing or Google is
25 proposing that 21 percent gets replaced with.

1 Q. Yeah. So the 13 and a half percent is
2 calculated based on the current ratio of the PDD
3 royalty to the royalties paid to the record labels
4 for sound recordings, generally speaking; isn't that
5 right?
6 A. Yeah, I guess I should be -- clarify a
7 little bit there. So Google came up with the
8 13.5 percent. My benchmarking was doing what you
9 are suggesting.
10 Q. And you don't -- do you know how Google
11 came up with the 13.5 percent?
12 A. I do not know specifically, no.
13 Q. Did you ask anyone?
14 A. I did not.
15 Q. Was it of interest to you to see how the
16 new proposed rate related to what was, you know, has
17 been in the statute for some time?
18 A. Meaning was it of interest to me to
19 compare 13.5 to 21?
20 Q. Yes, and to understand how that change
21 came about?
22 A. It was certainly of interest to me to
23 compare those two numbers. Well, I guess I should
24 say, it is of interest to me to compare what I got
25 out of Subpart A to the 21 percent.

1 Q. Well, when you use benchmarks, I think
2 you testified that nothing is perfectly comparable,
3 right?
4 A. Yeah, generally speaking.
5 Q. It's a rare thing. So when you have a
6 benchmark, is it not of interest if you are making
7 an adjustment to some existing number to understand
8 the relationship and the derivation between what you
9 are proposing of something new and what has been
10 existing over time?
11 A. I'm not sure I necessarily agree with
12 that. So you could have a number that exists over
13 time, and, you know, it may have come from who knows
14 where. If you have a benchmark that suggests that
15 number is wrong, then the number is wrong, and it is
16 not necessarily of interest why there is a
17 difference.
18 Q. If a number has existed over time, isn't
19 that just -- isn't that a benchmark, and don't then
20 you have to pay attention to it? I am not saying
21 you have to adhere to it, but don't you have to pay
22 attention to it if you are doing a benchmarking
23 analysis?
24 A. Again, it was of interest to me to
25 compare the 21 percent to what I was seeing as

1 Subpart A, and which, you know, were lower numbers.
2 And, you know, one thing that was clear, at least in
3 Google's case, the 21 percent really never binds.
4 So, you know, I think that's another
5 issue with it as far as Google goes, is that it is
6 too -- the 21 percent number is too high to really
7 ever come into play. And in that sense it is not
8 particularly useful.
9 So getting it lower potentially would
10 make it more useful in terms of operating within the
11 structure.
12 JUDGE STRICKLER: Do you know whether the
13 21 percent ever came into play for other Services,
14 other than Google?
15 THE WITNESS: I do not, with the
16 exception of, I believe, Amazon, which counsel
17 referred to that I think has no revenue. And I
18 think if I remember correctly, has paid under the
19 21 percent prong of this, of this structure.
20 JUDGE STRICKLER: Thank you.
21 JUDGE FEDER: Excuse me. Are you saying
22 that the 21 percent hasn't come into play with
23 Google because the 10 and a half percent of revenue
24 is higher than that or because the 80 cent per
25 subscriber is higher than that?

1 THE WITNESS: I think sort of both. So I
2 think, generally speaking, Google has paid 10 and a
3 half percent of revenue, that that's the higher of
4 that or the minimum. But when you look at the
5 minimum, it has typically been the 80 cents per
6 subscriber that has been the one that would be the
7 relevant number.
8 JUDGE FEDER: Thank you.
9 BY MR. JANOWITZ:
10 Q. Dr. Leonard, the -- whether or not the
11 TCC is triggered is based on a relationship between
12 the TCC in the part B calculation and the revenue in
13 the part A calculation, correct?
14 A. Whether it is triggered or not -- well,
15 and also the 80 cents, though.
16 Q. I understand that. But we look at that
17 as a cap. So let's -- the cap doesn't come into
18 effect, really, unless the TCC is triggered, right?
19 A. I guess I don't view it that way. I view
20 it as -- I look at the TCC. I look at the 80 cents.
21 Whichever one is lower, then that's what gets
22 compared to the 10 and a half percent.
23 Q. I understand that. But my question is if
24 -- if revenues are decreasing, if you have services,
25 for example, at low rates, some sort of a discounted

1 rate, a 5 dollar a month instead of a 10 dollar or a
2 3 dollar, whatever, isn't it possible that you could
3 trigger the 21 percent?
4 A. I mean, is it possible? You know, there
5 is obviously some regions of the space in which it
6 can get triggered certainly, but, again, as an
7 economic reality -- and, again, I can't speak to
8 every Service -- but as far as Google goes, I don't
9 believe it has actually been relevant.
10 Q. Right. But as you say, you can't speak
11 to every Service, with the exception of Amazon, that
12 you mentioned. Can you speak to any other Service?
13 A. I don't -- yeah, I don't think I have had
14 the data to do those calculations.
15 Q. Okay. And according to your report, this
16 is paragraph 78, page 50, at 13 and a half percent
17 of sound recording fees, as Google has proposed, it
18 is likely that the percentage of sound recording
19 royalties prong will be lower than the all-in per
20 subscriber prong, correct?
21 A. Could you point me to that again? I was
22 a little bit behind you.
23 Q. I think it is paragraph 78, page 50.
24 A. Okay. Yep, I'm there, let's see.
25 Q. Okay.

1 A. I'm sorry, what part were you reading?
2 Q. I will read it again.
3 JUDGE STRICKLER: There are some bullet
4 points. Is it above or below the bullet point?
5 MR. JANOWITZ: Let's see.
6 JUDGE STRICKLER: Near the bullet?
7 BY MR. JANOWITZ:
8 Q. I'm sorry, paragraph 78, page 50. I
9 think it is at the top of the page.
10 A. Of -- of 50?
11 Q. It is the last bit on paragraph -- I
12 actually think it is paragraph 80.
13 A. 80, okay. And the last bit, you say?
14 Q. Yeah. The last sentence. Let me know if
15 you see it, is the sentence begins with "that said"?
16 A. Yes.
17 Q. So let me read it again. "That said, to
18 the extent that all-in per-subscriber minima are
19 part of a lesser-of comparison with 13 and a
20 half percent of sound recording fees, as Google has
21 proposed, it is likely that the percentage of sound
22 recording royalties prong will be lower than the
23 all-in per-subscriber prong."
24 So I think what you are saying is that
25 much like what you say was the case with Google when

1 the TCC was 21 percent, when it is 13 and a
2 half percent, it is also not likely to be triggered?
3 A. Let's see. Well, I think I am saying, in
4 fact, at the lower level it may become the more
5 operative minimum. And then it might be triggered
6 if the 10.5 percent of revenue ends up being less
7 than that.
8 MR. JANOWITZ: Could you read that back,
9 please, because I didn't hear it.
10 THE REPORTER: "Answer: Let's see.
11 Well, I think I am saying, in fact, at the lower
12 level it may become the more operative minimum. And
13 then it might be triggered if the 10.5 percent of
14 revenue ends up being less than that."
15 THE WITNESS: I am discussing this in the
16 context of saying, you know, the 80 cent minimum, to
17 the extent it is the operable one, you know, it is
18 possible that there could be plans that a provider
19 might want to offer.
20 You know, again, for lower
21 willingness-to-pay consumers, for instance, it might
22 have 10.5 percent of revenue, less than the 80
23 cents. The 80 cent would become binding. And that
24 could deter somebody from offering the plan.
25 And then this last sentence that you

1 referred to is just saying but, you know, something
2 else to consider is that if we're talking about
3 lowering the TCC part of it to 13.5 percent, then
4 maybe that's not true any more, that maybe the 80
5 cent per subscriber isn't the binding minimum any
6 more, but, instead, would be the 13.5 percent of
7 TCC.
8 BY MR. JANOWITZ:
9 Q. Because it is less?
10 A. It is less.
11 Q. Because it is a lesser-of?
12 A. Correct.
13 Q. And so it becomes the more likely binding
14 prong because you have now reduced it relative to
15 the past from 21 percent to 13 and a half percent,
16 correct?
17 A. That's correct.
18 Q. So it is more likely to become binding,
19 but it is also likely, as compared to the 21 percent
20 -- it is not even likely -- but it will be a smaller
21 minimum, correct?
22 A. Yes. Those two things go hand in hand.
23 It is now sort of too high to really bind
24 meaningfully. If it comes down, it is more likely
25 to bind, but it is lower, yes.

1 Q. So do you see this as a -- this proposal
2 as a benefit to the Copyright Owner as compared to
3 the 21 percent or the 17.36 percent?
4 A. You know, I think it's -- that's a
5 complicated question because let's say in the
6 example I gave, somebody goes out and offers a plan,
7 this aspect of it means the plan is feasible because
8 they are willing to do it at 13.5 percent of service
9 revenue but they wouldn't be willing to do it at 80
10 cents per subscriber.
11 Then they go ahead and do the plan, it
12 generate some revenue, and Copyright Owners earn
13 some royalties on that, that, you know, could very
14 well be beneficial.
15 Q. Do you know whether the 80 cents per
16 subscriber has ever been triggered?
17 A. Yes, I believe Google has on occasion --
18 I don't know if it is all that frequently -- but on
19 occasion has paid the 80 cent subscriber minimum.
20 Q. So that would mean that in that
21 situation, the calculation of the 21 percent TCC
22 would be higher than 80 cents, right?
23 A. If the 80 cents was the binding one they
24 paid, then that means the 21 percent was higher.
25 Q. So in this situation with Google, for

1 example, if you reduce the 13 and a half -- if you
2 reduce the TCC to 13 and a half percent, and 13 and
3 a half percent was binding, then all things, other
4 things being equal, the Copyright Owner would
5 receive less in that calculation?
6 A. Again --
7 Q. Correct?
8 A. -- I think that's just holding the whole
9 rest of the world constant.
10 Q. Yes, it is.
11 A. The reason that the 80 cents ended up
12 binding, as I understand it, is that that had to do
13 with family plan subscriptions. And Google has paid
14 out royalties at 80 cents per, in that case, family
15 member.
16 But, of course, the whole point of that
17 plan is to try to generate more subscribers, and it
18 generates more revenue.
19 So, you know, if you changed, again, the
20 13 or the 21 percent to 13.5 percent and that means
21 that would be a little less, maybe there would be
22 other plans that are able to be implemented that
23 generate more royalties for music owners.
24 Q. Sure. But that would require us to look
25 at other plans. I am trying to look at this --

1 A. Right.
2 Q. -- just in the terms of the calculation
3 in the hypothetical.
4 A. Right. But I am explaining the reason
5 Google hit the 80 cent minimum in those cases was
6 precisely because they did offer a different type of
7 plan.
8 Q. And if they offered it in this situation,
9 and the Google proposal were adopted, then the 80
10 cents would not come into play, it would be the 13
11 and a half in all likelihood?
12 A. We would have to ultimately do the math
13 to know what the sound recording payments were, but
14 that is certainly possible.
15 Q. Dr. Leonard --
16 JUDGE BARNETT: For the 10 and a half, if
17 that's the greater of?
18 THE WITNESS: Yeah, yeah, right. We're
19 only talking about somehow we end up above 10 and a
20 half because otherwise, yeah, that continues to
21 apply, regardless.
22 I should point out I don't think Google
23 has hit the 80 cent minimum very often, but it has
24 happened, so it has typically been at 10 and a
25 half percent.

1 BY MR. JANOWITZ:
2 Q. Dr. Leonard, you are aware, are you not,
3 that entrants into the interactive streaming field
4 often sell complementary goods and services?
5 A. It depends on who you are. Spotify, you
6 know, is pretty much a standalone. Somebody like
7 Google is certainly, when they introduce a music
8 service, they are trying to take their existing base
9 of users and sell them something more; namely,
10 music. And that can be something they can do
11 efficiently because they have an installed base.
12 Q. So Google could do that?
13 A. Well, I think certainly that would be
14 part of the idea is that, look, we have got this
15 installed base, let's see what else we can sell to
16 them.
17 Q. Okay.
18 A. And music is an example of that. And it
19 is one of many examples that Google might try.
20 Q. And do you know of any other service that
21 works this way, that has this attitude towards
22 selling complementary goods and services?
23 A. Well, I mean, anybody who has got a
24 platform, again, you might try to add things to the
25 platform because the platform can drive the sales of

1 those other things, such as music.
2 And Apple, you know, would be another
3 example of that.
4 Q. And you could drive -- when you say the
5 platform could drive the sales of music, music could
6 also drive the sales of other things, correct? It
7 goes both ways?
8 A. So here we really need to distinguish
9 between potential, you know, possibilities and
10 reality. The reality is it doesn't drive sales of
11 anything else Google does, music does not.
12 Q. I understand. But I am talking about for
13 other Services.
14 A. Again, I haven't analyzed other Services.
15 As a general matter, if you sell two things, it is
16 possible one could drive the other. The other could
17 drive the one. They could both drive each other.
18 As just general possibilities, of course any of
19 those are possible.
20 Q. And this is certainly a possibility in
21 this area, correct?
22 A. Again, as a general matter, but you have
23 got to remember, again, what is motivating the Apple
24 and the Googles of the world to do this, is they
25 already have a very successful platform. The

1 question is how can we figure out other things to
2 sell that we can leverage our existing platform.
3 That's really the motivation.
4 It is not going the other way, that we
5 have music and, gee, now we're going to come up with
6 an Android operating system and that's going to be
7 able to exist and survive only because we have
8 music. It is just clearly the reverse.
9 Q. Well, let's take Google out of this
10 discussion for the moment.
11 A. Okay.
12 Q. And look at some of the others. In the
13 case of Amazon, you understand how they work?
14 A. With regard to music or generally?
15 Q. Yeah.
16 A. I have a sense of it, but I haven't
17 studied Amazon to the extent I have studied Google.
18 Q. So Amazon Prime, for example, which is a
19 service that Amazon offers with its Prime membership
20 is not something -- does not require the Amazon
21 customer to pay for the music service, correct?
22 A. Well, or the payment for Prime includes a
23 bunch of different things and you'd have to
24 apportion that out, I think is the right way to
25 think about it.

1 Q. I agree. So that if you were going to
2 have a revenue-based calculation and it was going to
3 be meaningful, you would have to apportion out the
4 revenue attributable to music from the revenue
5 generally received, you know, from Prime
6 subscriptions; is that correct?
7 A. I guess I would disagree with that to
8 some extent. That's why we have or why there are --
9 one reason why there are the minima to take care of
10 that situation amongst others.
11 Q. Yes. But I am not asking you about the
12 remedy for the problem. I am asking you for the
13 problem at this point.
14 In terms of identifying revenue, which is
15 after all the first prong and the first analysis
16 that you have to do, if you had a service where
17 revenue was not recognized or not fully recognized
18 from the music service, and instead was part of
19 another service that the provider had, you would
20 have to do some kind of apportionment, assuming that
21 you were going to try to pay a royalty on a revenue
22 basis, correct?
23 A. You kind of said if you were going to pay
24 a royalty on a royalty basis, then --
25 Q. Royalty on a revenue basis.

1 A. That's right, sorry, a revenue basis,
2 then you would have to have a revenue figure. You
3 know, at some level that's a tautology. The other
4 thing you can do is figure out a different way to do
5 the royalties, such as a per-subscriber or some
6 other way.
7 Q. Or per-stream, you could do it that way,
8 couldn't you?
9 A. I think, again, I haven't studied Amazon
10 completely, but, look, Amazon has a lot of different
11 ways that they could make Prime attractive. This is
12 one that they have chosen to do, but there are a
13 million other ways that they could do.
14 And I think if you made it very expensive
15 for them in that sense they might not do it, and I
16 think that would be a bad thing for Prime
17 subscribers who actually use that service.
18 You know, a perfectly other good way to
19 do it is to do it per-subscriber, to do it as a
20 percentage of sound recording payments, which I
21 think is how they were doing it.
22 Q. But you could do it on a per-stream
23 basis, couldn't you?
24 A. Again, in the sense that anything is
25 possible, yes. I would not recommend that.

1 Q. I understand. And, in addition to
2 Amazon, there are other companies where the music
3 services are bundled with other kinds of goods or
4 services, correct?
5 A. Yes, I think generally that can happen.
6 Q. And it does happen, does it not?
7 A. I think, again, it has happened, yes.
8 Q. And that creates measurement problems and
9 issues in terms of revenue, does it not?
10 A. Again, it does. And that's why
11 Phonorecords II was set up the way it is with the
12 different categories and the minima. And there is a
13 non-portable -- I can't even remember all the
14 configurations, but there is different categories
15 and there are different minima that go with that to
16 address this sort of problem. I think that's a very
17 good way to go about it.
18 Q. Are you aware of Spotify's plans to
19 engage in bundling of its service with other kinds
20 of goods or services?
21 A. I don't think I have studied that, no.
22 Q. Are you aware of it at all?
23 A. That doesn't right now sound familiar to
24 me.
25 Q. Well, there was, there was testimony, and

1 there have been documents introduced in this case to
2 show that Spotify is considering going the bundling
3 strategic route. So if --
4 MR. MANCINI: Objection, Your Honor. I
5 believe that lacks foundation.
6 MR. JANOWITZ: I think not. I think
7 there are Spotify documents in evidence on that.
8 JUDGE STRICKLER: I remember documents
9 along those lines, specifically a document relating
10 to the bundling of Spotify with New York Times
11 subscriptions, but I don't recall whether they were
12 put into evidence or whether they were just used on
13 cross-examination for a witness.
14 MR. JANOWITZ: You know, it is possible
15 that that's how they were used. So let me do it
16 hypothetically and that way we can avoid the
17 problem.
18 JUDGE BARNETT: Okay.
19 BY MR. JANOWITZ:
20 Q. If, hypothetically, Spotify was going to
21 change its business model from a more pure-play,
22 which it currently is, to a service that was
23 bundling with other goods and services which were of
24 higher margin, would that affect your opinion as to
25 the suitability of the revenue modeling for

1 royalties?
2 A. I don't think so because Google's
3 proposal, again, has the various categories. Again,
4 it is a little daunting to figure out sometimes
5 which one of these would -- where something would
6 fit, but I believe there are, you know, bundles and
7 other such things that are already covered. And
8 they are addressed through minima and other things,
9 these issues.
10 So, you know, we can talk about what, you
11 know, the minima should be and things like that. I
12 think Google has proposed basically leaving those as
13 they are. But, you know, that exists precisely to
14 address this kind of issue.
15 JUDGE STRICKLER: If I may interject for
16 a second, Dr. Leonard, I want to ask you a question
17 about bundling in your role as an expert as an
18 economist.
19 THE WITNESS: Sure.
20 JUDGE STRICKLER: On economic theory. Is
21 bundling utilized to, to engage -- by a seller to
22 engage in price discrimination?
23 THE WITNESS: It can be. That's one of
24 the possible motivations for bundling.
25 JUDGE STRICKLER: Is it a primary

1 motivation or does it simply depend on the
2 circumstance?
3 THE WITNESS: You know, there is a lot of
4 different economic models. Some address market
5 power monopolization reasons. Some address price
6 discrimination. Some address other reasons.
7 You know, bundling is very, very common.
8 And I think in one form or another, its attempts
9 even by pretty competitively positioned firms to
10 price discriminate, and I mean by that, of course,
11 for anyone that is not an economist, I don't mean
12 that pejoratively, but it is a way to sort out
13 customers into willingness-to-pay groups.
14 JUDGE STRICKLER: You anticipated my
15 question. It is trying to sort customers according
16 to willingness to pay, which is the same goal as
17 using percentage-of-revenue pricing, you move down
18 the demand curve to exploit the willingness to pay
19 of customers who have a lower willingness to pay,
20 right?
21 THE WITNESS: Yeah, exactly, yeah. And I
22 think, you know, again, from the point of view of
23 the musical work Copyright Owners, you know, that is
24 a good thing. I mean, trying to, again, get as many
25 people in the door, perhaps at different price

1 points and generating a lot of revenue is a good
2 thing.
3 JUDGE STRICKLER: But now let's take it
4 again back to bundling, which is the point of the
5 cross-examination at the moment.
6 THE WITNESS: Yes.
7 JUDGE STRICKLER: When you bundled, your
8 last example on the table, with Spotify and what I
9 recall New York Times subscriptions being bundled
10 together, so if somebody were to pay money, which
11 constitutes revenue, maybe a royalty base, maybe
12 not, that's the open question, and they are paying a
13 certain amount for the bundle, you are teasing out
14 willingness to pay for the bundle, which by
15 definition is different than the sum of the
16 individual willingness to pay for the individual
17 items or else you wouldn't bother to bundle at all.
18 THE WITNESS: Correct.
19 JUDGE STRICKLER: So isn't it necessary
20 in some way to tease out what revenue is
21 attributable in the bundle to the Spotify music
22 service and what portion of the bundle is
23 attributable to The New York Times subscription in
24 order to figure out how much of the revenue in that
25 bundle needs to go into the royalty base and pay the

1 Copyright Owner?
2 THE WITNESS: So I would say conceptually
3 that that is correct, that is certainly one way to
4 going and figure out what the right royalty should
5 be. I would say, you know, as we know, that can be
6 difficult in a given situation.
7 So I guess what I would say in this -- as
8 we're sitting here is we do have these different
9 categories. We have the different minima. At this
10 point I would say that a fruitful approach is to
11 say, look, are the minima working? Are people
12 introducing these kind of plans? And then try to
13 see, you know, perhaps analyze the minima and see
14 whether they seem to be out of whack in one way or
15 another.
16 And, you know, as to the first question,
17 it seems like, you know, this is maybe an example, I
18 don't know if Spotify is actually doing it, but,
19 hey, that might be a great idea for them to do that.
20 And if they are doing it, it would suggest that
21 whatever grouping it would fall into, that the
22 minima there aren't too high, which is good, but,
23 you know, somebody could argue, well, the minima are
24 too low. Again, that's something I think somebody
25 could analyze, taking an approach similar to what

1 you are talking about, but I guess I just don't see
2 any evidence right now that they are way out of
3 whack one way or the other.
4 JUDGE STRICKLER: Is it your
5 understanding, and this goes to a question Judge
6 Feder asked this morning, that the categories within
7 Subpart B and Subpart C for that matter, but let's
8 take Subpart B, as they are defined, are sufficient
9 to cover the bundles that we find in the marketplace
10 as we sit here today?
11 THE WITNESS: I think that's a very good
12 question too.
13 JUDGE STRICKLER: It was his question.
14 THE WITNESS: Yeah, it seems like that --
15 I mean, there certainly were a number of them. And
16 my understanding is that in Phonorecords, whatever
17 it was, II, that a lot of those were added at that
18 point because I think by then there was a sense that
19 these other things were coming down the pike.
20 And I think they did foresee a lot of
21 what, you know, we might -- are seeing now, that
22 they would fit into those buckets. But I wouldn't
23 say that I have kind of gone through every existing
24 plan and said does it have a bucket that fits, it
25 fits neatly into? And I would certainly, if

1 somebody had the suggestion about a different sort
2 of bucket that should be created, I certainly think
3 that's a good idea.
4 JUDGE STRICKLER: So if I understand you
5 correctly then, you haven't held up -- tried to
6 match up, use one as a template against the other
7 and say this category, these categories that are in
8 Subpart B cover 100 percent of all the things that
9 exist in the market, now you don't know the answer
10 to that question because you haven't studied it?
11 THE WITNESS: Yeah, I don't know
12 100 percent. And for Google, I think that its
13 offerings fit in perfectly fine. It seems like the
14 other ones that I'm aware of have a corresponding
15 category, but I can't say I have looked at every
16 plan.
17 JUDGE STRICKLER: Is there anything in
18 your testimony or any of the other evidence from
19 Google that you are aware of that does make that
20 sort of template alignment, as it relates to Google,
21 saying here are Google's floor offerings, by the
22 way, hypothetically, and here are each of the
23 categories, this one will go into portable
24 subscriptions, and this one will go here and this
25 one will go there.

1 Is there anything in the evidence that
2 tells us where they would go?
3 THE WITNESS: I think my report does say
4 here is what Google offers and here is what
5 categories they would fall in.
6 JUDGE STRICKLER: Thank you.
7 BY MR. JANOWITZ:
8 Q. Dr. Leonard, you said that, you know, it
9 is possible that you could observe that the minima
10 are out of whack, correct?
11 A. It is possible, yes.
12 Q. And it is possible that they might be too
13 high and they might be too low, correct?
14 A. Again, if they are out of whack, it could
15 be in either direction.
16 Q. Okay. So what has been done in terms of
17 analysis of data to determine whether the
18 13.5 percent is neither too high nor too low?
19 A. 13.5? Well, that one is a Subpart A
20 analysis, I believe, supports the 13.5 percent.
21 Q. If the -- if the Services do not report
22 revenue and yet there is a great deal of revenue
23 made, which might otherwise be attributable to the
24 music if you could divide it up, is the 13.5 percent
25 a good proxy for the revenue that would otherwise

1 have been calculated and paid on?
2 A. I sort of think we're -- do you mean 13.5
3 or do you mean something else?
4 Q. No, I mean the 13.5 percent. Because
5 we're positing a situation where the revenue is
6 either nonexistent or too low.
7 A. Right.
8 Q. So that the 13.5 percent is triggered.
9 A. So the purpose of that one is to say more
10 or less, is to piggyback if it were off of the
11 label, so in a situation where the labels have
12 approached a company and said, okay, here is what
13 the sound recording royalty, or they negotiate and
14 come up with the sound recording royalties, and
15 we're saying, okay, then when we get to the musical
16 work, it should get 13 and a half percent of that,
17 so I think that is another way around this issue of
18 not having to actually dig into the revenue in this
19 proceeding. This provides some protection that
20 piggybacks off the labels.
21 Q. But that, that piggybacking off the
22 labels has no relationship to the amount of the
23 revenues that a Service may have earned and not
24 reported, correct?
25 JUDGE STRICKLER: Because your question

1 presumes that we're in the part where it is the
2 10.5 percent prong that is applicable?
3 MR. JANOWITZ: It would be, assuming it
4 would be if we knew what the revenues were. And
5 since we don't, the 13 and a half percent is
6 applied, and that's based upon the sound recording
7 payments. And it seems to me that those payments
8 are not linked in any way to revenue being earned by
9 the Service.
10 JUDGE STRICKLER: Thank you.
11 THE WITNESS: I guess I would disagree
12 with that because, again, what are the labels doing?
13 Presumably they have in their negotiation, they have
14 reached their number based on various factors,
15 perhaps, including the revenue.
16 BY MR. JANOWITZ:
17 Q. But the labels -- let's take the case of
18 Spotify. Spotify is owned in significant part in
19 excess of -- I think this may be restricted. The
20 number is restricted.
21 JUDGE BARNETT: Is it or isn't it?
22 MR. JANOWITZ: It is.
23 JUDGE BARNETT: Okay. Are you going to
24 have a section of restricted inquiry?
25 MR. JANOWITZ: I wasn't planning on it.

1 Maybe I can walk around it.
2 JUDGE STRICKLER: Were you going to
3 mention percentage of revenue Spotify pays to the
4 labels?
5 MR. JANOWITZ: No, I was going to talk
6 about the equity. But the equity -- I believe the
7 equity is not the percentage, right? Is that it?
8 JUDGE STRICKLER: Maybe you can make up a
9 hypothetical percentage and don't use the real one.
10 MR. JANOWITZ: Okay. I don't think -- I
11 am not sure I know the real one, so --
12 JUDGE BARNETT: So are we open?
13 MR. JANOWITZ: We're open.
14 JUDGE STRICKLER: Maybe you better find
15 out what the real one is to make sure you don't use
16 it.
17 MR. JANOWITZ: All right. I think I am
18 going to try to be safe on this.
19 BY MR. JANOWITZ:
20 Q. Let's assume hypothetically that the
21 labels own 14 percent of Spotify.
22 A. Okay.
23 Q. And Spotify, you know, has been valued at
24 8 billion dollars or more, correct?
25 A. There are numbers floating around. That

1 sounds around right.
2 Q. Right. So let's say the labels have
3 14 percent of Spotify. Does it appear to you that
4 you might not be able to fully rely on the integrity
5 of the sound recording payments when the labels have
6 another agenda and another way of making money that
7 could be perhaps, you know, a lot better than
8 getting sound recording royalties?
9 And would that not create a problem for a
10 Copyright Owner whose royalties were linked to the
11 sound -- to the TCC?
12 A. Well, I mean, clearly this would only
13 apply within the context of Spotify.
14 Q. Or any other company that was also owned
15 by labels?
16 A. Okay. Yeah, this isn't owned. This is,
17 in your number of 14 percent, you know, that's not
18 anywhere near a controlling interest, obviously.
19 And, you know, part of what that means is if what
20 you are saying is would they give a special deal to
21 Spotify?
22 You know, first of all, we have got the
23 other minima and the 10.5 percent, but even putting
24 all that aside, you know, you have got to think
25 about why would the labels do this? Well, if they

1 thought they were going to get a bigger share, I
2 guess, for Spotify somehow, but the problem is when
3 you only own 14 percent, then you only at best,
4 assuming you even get a dividend in the end, get
5 14 percent of that, and the rest is accruing to all
6 the other owners.
7 So it is -- it's -- I don't know -- a
8 very questionable strategy that I find it hard to
9 believe that it would make any sense here, plus I
10 don't think there is any evidence of it.
11 Q. So if you owned 14 percent of a company
12 with an 8 billion dollar valuation, you think that
13 you could only get dividends for that?
14 A. Well, ultimately, of course, the
15 company's value is equal to present discounted value
16 of its dividends. That's basic finance.
17 Q. Are you aware that in the case of Spotify
18 that there is great likelihood that there will be an
19 initial public offering?
20 A. Okay, but if you -- if you are a buyer
21 who is going to buy into this IPO and you are
22 rational, are you going to pay money on a certain
23 set of financials when you know that the minute you
24 sell your shares, the labels are going to come back
25 and say well, sorry, the royalties are a lot higher.

1 I mean, it just can't work, unless there is some
2 deception going on.
3 And then I think we're going to be seeing
4 SEC investigations. And I am sure that's not going
5 to be happening, so I don't -- this is just not a
6 plausible scenario.
7 Q. By the way, I couldn't resist. You say
8 14 percent of a company is not -- is not control?
9 A. 14 percent by itself is not a controlling
10 interest, no.
11 Q. In a public company?
12 A. Well, if what you mean is can I sort of
13 decide what's going to happen, the answer to that is
14 no.
15 JUDGE STRICKLER: That was a hypothetical
16 number, wasn't it?
17 MR. JANOWITZ: It was.
18 BY MR. JANOWITZ:
19 Q. Let's talk a little bit about the
20 elimination of the 50 cent per-subscriber per-month
21 mechanical-only floor. The Google proposal
22 eliminates that floor, correct?
23 A. Correct.
24 Q. And in this currently construction 115
25 recognizes the possibility that the calculation of

1 the all-in royalty pool, even using the TCC, might
2 result in a royalty that is less than 50 cents per
3 subscriber per month after the deduction of
4 performance royalties, correct?
5 A. My understanding is the floor is there,
6 and the reason it might be there is if -- or the
7 consequence of it being there is if the other
8 calculations below 50 cents and the floor would then
9 guide what the royalty would be.
10 Q. Right. And Google's proposal continues
11 the deduction of performance royalties but
12 eliminates the mechanical-only floor, correct?
13 A. That's correct.
14 Q. So this added protection, this level of
15 protection which could come into effect if it is
16 greater than the TCC calculation, right, would be
17 eliminated under Google's proposal, correct?
18 A. Well, the minimum would get eliminated.
19 Q. Sorry?
20 A. Sorry, the mechanical-only floor would be
21 eliminated under Google's proposal.
22 Q. Right. And by definition, the
23 mechanical-only floor would only have been triggered
24 if it was greater than, assuming you are using the
25 TCC, it would be greater than the TCC?

1 A. You mean if everything else is dropped
2 out, now we're just looking at the TCC? Well, yeah,
3 by definition, I think, if you have eliminated
4 everything else, only TCC and the 50 cents are left,
5 the 50 cents will apply, if the TCC is less than
6 that.
7 Q. And isn't it true that with a reduction
8 of the TCC proposed by Google, the mechanical-only
9 floor, if continued, would be more likely, rather
10 than less likely to be triggered?
11 A. Again, probably in general, if you are
12 going to reduce the TCC, then there is more
13 likelihood that it will hit. If it hits then -- it
14 does slow down. I would certainly agree with that.
15 Now, the actual change in likelihood,
16 again for Google, would be fairly minimal in either
17 direction.
18 Q. Can you speak to the other Services on
19 this point?
20 A. I haven't gone back to see how often it
21 is currently, if at all, triggered by any other --
22 in any other Service.
23 Q. So inasmuch as the Google proposal
24 continues the deduction of the performance royalties
25 but eliminates the mechanical-only floor, isn't it

1 true that an increase in performance royalties
2 licensed by the PROs could eat into the mechanical
3 royalty and possibly eliminate it?
4 A. That is possible. And, again, that's
5 actually the exact reason to get rid of the
6 mechanical-only minima.
7 Q. From the perspective of the interactive
8 streamers?
9 A. I would say from the perspective of the
10 801(b)(1) factors.
11 Q. But you can understand that the Copyright
12 Owners might not see this as an advantage, correct?
13 A. Well, I mean, it is interesting. Again,
14 are we talking about songwriters or are we talking
15 about publishers? I think there is an important
16 distinction there.
17 And, again, you know, recognizing all the
18 issues about royalty stacking and everything else,
19 it is not entirely clear that a bigger royalty stack
20 is actually ultimately good for even the
21 songwriters.
22 Q. Let's turn to your --
23 JUDGE STRICKLER: You say it is not good
24 for the songwriters, but would it be good for the
25 publishers?

1 THE WITNESS: You know, again, in
2 principle, that could be a different subject. You
3 know, my view --
4 JUDGE STRICKLER: They represent both
5 here, right?
6 THE WITNESS: There is, I think there is
7 some interesting tension there, but yeah.
8 JUDGE STRICKLER: You are assuming
9 existence or lack of tension, but the royalties
10 we're talking about flow into the publishers and
11 through to the songwriters to some extent, right?
12 THE WITNESS: That's my understanding,
13 yes.
14 JUDGE STRICKLER: So my question still
15 stands. Doesn't having a mechanical floor benefit
16 the publishers, separate and apart from any analysis
17 you might do of the songwriters?
18 THE WITNESS: Yeah, I mean, there are
19 also payments, I think, through the PROs to
20 publishers, but -- so, again, we have to evaluate
21 the whole thing and take into account the effects of
22 royalty stacking and everything else.
23 So I think it is -- it is hard for me to
24 say here, but I would say, what I think I can say is
25 the elimination of the floor is more likely to have,

1 you know, so-called, you know, reduction in revenue
2 for the publishers than it would be for the
3 songwriters.
4 JUDGE STRICKLER: Thank you.
5 BY MR. JANOWITZ:
6 Q. Turning now to your -- to the existing
7 agreements as benchmarks, when I questioned you
8 earlier on the use of the Subpart A settlement as a
9 benchmark, we talked about the existence of the
10 shadow and the compulsory, correct, do you recall
11 that?
12 A. I recall that, yes.
13 Q. You would agree that the same shadow
14 falls over the benchmark agreements that are
15 addressed in your report; is that correct?
16 Forgetting about what you think the impact is,
17 whether it is good or whether it is bad, but it
18 exists?
19 JUDGE STRICKLER: Counsel, in your
20 question are you able to distinguish between what
21 you are calling the shadow as between the shadow of
22 the license and the rates as they exist?
23 MR. JANOWITZ: Yes.
24 JUDGE STRICKLER: And the shadow of a
25 proceeding that would go forward in the event you

1 don't come to agreement?
2 THE WITNESS: I was going to make, for
3 what it is worth, I was going to make that
4 distinction myself.
5 MR. JANOWITZ: Your Honor, I think it is
6 hard to make that distinction because when -- these
7 are recent agreements. I think they are -- take
8 effect in 2016.
9 Whenever they would have been negotiated,
10 to the extent that there is a compulsory license,
11 then that compulsory license would have, I think,
12 affected in some way those agreements.
13 JUDGE STRICKLER: Doesn't it depend on
14 the term of the license, if you are talking about a
15 license that has an effective term during a rate
16 period, then it is the shadow of the rate that
17 exists. If you were to enter into a contract today
18 for mechanical royalties, that was going to be in
19 the year 2021, you would be worried about we're
20 doing here today. It would be somewhat a different
21 shadow.
22 MR. JANOWITZ: It is somewhat different
23 but it is a little hard to pry apart, for me, at
24 least, because I think the context of this
25 proceeding is that there will be some compulsory,

1 you know, license.
2 And obviously we don't know what that's
3 going to be, but it has that effect. And given the
4 factors, you know, I think you probably, if you were
5 a publisher or a copyright owner, probably feel the
6 impact of both the existing statute and the fact
7 that there is going to be a proceeding which will in
8 some way change that -- that license, but maintain a
9 compulsory nonetheless.
10 JUDGE BARNETT: Are you testifying, Mr.
11 Janowitz?
12 MR. JANOWITZ: No, I was simply answering
13 -- I was really trying very hard to answer.
14 JUDGE STRICKLER: I want to be able
15 understand the question. So I appreciate the
16 answer, since the witness indicated that he had the
17 same sort of question, I wanted to make sure that
18 whatever colloquy ensued --
19 MR. JANOWITZ: Absolutely.
20 JUDGE STRICKLER: -- we were all using
21 commonly agreed-upon terms.
22 MR. JANOWITZ: I understand. And I
23 appreciate your giving me the opportunity to explain
24 it.
25 BY MR. JANOWITZ:

1 Q. So with that, can you answer the
2 question?
3 A. I don't even know if I know what the
4 question is.
5 Q. I will rephrase it. Is the -- in the
6 benchmark agreements that you are relying on in your
7 report, do you feel -- is it your opinion that there
8 is a shadow of a compulsory that affects those
9 agreements, whether you consider it as the shadow of
10 the existing compulsory or the shadow of the, you
11 know, the proceeding that is upcoming and has
12 arrived?
13 A. Yeah, I would draw the distinction,
14 because one thing you said, I think I disagree with,
15 is most of the agreements I looked at, at least the
16 ones that I am remembering as I am sitting here,
17 generally would have been, the term would have
18 expired prior --
19 MR. ELKIN: Objection, Your Honor. Some
20 of the -- the agreements at least with respect to
21 Amazon are restricted. I don't know the extent to
22 which the answer is going to encroach on to the
23 specific terms, but they started to go into that
24 direction.
25 MR. JANOWITZ: And we are -- we're going

1 to be heading into some restricted material.
2 JUDGE BARNETT: Why don't we go ahead and
3 ask anyone in the courtroom who is not privy to
4 restricted or confidential information to wait
5 outside, please.
6 MR. ELKIN: Thank you.
7 (Whereupon, the trial proceeded in
8 confidential session.)
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1 O P E N S E S S I O N
2 REDIRECT EXAMINATION
3 BY MR. WETZEL:
4 Q. Good afternoon, Dr. Leonard.
5 A. Good afternoon.
6 Q. You were asked some questions earlier on
7 your reliance on the Phonorecords II settlement and
8 where it appears in your amended expert testimony.
9 Do you recall those questions?
10 A. Yes, I do.
11 Q. If I could turn your attention for a
12 moment to page 7, paragraph 13 of your statement,
13 Exhibit 695. If you could take a look at the second
14 circular bullet there, let me know when you are
15 finished.
16 A. Let's see. Yes, I see it.
17 Q. Does that refresh your recollection about
18 how you relied on the Phonorecords II settlement as
19 part of your benchmark analysis?
20 A. Yes.
21 Q. And just so we're clear, how was that?
22 A. It was part -- it was one of the things I
23 looked at in support of the overall rate structure
24 that was proposed by Google.
25 Q. You were also asked some questions about

1 the proposed deduction from revenues that Google has
2 made in this proceeding.
3 Do you recall those questions?
4 A. Yes.
5 Q. Now, under Google's proposal, if Google
6 agreed to pay, for example, 10 percent more of its
7 service revenues in credit card fees to take
8 advantage, I believe was the term, of the up to
9 15 percent deduction, how much would Google get back
10 by virtue of that deduction under Google's proposal?
11 A. I guess it would be 10 percent of that.
12 Q. And would that be a rational economic
13 decision, in your opinion?
14 A. I don't think so, no.
15 Q. Would it be efficient for Google to do
16 that?
17 A. No.
18 Q. I would like to mark a document for
19 identification. It is Google Exhibit 1701.
20 (Google Exhibit 1701 was marked for
21 identification.)
22 JUDGE FEDER: This is not in the binder?
23 MR. WETZEL: No, this is a document that
24 we pulled during lunch.
25 JUDGE BARNETT: I want you to go get

1 binders for that.
2 (Laughter)
3 MR. WETZEL: I believe next in order is
4 1701, Exhibit 1701.
5 THE WITNESS: Thank you.
6 BY MR. WETZEL:
7 Q. Dr. Leonard, have you had an opportunity
8 to review Exhibit 1701?
9 A. Yes, I have.
10 Q. What is Google Exhibit 1701?
11 A. It is Google's proposal as to what the
12 115 rate should be.
13 Q. And if I could direct your attention to
14 pages 31 and 32 of Exhibit 1701. Let me know when
15 you have had a chance to review that.
16 A. Yes.
17 JUDGE BARNETT: Did you ask that this be
18 admitted?
19 MR. WETZEL: Yes, ultimately, Your Honor.
20 JUDGE BARNETT: Then we can't get into
21 the contents of it until it is admitted.
22 MR. WETZEL: Fair enough. I move Google
23 Exhibit 1701 into evidence.
24 MR. JANOWITZ: No objection.
25 JUDGE BARNETT: 1701 is admitted.

1 (Google Exhibit Number 1701 was received
2 into evidence.)
3 JUDGE BARNETT: Now, proceed.
4 MR. WETZEL: Thank you.
5 BY MR. WETZEL:
6 Q. Does reviewing pages 31 and 32 refresh
7 your recollection about Google's proposal with
8 respect to the TCC minimum payment and pass-through
9 and non-pass-through circumstances?
10 A. Yeah, I see here that it actually does do
11 the calculation I talked about, and so it does have
12 a number both for the with-pass-through and
13 without-pass-through situation.
14 Q. What is the corresponding TCC rate Google
15 proposes for the pass-through context where the
16 labels are paying the Copyright Owners under the 115
17 license?
18 A. 11.9 percent.
19 Q. And does that, without asking you to do
20 the calculation here, does that appear to be
21 approximately the right ratio relative to the
22 21 percent to 17.36 percent ratio in the existing
23 rates?
24 A. It does seem to be, yes.
25 JUDGE STRICKLER: Which pages are you

1 referencing?
2 MR. WETZEL: 31 and 32.
3 JUDGE STRICKLER: That's Subpart C,
4 correct?
5 JUDGE BARNETT: I surreptitiously did the
6 math and I think it is correct.
7 MR. WETZEL: Thank you.
8 BY MR. WETZEL:
9 Q. I could also direct your attention to
10 page 11, if that's helpful.
11 A. Right. So the same numbers -- well, the
12 same adjustments appear here.
13 Q. And page 11 pertains to Subpart B,
14 correct?
15 A. Yes, it appears to be.
16 MR. WETZEL: I have no further questions.
17 JUDGE STRICKLER: I have one or two.
18 Dr. Leonard, following up on what we discussed
19 briefly this morning, you were going to take a look.
20 THE WITNESS: I did. I took a look.
21 JUDGE STRICKLER: Allow me, before you
22 respond to the old version of the question, let me
23 garble it this afternoon for you.
24 THE WITNESS: Okay, sure.
25 JUDGE STRICKLER: The first question

1 related to what was -- now I am back to your
2 original report, paragraph 14 on your original
3 report, which I am guessing is paragraph 16 in the
4 amended report, the one that begins with the words
5 "music publishers are entities." Can you check out
6 16?
7 THE WITNESS: Yeah.
8 MR. JANOWITZ: It is 15.
9 JUDGE STRICKLER: "Music publishers are
10 entities," do you see that?
11 THE WITNESS: Yes.
12 JUDGE STRICKLER: And I had asked you,
13 you had written after you had listed Sony/ATV,
14 Warner/Chappell, Universal Music Publishing, "these
15 firms hold a significant combined position
16 controlling the majority of the U.S. music
17 publishing market." Do you see that?
18 THE WITNESS: I do.
19 JUDGE STRICKLER: The question I believe
20 I asked you this morning was whether or not you
21 relied on that assertion to draw any of your
22 conclusions elsewhere in the report?
23 THE WITNESS: I would say no. I reviewed
24 my report at lunch, and I couldn't find any other
25 real mention of this topic.

1 JUDGE STRICKLER: Okay. Thank you for
2 that.
3 Also I had asked you with regard to what
4 I see as paragraph 17, so I am guessing it is
5 paragraph 18, the paragraph that begins "a record
6 company (or label) typically finances"?
7 THE WITNESS: Yes.
8 JUDGE STRICKLER: Then you go all the way
9 down towards the bottom of that, exactly six lines
10 up from the bottom and you said, these major record
11 labels share common ownership of the major music
12 publishers discussed above. For example, Sony
13 Corporation owns SME and half of Sony/ATV and then
14 you went on about Universal and Warner/Chappell.
15 Do you see that?
16 THE WITNESS: Yes.
17 JUDGE STRICKLER: Did you rely on that
18 assertion, those assertions of fact in drawing any
19 other conclusions in your analysis in your report?
20 THE WITNESS: Again, I would say not. It
21 doesn't really come up again in this report.
22 JUDGE STRICKLER: One other thing I think
23 you said you were going to check on and you may have
24 already covered in your cross-examination question
25 and answer was with regard to the impact of the

1 alleged impact of a regulatory shadow on your
2 analysis.
3 Have you already covered that in your
4 cross-examination?
5 THE WITNESS: Yeah, I would say I have
6 covered my views on that. They may be expanded a
7 bit in my rebuttal report, but, again, I don't think
8 in this report that that is directly addressed.
9 JUDGE STRICKLER: Thank you.
10 JUDGE FEDER: I have a couple of
11 questions as well.
12 Could I direct your attention back to
13 paragraph 47 on page 30 of your direct testimony.
14 JUDGE STRICKLER: What paragraph is that?
15 JUDGE FEDER: 47.
16 THE WITNESS: Sorry, was that paragraph
17 or page 47?
18 JUDGE FEDER: Page 30, paragraph 47.
19 THE WITNESS: Okay. I am there.
20 JUDGE FEDER: It begins "in general."
21 Well, it says, "In general, in the absence of any
22 constraints, the outcome of an arm's-length
23 negotiation between unrelated parties represents a
24 fair outcome for both parties as contemplated under
25 Section 801(b)(1)(B)."

1 THE WITNESS: Yes.
2 JUDGE FEDER: Why is it important that
3 they be unrelated parties? What would be the --
4 your concern about a negotiation between related
5 parties in this context?
6 THE WITNESS: I'm not sure I had a
7 concern about this context. I think I was just
8 putting this in here because I think about it more
9 generally that way, but, you know, when they are
10 related parties, there may be certain incentives to
11 structure things in a certain way or provide a given
12 price, so, you know, that's a concern, say, in
13 transfer pricing where one entity is sort of paying
14 another for IP rights, for instance, they may look
15 and say, hey, was whatever rate was agreed to, was
16 this done as if they were unrelated parties? That
17 would be much more useful as a benchmark than if
18 they were doing it as related parties.
19 JUDGE FEDER: So from the standpoint of a
20 benchmarking analysis, like what you have done here,
21 would the -- would having related parties on both
22 sides of an agreement tend to lessen the value of
23 that agreement as a benchmark?
24 THE WITNESS: I think having -- I mean,
25 in general, if there were related parties on both

1 sides of the agreement and, you know, again, as in
2 the transfer pricing case, they weren't, you know,
3 being instructed to act as if they were unrelated,
4 you know, then that potentially could cause a
5 concern.
6 I think I would want to look deeper and
7 see if there was any issues specifically that might
8 arise, but it certainly raises more concerns than if
9 they were just unrelated parties.
10 JUDGE FEDER: Okay. And just shifting
11 topics a little bit --
12 JUDGE STRICKLER: Before we switch topics
13 because I want to follow up on that.
14 JUDGE FEDER: Go ahead.
15 JUDGE STRICKLER: So if I understand your
16 testimony correctly in response to those questions,
17 the fact that they are unrelated parties -- excuse
18 me. The fact that they are related parties could
19 cause you concern, but you would have to investigate
20 further to determine whether or not the fact that
21 they are related has affected the value of any --
22 the benchmark value of any contract entered into?
23 THE WITNESS: Yes, that's right.
24 JUDGE STRICKLER: Thank you.
25 JUDGE FEDER: Judge Strickler earlier on

1 asked a question he attributed to me, and it was a
2 question I had asked but of a different witness, and
3 that goes to the different -- the different buckets
4 in Subparts B and C, where there are, you know,
5 separate rates for various kinds of activities.
6 THE WITNESS: Right.
7 JUDGE FEDER: That were presumably
8 designed around activities that existed or were
9 contemplated in the marketplace in 2012 when that
10 settlement was put in place.
11 My question is does carrying those
12 categories forward in a regulation that will be
13 enforced for another five years run any risk of
14 distorting marketplace of funneling activities into
15 those buckets, rather than innovating and creating
16 new types of services?
17 THE WITNESS: I certainly haven't seen
18 any evidence that anyone, in coming up with a plan
19 or a service or product, that they have been too
20 worried about the exact buckets here. So I don't
21 think that's too much of a concern.
22 And as I mentioned, you know, in a way
23 they address a lot of the -- at some level, a lot of
24 the types of services you might expect to see. Now,
25 that being said, if someone were to come in here and

1 say: Hey, there is this new service that could
2 exist, and we don't think it fits neatly into these,
3 we think there would be a new one, I would be all in
4 favor of that because obviously it helps to
5 appropriately, you know, match things into the right
6 bucket.
7 But I haven't seen any evidence that
8 there is a real big issue there.
9 JUDGE FEDER: Thank you.
10 JUDGE STRICKLER: Following up on those
11 questions and answers, if we did not have the
12 different buckets and it went to just a single rate
13 structure for all various types of services and
14 differentiated products, you believe that would or
15 would not cause disruption in the market?
16 THE WITNESS: I think that would -- well,
17 I mean, it depends what the -- I suppose at some
18 level what the rates and the structures are, but, I
19 mean, if we're talking about a single, you know,
20 percentage of royalty rate, for instance, then -- a
21 percentage of revenue rate without any kind of
22 minimum or something like that --
23 JUDGE STRICKLER: Let me interrupt you.
24 That would mischaracterize. I may not have stated
25 clearly what I meant.

1 THE WITNESS: I'm sorry.
2 JUDGE STRICKLER: We have been using for
3 example the portable subscription service structure.
4 THE WITNESS: Right.
5 JUDGE STRICKLER: With its minima, and
6 the percentage of revenue, and the greater of and
7 the lesser of within the greater.
8 If we only had one of those, we didn't
9 have different buckets for that --
10 THE WITNESS: I see.
11 JUDGE STRICKLER: -- would that be
12 disruptive in the market?
13 THE WITNESS: I think it could be because
14 the 80 cents per subscriber minimum does differ
15 across the bucket. So if you did away with that,
16 then there could be certain buckets suddenly --
17 let's say ones that didn't have revenue or, you
18 know, again we're aimed at low willingness to pay
19 people and maybe had low, relatively low revenue
20 because of that.
21 The percentage of revenue might be low,
22 the 80 cents would kick in, and then the Service
23 would say, if it was categorized in that group, you
24 know, we can't do this; whereas it may fit into one
25 of the existing groups as a lower subscriber minimum

1 and then it could work.
2 And, you know, again, I think that would
3 be good for consumers, actually ultimately good for
4 the Copyright Owners and the Services as well.
5 JUDGE FEDER: To the best of your
6 knowledge, why are there different per-subscriber
7 minimums for the different categories?
8 THE WITNESS: I think it is a recognition
9 of exactly this idea, that the different types of
10 products you would be offering are going to have
11 different values. So, for instance, a limited
12 interactive service, you know, it has certain
13 constraints. People are going to do it, aren't
14 going to pay as much, but that's, you know, again, a
15 way to separate people into -- people are like: All
16 right, I will put up with streaming because I don't
17 want to pay a lot for music service, but I would
18 like to have a little more flexibility versus
19 somebody who is willing to pay more and have full
20 access, unhindered to the library.
21 Again, that's a good outcome. The
22 different, those different buckets, I think, have
23 different minima. And that helps allow the Services
24 to develop those kind of plans.
25 JUDGE FEDER: So when you are saying

1 value, are you talking basically about subscription
2 price, that certain things are offered at different
3 subscription prices?
4 THE WITNESS: Value, yeah, I mean for the
5 price of the plan, but then that reflects a value to
6 the type of consumer that you are targeting with
7 that plan.
8 JUDGE FEDER: So, theoretically, could
9 one construct a rate structure that had a
10 per-subscriber minimum that was -- that moved
11 together with the subscription price?
12 THE WITNESS: Yeah, I think that's
13 possible. And I think in a way that is what is
14 trying to be accomplished here.
15 You know, you could have a million
16 different buckets. And the problem with that, I
17 guess, is that makes life very difficult for you
18 guys and maybe for everybody, but -- so there has
19 got to be some tradeoffs there, but, yeah I think
20 the idea is to try to have buckets with different
21 minima that are reflecting the nature of the plan
22 that would fit into the bucket.
23 JUDGE BARNETT: May this witness be
24 excused?
25 MR. WETZEL: Yes, Your Honor.

1 JUDGE BARNETT: Thank you, Dr. Leonard.
2 THE WITNESS: Thank you.
3 JUDGE BARNETT: It appears we have
4 Alyeshmerni next?
5 MR. STEINTHAL: We have, Your Honors,
6 Elliot Alyeshmerni from Google was one of the
7 witnesses where cross-examination was waived. We
8 are simply moving into evidence Google Exhibit 694,
9 which is the written direct testimony of Elliot
10 Alyeshmerni, and Google Exhibit 551, 552, 553 and
11 560, which are attached and referenced in Mr.
12 Alyeshmerni's direct testimony.
13 JUDGE BARNETT: Thank you.
14 MR. SCIBILIA: And Copyright Owners have
15 an objection to one of those exhibits.
16 JUDGE BARNETT: Which one?
17 MR. SCIBILIA: That is Exhibit 551. And
18 the reason, the basis for the objection is that this
19 is a spreadsheet that purports to show losses
20 incurred over several of Google's services,
21 including download service and other offerings that
22 aren't at issue in this case.
23 But, more importantly, the losses shown
24 are the result of an allocation of global costs,
25 including infrastructure costs and customer support

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RISHI MIRCHANDANI				
	1300			

AFTERNOON SESSION: 1193

CONFIDENTIAL SESSIONS: 1077-1091, 1245-1275, 1293-1299, 1335-1373

E X H I B I T S

EXHIBIT NO:	MARKED/RECEIVED	REJECTED
GOOGLE		
551	1295	
552	1295	
560	1295	
694	1295	
695	1072	
1701	1277/1279	
AMAZON		
1	1305	
7	1368	
10	1368	

1	15	1298
2	16	1299
3	17	1299
4	18	1299
5	20	1299
6	111	1306
7	113	1299
8	114	1299
9	115	1299
10	116	1299
11	117	1299
12	118	1299
13	119	1299
14	120	1299
15	121	1299
16	122	1299
17	123	1299
18	124	1298
19	125	1299
20	127	1299
21	129	1299
22	130	1299
23	131	1299
24		
25		

1 CERTIFICATE

2

3 I certify that the foregoing is a true and
4 accurate transcript, to the best of my skill and
5 ability, from my stenographic notes of this
6 proceeding.

7

8

9 3/16/17
10 Date Signature of the Court Reporter

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IN THE MATTER OF:)

)

DETERMINATION OF RATES) Docket No.

AND TERMS FOR MAKING AND) 16-CRB-0003-PR

DISTRIBUTING PHONORECORDS) (2018-2022)

(PHONORECORDS III),)

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3 ----------X
4 IN THE MATTER OF:)
5)
6 DETERMINATION OF RATES) Docket No.
7 AND TERMS FOR MAKING AND) 16-CRB-0003-PR
8 DISTRIBUTING PHONORECORDS) (2018-2022)
9 (PHONORECORDS III),)
10 ----------X
11 BEFORE: THE HONORABLE SUZANNE BARNETT
12 THE HONORABLE JESSE M. FEDER
13 THE HONORABLE DAVID R. STRICKLER
14 Copyright Royalty Judges
15
16 Library of Congress
17 Madison Building
18 101 Independence Avenue, S.E.
19 Washington, D.C.
20
21 April 5, 2017
22 9:25 a.m.
23 VOLUME XVII
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1 O P E N S E S S I O N
2 JUDGE BARNETT: Good afternoon,
3 Dr. Leonard. Welcome back. You remain under oath.
4 THE WITNESS: Thank you.
5 Whereupon--
6 GREGORY LEONARD
7 a witness, called for examination, having previously
8 been duly sworn, was examined and testified further
9 as follows:
10 MR. WETZEL: Good afternoon, Your Honors.
11 DIRECT EXAMINATION
12 BY MR. WETZEL:
13 Q. Welcome back, Dr. Leonard. Could you
14 please turn to Exhibit 698, which is in the binder
15 in front of you.
16 A. Yes, I'm there.
17 Q. What is Exhibit 698?
18 A. It is my rebuttal expert witness
19 statement.
20 Q. And I will note for the record that the
21 report appendices and exhibits to the report, while
22 tabbed separately in the binder, are all part of
23 Exhibit 698.
24 On the declaration following page 111 of
25 Exhibit 698, is that your signature?

1 A. Yes, it is.
2 MR. WETZEL: Your Honor, Google moves to
3 admit Exhibit 698, the rebuttal expert statement of
4 Dr. Gregory Leonard, dated February 18, 2017.
5 MR. JANOWITZ: No objection.
6 JUDGE BARNETT: Mr. Wetzel, you are
7 offering that together with the appendices?
8 MR. WETZEL: Correct.
9 JUDGE BARNETT: 698 is admitted, together
10 with the appendices and exhibits.
11 (Google Exhibit Number 693 was marked and
12 received into evidence.)
13 MR. WETZEL: Your Honors, at this time
14 Google would also like to move to admit Exhibit 790,
15 which was a compendium of royalty reports and
16 related documents produced by Kobalt through the
17 Copyright Owners' counsel.
18 MR. JANOWITZ: Your Honor, we're okay
19 with that for reliance only. There is no
20 foundation.
21 JUDGE BARNETT: Okay. 790 is admitted as
22 a document that --
23 MR. WETZEL: These are materials that
24 Dr. Leonard relied upon. We do believe that the
25 royalty statements qualify as business records while

1 we understand that there has not been a Kobalt
2 witness before the Panel.
3 JUDGE BARNETT: Thank you. 790 is
4 admitted for the limited purpose of documenting
5 facts upon which this witness relied.
6 (Google Exhibit Number 790 was marked and
7 received into evidence.)
8 MR. WETZEL: Thank you.
9 BY MR. WETZEL:
10 Q. Dr. Leonard, what was your assignment in
11 preparing your rebuttal statement?
12 A. My assignment was to review the expert
13 reports of, I guess, both Copyright Owners and Apple
14 and to analyze them and respond to them in my own
15 rebuttal statement.
16 Q. And you had some demonstrative slides
17 prepared to accompany your testimony today?
18 A. Yes, I did.
19 Q. Now, I am not going to ask you,
20 Dr. Leonard, about all of the opinions that are
21 displayed or summarized on these slides. I am going
22 to seek to avoid spending too much time on material
23 that has been covered by Dr. Katz today.
24 Have you been following the testimony and
25 evidence in this proceeding?

1 A. Yes, I have.
2 Q. And have you seen any evidence or
3 testimony that causes you to change any of the
4 conclusions expressed in your written rebuttal
5 testimony?
6 A. No, I have not.
7 Q. Have you had an opportunity to review
8 Dr. Eisenach's written testimony in this case?
9 A. Yes, I have.
10 Q. And you were here yesterday for
11 Dr. Eisenach's testimony?
12 A. I was, indeed.
13 Q. We can go to slide 2, please.
14 Did you respond in your rebuttal
15 statement to Dr. Eisenach's benchmarking analysis?
16 A. Yes, I did.
17 Q. And does slide 2 reflect Dr. Eisenach's
18 benchmarking approach?
19 A. Yes, it is a summary thereof.
20 Q. Oh, I'm sorry, is slide 2 restricted? We
21 can keep that down.
22 Very briefly, what conclusions, if any,
23 did you reach regarding Dr. Eisenach's benchmarking
24 analysis?
25 A. Well, there are two big components. One

1 is the use of sound recording royalties as a
2 benchmark and the other is use of various benchmarks
3 that are related to the ratio of sound recording
4 royalties to musical work royalties. And I think
5 there were flaws in both of those.
6 Q. Why, just very briefly, again, why are
7 payments for sound recordings not suitable to use as
8 a benchmark, in your opinion?
9 A. Well, first, they are not governed by the
10 801(b)(1) factors that we have to take into account
11 here. As related to that is the point that they can
12 be reflective of the market power that labels have.
13 There is also this argument that I think
14 was discussed, I am not going to go into it, but the
15 idea that if Copyright Owners are correct that the
16 musical work royalties are too low right now, then
17 the sound recording royalties are probably higher
18 than they would be.
19 And that actually upsets then the idea
20 that there is some fixed benchmark that it will be
21 changing as the musical work royalty were to change.
22 And then, lastly, just the idea that, you
23 know, we're talking about music, of course, but the
24 sound recording area with artists and labels is
25 really a different one than the songwriting and

1 publisher market. And I think some of those
2 differences are quite important.
3 JUDGE STRICKLER: A question for you,
4 Dr. Leonard. Good afternoon.
5 THE WITNESS: Good afternoon.
6 JUDGE STRICKLER: Your first point is
7 that the sound recording rates are not governed by
8 801(b)(1), those factors there.
9 But is it possible to utilize those rates
10 in a two-step type of analysis that this Panel or
11 the Judges, predecessors of this Panel have used
12 whereby you can establish some sort of a market rate
13 through a ratio using sound recording royalties and
14 then apply the 801(b)(1) factors?
15 THE WITNESS: Yeah, I mean, for instance,
16 if the idea was we have a way to estimate how much
17 those rates were above the competitive rate, you
18 know, in other words, how much market powers affect
19 things, then in principle we could eliminate that
20 and then proceed with that rate.
21 Again, I think you want to be careful
22 about some of these other issues. But certainly if
23 you could identify the issues, if you could measure
24 a correction and make it, then that's certainly an
25 approach that could be contemplated.

1 JUDGE STRICKLER: Thank you.
2 BY MR. WETZEL:
3 Q. Dr. Leonard, did you have an opportunity
4 to evaluate Dr. Eisenach's range of ratios of sound
5 recording to musical work royalties?
6 A. Yes, I did.
7 Q. And in your analysis what conclusion did
8 you reach?
9 A. Well, I found, first of all, the range to
10 be extremely wide. In fact, so wide as to be in my
11 view uninformative because what you have are a bunch
12 of different potential benchmarks, each of which is
13 pretty different in numerical value to the others.
14 In that kind of situation, something must be
15 explaining that.
16 And typically what would explain that are
17 some kind of difference in economic conditions that
18 are going on behind the scenes. And then what you
19 would have to do is go look at the various potential
20 benchmarks and say, okay, which one is most similar
21 to the situation we're interested in here.
22 And I didn't really see Dr. Eisenach
23 doing that so much as saying, well, I'm going to
24 look towards the middle of the range and, you know,
25 that's not -- when the range is so wide, that's

1 really not a valid approach.
2 Q. You chose a different benchmark, correct?
3 A. I did.
4 Q. I think I am going to need to go to
5 restricted session for the next part.
6 JUDGE BARNETT: We will be closing the
7 hearing room briefly.
8 (Whereupon, the trial proceeded in
9 confidential session.)
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1 O P E N S E S S I O N
2 BY MR. WETZEL:
3 Q. Let's discuss Dr. Gans. What, if any,
4 opinions do you have regarding Dr. Gans' application
5 of the 801(b) factors?
6 A. Well, I would say he didn't apply them,
7 which is a pretty big problem, as I see it.
8 Q. Did you also evaluate Dr. Gans' Shapley
9 analysis?
10 A. I did, yes.
11 Q. What opinions did you form regarding
12 Dr. Gans' Shapley analysis?
13 A. Well, I guess to start with, I'd say in
14 my view it is not really even a Shapley value
15 analysis. At the end of the day what he is really
16 doing is he is saying in his view publishers should
17 make the same profits as labels.
18 And then he looks at what the labels have
19 made. And then he says, well, what musical work, or
20 mechanical royalty, I should say, would bring up,
21 the publishers up to where the labels are. Then
22 that's the analysis, I think, in a nutshell.
23 He didn't really do a Shapley analysis,
24 certainly not like the one Dr. Marx has done. I
25 think he called it that because he wanted to clothe

1 it in that, but it's not really that, so, I mean,
2 that was point number 1.
3 JUDGE STRICKLER: Again, just to be
4 clear, you say he clothed it as a Shapley analysis.
5 Is that because, I think you just said, that he
6 assumed that the sound recording labels and the
7 publishers should have equal profits?
8 THE WITNESS: Well, I mean, he could have
9 made that assumption without calling it a Shapley
10 value analysis. I think he -- in fact, the
11 fundamental -- yeah, I don't see that you need
12 Shapley to make that assumption. That assumption is
13 just something he is saying, well, they both have
14 veto power, therefore, their contribution is the
15 same.
16 JUDGE STRICKLER: Right. So does that
17 disqualify it as a Shapley analysis or does that
18 make it a Shapley analysis with that assumption
19 built into it?
20 THE WITNESS: Well, I would say it is not
21 a Shapley analysis because a Shapley analysis, you
22 would look at -- and I will get into this in a
23 minute -- but in my view you would start with each
24 individual copyright that's at issue here. And you
25 would say: I'm going to, you know, I've got to look

1 at each of them. I'm going to look at each of the
2 Services. I have got to look at everybody.
3 JUDGE STRICKLER: You would unbundle the
4 individual songs themselves?
5 THE WITNESS: You have to. Otherwise you
6 get, you know, the market power type issues by
7 aggregation.
8 And so I think there are two
9 alternatives. One is you sort of unbundle
10 everything, because at some level the songs and the
11 sound recordings, you know, are substitutes for each
12 other. Eventually you get to an aggregation point
13 where they become must-haves. That creates a market
14 power and Cournot complements problem that I know
15 was discussed a lot earlier, as I was here.
16 And that's, you know, one issue. But I
17 think another issue is just that an individual
18 copyright owner, if you are looking at that level,
19 if you are trying to compete to get an artist to
20 record your song versus somebody else's song, then
21 you are out there as it actually happens trying to
22 compete with a bunch of different songwriters.
23 And, you know, that's going to, in
24 general, create a lot of competition for you. If
25 you look at things aggregated up to a single

1 publisher, you have completely eliminated that
2 competition and substitution. And the one thing we
3 know from everyone's discussion of Shapley is that
4 when there are alternatives and substitutes out
5 there, that that drives down the values, the Shapley
6 values that result for those particular products.
7 Now, I will say that computationally,
8 completely impossible to do what I just described.
9 It is not going to happen. So then you are left
10 with two alternatives. One is you just don't do it.
11 And I think that's where I am.
12 But I think the other way to do it, and
13 the most sensible way if you're going to do it, is
14 what Dr. Marx has done, which is to say, you know,
15 okay, as a practical matter, I have got to look at
16 the publishers together, I have got to look at the
17 labels all together as one entity, but then, you
18 know, to counteract these effects I'm talking about,
19 then I also have to look at the Services together.
20 So I think if you are going to do it, I
21 think the way Dr. Marx did it is the right way. It
22 adjusts for some of the market power issues.
23 JUDGE STRICKLER: So would it be fair to
24 say that Dr. Marx built, rather than eliminating the
25 market power, she elevated the market power of the

1 Services so that she would have countervailing power
2 to eliminate what you are calling the defect in the
3 Shapley analysis?
4 THE WITNESS: Yeah. And, again, I think
5 I personally would go a different route entirely. I
6 just think this is way too complicated for Shapley
7 to deal with in a tractable way.
8 But if you are going to do it, that's
9 certainly, I think, a much more preferable way,
10 because otherwise you are giving market power or
11 additional market power to the, you know, by putting
12 all the copyrights in the hands of one entity and,
13 you know, not allowing there to be any competition
14 between them.
15 So, I mean, that's one issue I have. And
16 then I guess the other important issue from my
17 perspective is just -- and it is actually related in
18 a way -- is this whole idea that the contribution of
19 the songwriter is exactly equal to the contribution
20 of the artist.
21 I mean, I think if you just think about
22 the way the music industry works, it is driven by
23 the artists.
24 I mean, you know, artists are what drive
25 things. People want to hear the artist. At the end

1 of the day, I mean, how many songwriters can we each
2 name versus how many artists can we name? As I
3 mentioned before, when a popular artist is recording
4 an album, they have songwriters come out of the
5 woodwork to get them to record their songs.
6 What does that all tell you? It tells
7 you the artist really should be getting more because
8 they are driving more of what's going on.
9 So I think the fundamental premise of
10 Dr. Gans' whole analysis is completely wrong, that
11 the, you know, at the end of the day the artists and
12 the songwriters are making different contributions
13 and we need to take that into account.
14 The only way he is getting to an equal
15 value is he is saying, okay, once we're all said and
16 done, we're about ready to offer our service, the
17 publishers could pull back and say we're going to
18 veto this.
19 That's really, you know, in the patent
20 area, that's what people are all upset about,
21 holdup. Okay. That is exactly holdup.
22 Let's go back to the time when that
23 artist is recording the album, and imagine there
24 that you get in a room with the songwriters, okay,
25 and then the songwriters are going to accept a lot

1 less at that point, again, because of the
2 competition to get into the, you know, basically on
3 the artist's album. So that's, I think, very
4 important.
5 The other thing is that, and this goes
6 to -- actually to follow up on that point -- is
7 that, you know, at the end of the day we're trying
8 to incentivize the actual producers of the content.
9 Are those the publishers and the labels? No. It is
10 the songwriters and the artists.
11 And Dr. Gans has left them out of his
12 model entirely. They are just a cost, respectively,
13 to the publishers and the labels. And so, I mean,
14 that's just part -- that part of it is to me
15 completely wrong.
16 And then, lastly, I think the 801(b)(1)
17 factors require that we contemplate consumers here.
18 That's the availability of the music to the public.
19 And a Shapley analysis simply doesn't
20 consider consumers. Consumers generate the surplus
21 that everybody else in the Shapley analysis gets to
22 split up. And that can obviously, again, through
23 market power and other things can lead to outcomes
24 that are not in consumers' best interests. And I
25 think that they should be considered more broadly

1 and, again, I have tried to do that.
2 So I think those are the main -- I went
3 on for a bit -- but I think those are the main
4 points that I would add.
5 BY MR. WETZEL:
6 Q. Just as one clarifying point, the bullet
7 that says "treats rightsholders as a single entity
8 but assumes many players on the Services' side,"
9 what is that referring to exactly in the context of
10 what you just described?
11 A. So the idea that all of the owners of the
12 musical work copyrights are treated as one entity
13 and then the owners of the sound recording rights
14 are treated as a second single entity.
15 Actually this probably isn't written very
16 clearly but that's what I meant, that within a
17 category they are all being grouped together and
18 treated as a single entity, allowed to enter into
19 the Shapley analysis, as opposed to dispersed and,
20 again, having to compete to be in the, you know, in
21 the services and in the recordings.
22 MR. WETZEL: If Your Honors have nothing
23 further, I will pass the witness.
24 JUDGE BARNETT: Thank you.
25 Cross-examination? How much?

1 MR. JANOWITZ: More than ten minutes.
2 Quite a bit.
3 JUDGE BARNETT: Okay. Well, we will
4 start.
5 CROSS-EXAMINATION
6 BY MR. JANOWITZ:
7 Q. Good afternoon.
8 A. Good afternoon.
9 Q. Dr. Leonard, in your written rebuttal
10 statement you state that it is your opinion that the
11 Copyright Owners' proposal would have a disruptive
12 effect by increasing Google's all-in royalties for
13 Subpart B interactive services, streaming services,
14 correct?
15 A. Can you point me to where that is, just
16 so I can see the context?
17 Q. Let's see. You can't remember if you
18 said it would have a disruptive effect?
19 A. Well, I certainly am concerned about it
20 having a disruptive effect. I think your question
21 was specifically related to Google. I don't know
22 whether I was that specific. I just don't recall.
23 You can point me to it.
24 Q. Well, I don't want to take the time. Oh,
25 I think I found it.

1 A. All right.
2 Q. Paragraph 9 on page 8.
3 A. Okay, let's see. Yes, so I say that, you
4 know, it would have a disruptive effect of
5 increasing the all-in royalties. This is by the
6 65 percent number that I talked about earlier.
7 Q. Right. Have you calculated the percent
8 of Google's total costs that the mechanical
9 royalties under the Copyright Owners' proposal would
10 be?
11 A. The percentage of costs? I don't believe
12 so, no.
13 Q. Have you calculated what percentage of
14 those total costs the incremental increase in
15 mechanical royalties under the Copyright Owners'
16 proposal would be?
17 A. I don't believe so, no.
18 Q. Now, as I understand it from your direct
19 testimony, based on your calculations, Google's
20 proposal is exactly equal to the amount paid by
21 Google for the period June 2013 through June 2016,
22 correct?
23 A. Yes, I mean if you -- well, it is the
24 same as if you applied the typical terms from their
25 license agreements.

1 Q. Have you done any projections on the
2 impact of Google's proposal on a forecast of
3 Google's streaming revenues for the upcoming period
4 of 2018 through 2022?
5 A. I don't believe so. I haven't seen any
6 forecasts of that type.
7 Q. Now, you say that Dr. Eisenach ignores
8 the fact that a shift to the Copyright Owners'
9 proposal would significantly disrupt interactive
10 streaming services, correct?
11 A. Yeah, a combination of the amount and the
12 shift to per-play.
13 Q. Have you done an analysis of the impact
14 of the Copyright Owners' proposal on the streaming
15 services?
16 A. Well, I think you can see from the number
17 I talked about, if the historical rate is about half
18 of what the proposal is then, you know, again, on a
19 historical basis, I haven't seen forecasts that
20 would allow one to do this, but on a historical
21 basis it would about double the mechanical royalty.
22 Q. Have you done any econometric analysis?
23 A. Of?
24 Q. Of the impact.
25 A. I wouldn't say an econometric one, no.

1 Q. In paragraph 21 of your report you state
2 that a number of interactive streaming providers
3 have shut down due to a lack of profitability,
4 correct?
5 A. Let's see. Yes.
6 Q. Do you know the names of the Services
7 that have shut down?
8 A. I don't recall sitting here, no.
9 Q. Do you know the names -- do you know
10 which Services were shut down for reasons having
11 nothing to do with profitability?
12 A. Well, I cited here to Ms. Levine's
13 testimony, so I guess we can call that up and take a
14 look at it, but I don't -- I don't recall what
15 exactly she says in there.
16 Q. So you are simply relying on Ms. Levine's
17 testimony, correct?
18 A. I think for this point I'm aware that
19 there has been exit, I think everybody has
20 acknowledged that, but that's what I'm citing
21 specifically here.
22 Q. But you haven't done any independent
23 study as to which Services have shut down and the
24 reasons for their shutting down?
25 A. I have not tried to independently go back

1 and identify everyone who shut down, no.
2 Q. And you haven't done any study to
3 indicate the impact of those Services shutting down
4 on the industry as a whole, have you?
5 A. I'm not sure what you mean by impact.
6 Q. In other words, if a service was
7 marginal, hardly did any streaming at all, the
8 impact of it shutting down on the industry would not
9 be significant, would it?
10 A. I mean, it depends. In any event, I
11 haven't done a specific study like you just
12 described.
13 Q. Are you familiar with a company called
14 ShareBeast which was mentioned in Dr. Katz's report
15 as having exited the business?
16 A. I don't think so, no.
17 Q. But you did read Dr. Katz's report,
18 didn't you?
19 A. I did, yeah.
20 Q. ShareBeast was shut down by the FBI for
21 willful copyright infringement. It was an illegal
22 file sharing service.
23 You wouldn't attribute the demise of
24 ShareBeast to a lack of profitability, would you?
25 A. I mean, if they were shut down for legal

1 reasons like that, no, no, I wouldn't.
2 Q. Do you know the history of any of the
3 following companies: Rara, Beatport, MOG, Beats
4 Music, Oris, Zune, or Bop.fm?
5 A. I have certainly heard some of those
6 names before and I believe I have reviewed some
7 information on them, but as I'm sitting here I
8 couldn't give you a detailed history of each one.
9 Q. Is there anything in your report
10 detailing the history of these companies?
11 A. I don't recall as I'm sitting here.
12 Q. Besides having heard the names of these
13 companies, did you ever know anything about why
14 these companies shut down?
15 A. I think that some of them I have
16 certainly read some things about, but, again, I am
17 not going to be able to tell you which ones shut
18 down for which particular reasons.
19 Q. So you don't have that information in
20 your report and you can't give it to us today,
21 right?
22 A. Well, I think I would have to go back
23 through my report and see -- especially the original
24 one -- but as I am sitting here I don't recall one
25 way or the other.

1 Q. So to the extent that it exists, it is in
2 your original report?
3 A. I think so, because I don't recall having
4 a discussion of that type in here.
5 Q. In paragraph 22 of your written rebuttal
6 statement, you state that it is likely that the
7 royalty payments proposed by the Copyright Owners
8 would result in additional service providers exiting
9 the market.
10 Can you identify companies that are
11 likely to exit the market if the Copyright Owners'
12 proposal is adopted?
13 A. I think it is hard to tell in this kind
14 of situation who exactly is going to exit. What we
15 know is costs would increase and we also know that,
16 you know, as the Goldman Sachs report says, no one
17 is currently profitable.
18 It is going to be hard -- and, you know,
19 the viability of such business models is yet to be
20 proven. That's a situation that we can be pretty
21 sure they are going to be exiting.
22 Q. Well, we know, for example, that Spotify
23 is not currently profitable, right?
24 A. They are not, as I understand it, yes.
25 Q. And so do you believe that it is likely

1 that Spotify will exit the market if the Copyright
2 Owners' proposal is adopted?
3 A. Again, I haven't done an analysis of
4 that. Spotify, I would think, would be -- is
5 probably in one of the best positions to survive, so
6 I would somewhat doubt that they would be one to
7 exit.
8 Q. Okay. And you haven't seen any
9 projections with respect to any of the other
10 interactive streaming companies in terms of the
11 impact of their -- of the Copyright Owners' proposal
12 on their ability to survive, correct?
13 A. I don't think I have seen any forecasts
14 of that eventuality.
15 Q. And you haven't seen any internal
16 analysis or projections of your client, Google,
17 which states or suggests that it will exit the
18 market if the Copyright Owners' proposal is adopted,
19 have you?
20 A. I wouldn't say I have seen any specific
21 analysis of that.
22 Q. Have you seen anything from Google that
23 indicates that it will exit the market if the
24 Copyright Owners' proposal is adopted?
25 A. I have to go back and look at the

1 testimony, but I thought there was something about,
2 you know, they are not going to, you know, Alphabet
3 has left all sorts of markets when things didn't
4 work out and they may decide this one isn't working
5 out either so, you know, I haven't seen, again, a
6 specific analysis of that.
7 Q. What markets have they left?
8 A. I believe they left, some robotics stuff
9 they left, some, you know, I would have to go back
10 and look but, you know, every so often I see they
11 have, you know, shut down a unit.
12 MR. JANOWITZ: Your Honors, I was just
13 about to get into some restricted material. And
14 since it is just after 5:00 o'clock, perhaps this is
15 a good place to stop.
16 JUDGE BARNETT: This is a good place to
17 stop.
18 JUDGE FEDER: Just before we break, I
19 want to make the record clear, by Alphabet you are
20 referring to Google's parent company?
21 THE WITNESS: Yes. Sorry.
22 JUDGE BARNETT: I have to dash but,
23 counsel, let me take a minute to remind you that the
24 Judges are tasked with doing two things in this
25 proceeding: One is setting rates and one is setting

1 terms.

2 And the Subpart A terms are settled and

3 published. So what we have heard so far in this

4 hearing is proposals to either continue the current

5 terms, which are voluminous, or to continue them but

6 to change some elements or eliminate the mechanical

7 floors or other elements, or to alter or adapt,

8 adopt, a different rate structure than the one that

9 is in the current regulations.

10 The current regulations are fragmented

11 tremendously because there are five or six different

12 types of Services that are dealt with separately.

13 There are also promotional, regulations about

14 promotional uses and free trials. And the current

15 regulations include that de novo determination

16 provision and lots and lots and lots of definitions.

17 Just because there are current

18 regulations in Subparts B and C does not mean that

19 they will automatically roll over because this is a

20 contested proceeding. Those were put in by

21 agreement.

22 And if we don't have evidence to adopt

23 new regulations, new terms, then we will be unable

24 to complete this. It is not enough for us to set

25 the rates. It is not enough for us to determine the

1 rate structure and what goes into that. The
2 regulations have a full complement of terms and
3 those will be decided de novo, the same as the
4 rates.
5 So we need evidence. We need -- and, I
6 mean, something other than arguments of counsel in
7 the proposed findings and conclusions, just so you
8 are aware.
9 Thank you. We will be at recess until
10 9:00 o'clock in the morning.
11 (Whereupon, 5:06 p.m. the hearing
12 recessed, to reconvene at 9:00 a.m. on Thursday,
13 April 6, 2017)
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8 AFTERNOON SESSION: 5018

9 CONFIDENTIAL SESSIONS: 4926-4969, 4979-4991,

10 5052-5053, 5063, 5067:19-25, 5069-5073, 5077-5078,

11 5115-5142, 5151-5180

12

13 E X H I B I T S

14 EXHIBIT NO: MARKED/RECEIVED REJECTED

15 GOOGLE

16 647 4997

17 693 5144

18 753 4998

19 770 4998

20 790 5145

21 PANDORA

22 886 4904

23 887 4921

24 913 4998

25 915 4998

EXHIBIT NO:	MARKED/RECEIVED	REJECTED
PANDORA		
916	4998	
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1034	4998	
1374	4905	

1 CERTIFICATE

2

3 I certify that the foregoing is a true and

4 accurate transcript, to the best of my skill and

5 ability, from my stenographic notes of this

6 proceeding.

7

8

9 4/6/17 _____

10 Date Signature of the Court Reporter

11

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IN THE MATTER OF:)

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DETERMINATION OF RATES) Docket No.

AND TERMS FOR MAKING AND) 16-CRB-0003-PR

DISTRIBUTING PHONORECORDS) (2018-2022)

(PHONORECORDS III),)

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4 IN THE MATTER OF:)
5)
6 DETERMINATION OF RATES) Docket No.
7 AND TERMS FOR MAKING AND) 16-CRB-0003-PR
8 DISTRIBUTING PHONORECORDS) (2018-2022)
9 (PHONORECORDS III),)
10 ----------X
11 BEFORE: THE HONORABLE SUZANNE BARNETT
12 THE HONORABLE JESSE M. FEDER
13 THE HONORABLE DAVID R. STRICKLER
14 Copyright Royalty Judges
15
16 Library of Congress
17 Madison Building
18 101 Independence Avenue, S.E.
19 Washington, D.C.
20
21 April 6, 2017
22 9:22 a.m.
23 VOLUME XVIII
24 Reported by:
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1 P R O C E E D I N G S
2 (9:22 a.m.)
3 JUDGE BARNETT: Good morning. Please be
4 seated.
5 It wasn't until I sat down here and had
6 to face all of you, that I realized we haven't given
7 you a response about the findings and conclusions.
8 We're not prepared to do that yet.
9 MR. STEINTHAL: Just one housekeeping
10 matter. You asked -- you gave us the opportunity
11 yesterday to designate something as restricted if we
12 thought it was appropriate on behalf of Google.
13 We're fine with the record as it is open.
14 JUDGE BARNETT: Thank you, Mr. Steinthal.
15 Thank you very much.
16 Mr. Janowitz, are you still
17 cross-examining this witness?
18 MR. JANOWITZ: I am, yes.
19 JUDGE BARNETT: You may proceed.
20 Whereupon--
21 GREGORY LEONARD,
22 a witness, called for examination, having previously
23 been duly sworn, was examined and testified further
24 as follows:
25 JUDGE BARNETT: Good morning,

1 Dr. Leonard. You remain under oath.
2 THE WITNESS: Good morning.
3 MR. JANOWITZ: And I don't think this is
4 restricted. In fact --
5 JUDGE FEDER: You know it's not
6 restricted?
7 CROSS-EXAMINATION -- Resumed
8 BY MR. JANOWITZ:
9 Q. Good morning, Dr. Leonard.
10 A. Good morning.
11 Q. Dr. Leonard, I'd like to direct your
12 attention to your criticisms of Dr. Rysman's
13 opinions.
14 A. Okay.
15 Q. And, in particular, Dr. Rysman's opinion
16 that a per-play based royalty is inappropriate,
17 which is your opinion, correct?
18 A. I'm sorry, his opinion --
19 Q. It is your opinion --
20 A. Right.
21 Q. -- that a -- that the per-play based
22 royalty is inappropriate?
23 A. I think it's less preferable certainly
24 than a percentage-of-royalty with the -- the TCC and
25 per-subscriber minimum.

1 Q. Less preferable?
2 A. Yes.
3 Q. But perhaps workable?
4 A. No, because we have a better alternative,
5 so I'm suggesting that's a better way of proceeding.
6 Q. I understand. But if that alternative
7 weren't there, this would be a workable alternative,
8 correct?
9 A. If the only way in the world to proceed
10 was to have a per-play royalty and the alternative
11 was to have, you know, a complete collapse of -- of
12 society, yes, I would accept that, but since that's
13 not where we are --
14 Q. Well --
15 A. -- and the existing system has worked
16 perfectly well, I think we can continue to use it,
17 and that's my opinion.
18 Q. Okay.
19 JUDGE STRICKLER: Dr. Leonard.
20 THE WITNESS: Yes.
21 JUDGE STRICKLER: Good morning.
22 THE WITNESS: Good morning.
23 JUDGE STRICKLER: I have a question for
24 you about how to handle the until the complete
25 collapse of --

1 THE WITNESS: Society.
2 JUDGE STRICKLER: -- society. So I don't
3 know. I don't --
4 THE WITNESS: Yeah, well, it could be
5 coming; who knows?
6 JUDGE STRICKLER: But if we were at a
7 per-play rate, as you and counsel have been
8 discussing, as opposed to a percentage rate, could a
9 per-play rate mimic some of the advantages of a
10 percentage-of-revenue rate if you had multiple
11 per-play rates based upon the nature of the service
12 in question such as ad-supported versus
13 subscription, by way of example?
14 THE WITNESS: So that would solve certain
15 problems that I've been concerned with, which is
16 that a one size per-play rate fitting all is going
17 to not work in a lot of cases. So, yes.
18 But, on the other hand, it still has the
19 disadvantage of, you know, not -- from my point of
20 view, not being the efficient way to proceed. You
21 want -- I think you want to charge for access and
22 let people listen to as much as they want without,
23 you know, in a subscription service, without having
24 to pay an incremental fee. And I'm worried that
25 that would -- you know, that would -- system may

1 change if a per-play structure were used.
2 JUDGE STRICKLER: Would it be fair to say
3 that both a percentage-of-revenue approach and a --
4 an approach with multiple tiers of per-play rates
5 are each different ways of price discrimination
6 because they vary the unit price?
7 THE WITNESS: They are, but, again, one
8 has the potential of adding a price for incremental,
9 you know, usage, which I don't think is wise here.
10 I think it's better to have -- again, given that we
11 have the per-subscriber minima, that takes care of
12 some of the problems that have been expressed.
13 And that, together with a
14 percentage-of-revenue, I think, is a much better way
15 to proceed.
16 JUDGE STRICKLER: You describe that as a
17 -- as a form of two-part tariff?
18 THE WITNESS: Yeah. Yes, in a way, yes,
19 because you're charging once for the access and
20 letting people then use as much as they want or you
21 can think of it as the usage is priced at the
22 incremental cost, which is zero here, largely. So,
23 yeah, that's exactly what a two-part tariff is.
24 JUDGE STRICKLER: Well, that's a two-part
25 tariff at the downstream level, right?

1 THE WITNESS: Correct, right.
2 JUDGE STRICKLER: Are you advocating
3 something that you would -- you would understand to
4 be a two-part tariff on the upstream level, which is
5 the rate we're setting here?
6 THE WITNESS: Yeah, I mean, that's a --
7 so if you charge a percentage-of-revenue, and I'm
8 talking about a subscriptions-based system, but then
9 you're basically saying for subscribers paying,
10 let's say, ten dollars, you're charging a fee for
11 them to have access to the library.
12 JUDGE STRICKLER: What do you -- what's
13 the upstream version equivalent of that? I
14 understand that's downstream.
15 THE WITNESS: Yes.
16 JUDGE STRICKLER: So I'm paying $9.99 a
17 month --
18 THE WITNESS: Right.
19 JUDGE STRICKLER: -- for all-you-can-eat
20 service. So the $9.99 is my -- is my -- the first
21 part of the tariff. The second part is essentially
22 zero.
23 THE WITNESS: Right, that's right.
24 JUDGE STRICKLER: But what is -- what is
25 the equivalent upstream? How does -- what is the

1 efficient way to transfer that two-part tariff
2 approach downstream?
3 THE WITNESS: Well, you can --
4 JUDGE STRICKLER: Without it being --
5 THE WITNESS: Yeah. So I think -- so if
6 you have a 10 and a half percent royalty, that's
7 $1.05, I guess, on per subscriber. And so you can
8 think of the Service really as charging, as part of
9 its two-part tariff, it's charging $1.05 as --
10 that's part of the two-part tariff that the user is
11 paying to have access.
12 So, really, that -- the royalty is being
13 set up as a two-part tariff as well. It's $1.05, in
14 the case, in the example I gave, and the user is
15 kind of paying that and then getting access and
16 paying zero incremental royalty for the usage from
17 there on.
18 I mean, it's almost like if you think --
19 think about the service for a minute as being
20 transparent. And the user was contracting directly
21 with the Copyright Owners, then they would be paying
22 a fixed fee to get access to the Copyright Owners'
23 library.
24 JUDGE BARNETT: Okay. If it's a -- if
25 it's a 10 dollar subscription price and -- and the

1 rate is 10 and a half percent of revenue --
2 THE WITNESS: Right.
3 JUDGE BARNETT: -- revenue is not the
4 same as subscription payment. Revenue can be
5 defined very many ways, can include a lot, can
6 exclude a lot. There's not a straight pass-through
7 of $9.99 per subscriber to -- to the 10 and a
8 half percent that goes to the Copyright Owners.
9 THE WITNESS: Well, I think --
10 JUDGE BARNETT: But some -- some
11 subscriptions from $4.99, some are $14.99 for a
12 family, some are zero.
13 JUDGE FEDER: Some are bundled.
14 JUDGE BARNETT: Some are bundled.
15 THE WITNESS: Right. Yeah, so I'm
16 talking about the simplest case of the part B
17 subscription service. When we get --
18 JUDGE BARNETT: There's nothing simple
19 here, Dr. Leonard. We don't want the simple. We
20 can't deal with the simple.
21 THE WITNESS: Sure.
22 JUDGE BARNETT: Okay? So --
23 THE WITNESS: Yeah. So I mean there's
24 two answers. One is if -- take a family plan, for
25 instance. So I think the point there, this is an

1 example of where you're using a part B subscription
2 and you're really targeting it at the group of
3 consumers with lower willingness to pay. So you're
4 trying to get them -- offer them a lower price to
5 entice them to take it.
6 The same principles I just outlined apply
7 there, that if we take 10 and a half percent of that
8 per subscriber fee that they're paying to subscribe,
9 I think that is the appropriate royalty there. And,
10 again, works like a two-part tariff.
11 Now let's move to the more -- you're
12 right, that's not simple, but certainly we'd all
13 agree that something like, you know, Amazon is more
14 complicated.
15 JUDGE BARNETT: Let me ask you a question
16 about that.
17 THE WITNESS: Yes.
18 JUDGE BARNETT: So if I'm a songwriter or
19 a publisher and I have a work that I'm getting --
20 that has value -- I mean, this is one of the big
21 questions, isn't it?
22 THE WITNESS: Yes.
23 JUDGE BARNETT: What is the value of that
24 artistic work?
25 THE WITNESS: Right.

1 JUDGE BARNETT: I get the -- I get the
2 willingness to pay argument. Okay. The argument of
3 the Services is we're bringing people in who
4 wouldn't otherwise be there by price discrimination.
5 THE WITNESS: Yes.
6 JUDGE BARNETT: But why should I, as the
7 songwriter, publisher, be -- in that circumstance,
8 be required to accept less for the same product?
9 THE WITNESS: Yeah, that's a very good
10 question. And I think the answer is that the
11 product has less value in that context. So, you
12 know, one of the fundamental premises of economics
13 is that a given product can vary in value depending
14 on how it's used and who's -- who's using it.
15 You know, I -- I might like a given
16 product a lot more than somebody else. I'd be
17 willing to pay a lot more for it. In that sense,
18 the product has more value to me than to that other
19 person. If it were possible for the producer to
20 separate me from somebody else, identify us as
21 somebody who is willing to pay more versus willing
22 to pay less, then they're able to price that product
23 differently to each of us in accordance with our
24 difference in values and, therefore, extract, in a
25 sense, more of the value from us combined than they

1 would otherwise be able to do.
2 And so that's the idea here. I think the
3 -- the idea that music, or anything for that matter,
4 has a value that is the same in every use and to
5 everyone is just not really the right way to think
6 about it because, you know, again, it's just some
7 people value it a lot, some people don't.
8 If we can separate those people out and
9 price differently to them, we actually do -- as a
10 Service, as the providers of the inputs, we can do a
11 lot better from a revenue perspective. And that's
12 really what I think the advantage of the
13 percentage-of-revenue structure is in situations
14 where, you know, the revenue is clear.
15 Now, again, the situation like Amazon is
16 a different one, where there's no distinct revenue
17 for it. I think the Echo situation is a bit
18 different, but, you know, the Prime, Amazon Prime,
19 is a bit different. And there we -- you know, we
20 obviously have to do something else.
21 And there -- you know, again, we can
22 think of the way it's existing right now is there's
23 a percent of TCC. You know, if you believe the
24 labels kind of take care of themselves, using
25 a percent of TCC for the musical works makes a lot

1 of sense. If you -- you know, then they the
2 question is what should the right percentage be to
3 apply there.
4 If we think we can come up with a
5 per-subscriber number that makes sense and, again,
6 that number may have to differ depending on what
7 kind of service it is, then that's something that
8 can be done.
9 And then as I remember under Subpart C, I
10 think there are situations, if I'm remembering
11 right, situations where it actually specifies for
12 particular services how to unbundle some revenue and
13 perhaps apply a percent of revenue to that unbundled
14 revenue. So it would be possible, again, to kind of
15 impute a revenue for a service like Amazon Prime
16 that -- that there's no explicit revenue generated.
17 So, I mean, those are the three
18 possibilities, it seems to me, to address this
19 problem, which I agree is difficult. And -- but I
20 think each one of those already exists in the
21 current 115 setup, if I'm not mistaken.
22 JUDGE FEDER: Well, just with regard to
23 the unbundling issue, under the current 115 setup,
24 we have a situation where Amazon is declaring zero
25 revenue --

1 THE WITNESS: Right.
2 JUDGE FEDER: -- attributing zero
3 revenue --
4 JUDGE STRICKLER: You want it restricted?
5 MR. ELKIN: Yes, if you don't mind.
6 JUDGE FEDER: Let's go to restricted,
7 then.
8 MR. LANE: And, Your Honors, there was
9 one answer that came up with Dr. Katz yesterday that
10 I think also sort of fell into this category. We'll
11 provide the markings with respect to that, since we
12 were in and out of restricted session.
13 JUDGE BARNETT: Thank you.
14 MR. LANE: A bit.
15 JUDGE BARNETT: Yeah, I don't think we've
16 gone anywhere yet, because everybody knows how much
17 Amazon Prime costs, right? And that the music is a
18 -- is a benefit that way.
19 MR. LANE: Yeah, it's more of a -- the
20 revenue points.
21 JUDGE BARNETT: Understand, understand.
22 (Whereupon, the trial proceeded in
23 confidential session.)
24
25

1 O P E N S E S S I O N
2 BY MR. JANOWITZ:
3 Q. Dr. Leonard, one thing I heard in the --
4 in your responses to the -- to the Panel was that
5 the per-play royalty would lead to a limitation of
6 usage. It's certainly possible? That's one of
7 the --
8 A. One of my concerns, yes.
9 Q. Yes. And -- and you cited Pandora as
10 having limited usage, correct? Limited, you know --
11 I guess limited usage.
12 A. I think there was a time when they
13 attempted to do certain things that would have that
14 effect, and I think they made their subscribers
15 unhappy, as I remember, and there was a change in
16 that policy.
17 Q. Isn't it true that Spotify also has
18 limited functionality or usage? It's not a -- it's
19 not a -- it's not a full on-demand service, is it?
20 A. In what regard are you --
21 Q. Well, have you ever used Spotify?
22 A. I am not actually a Spotify subscriber.
23 Q. Okay. Have you acquainted yourself with
24 the way Spotify works?
25 A. I mean, again, I haven't used it, but I'm

1 generally aware, yeah. I've just been asking what
2 you're referring to.
3 Q. And when I say Spotify, I mean
4 ad-supported.
5 A. Oh, ad-supported, I see. Yes. Right.
6 Yes.
7 Q. Are you familiar with the limitations on
8 functionality in ad-supported?
9 A. To some degree, but, again, I haven't
10 used it myself.
11 Q. So you understand that you just can't
12 call up any song the way you can in -- on a, you
13 know, unlimited subscription service, correct?
14 A. I think I'd -- I'd say I'm generally
15 aware of that, but, again, I haven't -- you know, I
16 haven't actually used it myself. So I'm not sure
17 quite how it feels when you try to use the service.
18 Q. And you -- do you understand that there's
19 a shuffle mechanism in it, so that you can't, for
20 example, just pick songs even in an album one by
21 one; it shuffles the album according to whatever
22 algorithm Spotify has?
23 A. I believe I'm aware of that, yes.
24 Q. So you would agree, then, that Spotify
25 already has limitations in the way that it can be

1 used that you saw as a negative outcome of a
2 per-play model?
3 A. It has that. I mean, part of that is, of
4 course, they want to funnel people up to the
5 subscriber service. So, you know, again, the ads
6 certainly make it less attractive. And, of course,
7 it's also the way you monetize it, but, you know,
8 there are other things you want to do to push, nudge
9 people, if you can call it that, in the right
10 direction. That's really what's motivating that
11 there. And, again, to the extent that that's
12 successful, it's something that benefits the
13 Copyright Owners.
14 Q. But you also know that many people,
15 millions of Spotify ad-free -- ad listeners refuse
16 to be nudged; they just stay with that service,
17 correct?
18 A. Yeah, and to the extent that they are
19 generating ad revenue that leads to royalties that,
20 again, benefit the Copyright Owners.
21 Q. Now, you were talking earlier also about
22 the -- the desirability of separating out consumers
23 based on the value they -- they perceive in music.
24 A. If you can do that, yes.
25 Q. If you can do it. Now, again, going back

1 to Spotify ad-supported, does Spotify ad-supported
2 separate out users according to the value that they
3 see in the music?
4 A. Again, what I was just describing, by
5 making it -- you know, imposing some constraints on
6 the usage as, you know, including having to endure
7 ads, that is a mechanism. But, I mean, the
8 funneling is itself a mechanism to separate out the
9 people who really value music and want to just be
10 able to listen to what they want to listen to,
11 versus people who, you know, are not willing to pay
12 that amount of money or willing to accept some of
13 the other burdens and then pay a lower price
14 effectively. And, you know, it generates less money
15 for Spotify and ultimately for the Copyright Owners.
16 But, again, those are people who are --
17 probably a lot of them are not going to pay the
18 higher subscription price.
19 Q. Right. And you say a lot of them are not
20 going to be willing to pay it. But there may be
21 millions of people in there who both could and,
22 under certain circumstances, would pay more, isn't
23 that right?
24 A. I mean, could, I don't think, has much
25 utility here, but --

1 Q. Would.
2 A. You know, it's -- look, no -- it's very
3 rare to have a situation where you get what's called
4 perfect price discrimination where you know -- you
5 know, we all have a little sign on our head that
6 says I'm willing to pay 10 dollars, you have one
7 that says I'm willing to pay 9 dollars, and then the
8 price you get charged is 9 and the price I get
9 charged is 10. That's not going to happen.
10 But Spotify has the incentives to set
11 these things up to do the funneling, to do the
12 separation, and, again, it's something that
13 ultimately benefits Copyright Owners as well.
14 JUDGE STRICKLER: Here's a question
15 following up on that. As you -- based on your
16 statement, if the -- if the Copyright Owners benefit
17 as well from this second- or third-degree price
18 discrimination that -- that you're positing, which
19 is -- which is a percentage-of-revenue rate, if we
20 were to set a per-user rate instead, and it's in the
21 interest of both the Services and the Copyright
22 Owners to deviate from that and negotiate around
23 that statutory constraint because it maximizes
24 revenue for both sides, would you expect them to
25 bargain for a different structure that would be a

1 percentage structure? If it's indeed in their best
2 interest, rational actors would -- would flee the
3 per-user rate and would -- would go to the
4 percentage rate, right?
5 THE WITNESS: Do you mean per player per
6 user?
7 JUDGE STRICKLER: Oh, I'm sorry, I
8 misspoke. I meant per player.
9 THE WITNESS: Okay. Yeah, no, I just
10 wanted to -- but then we get basically this exercise
11 going on in -- in negotiations and not necessarily
12 governed by the 801(b)(1) factors. So, I mean, I
13 think the problem -- I mean, I think the point of
14 having this kind of compulsory licensing setting is
15 to reduce transactions cost and to, you know,
16 prevent the exercise of market power and prevent
17 disruption in the marketplace.
18 So, I mean, it seems to me -- I can
19 imagine a situation where regardless -- you know,
20 again, you can't address all the complexities here,
21 that there might be some situation where there's
22 some news service that really doesn't fit in well
23 and -- and the parties maybe can hammer out
24 something differently, but I don't think that should
25 be the default. It seems to me we should try to

1 cover as many of the possibilities as we can.
2 JUDGE STRICKLER: Thank you.
3 BY MR. JANOWITZ:
4 Q. Dr. Leonard, in -- in paragraph 81 of
5 your rebuttal report, you point out that in the PSS
6 SDARS II proceeding, the rate percent is a
7 percentage of gross revenue, correct?
8 A. Yes.
9 Q. That's support -- that's support for your
10 position that that's how this matter should be
11 resolved as well, correct?
12 A. It's just -- it's an example, again, of
13 where percentage-of-revenue was used, at least as I
14 understand it.
15 Q. Right. Now, you're aware, aren't you,
16 that in Web IV, the CRB established a royalty rate
17 on a per-play basis?
18 A. Yes.
19 Q. And you're aware that Dr. Katz in Web IV
20 argued for a per-play royalty and against a
21 revenue-based royalty, correct?
22 A. I'm aware of that, yes.
23 Q. Did you consider Dr. Katz's arguments in
24 Web IV when you wrote paragraph 1 of your -- of your
25 rebuttal report?

1 A. When I wrote paragraph --
2 Q. 81.
3 A. 81? I don't -- I don't know that I went
4 back and checked what exactly he was saying in the
5 context of that proceeding.
6 Q. If you were aware of the decision in Web
7 IV and Dr. Katz's position, why didn't you refer to
8 it in paragraph 81 when you discussed the other
9 proceeding in support of your position?
10 A. Well, I'm just trying to indicate here
11 that there are a lot of situations where a
12 percentage-of-revenue is used and certainly where
13 there are some situations where it's not. Again, as
14 I mentioned, in IPO licensing you have a wide
15 variety of things that go on, but certainly it's not
16 surprising to see a percentage-of-revenue. That's
17 really my point.
18 Q. So --
19 JUDGE FEDER: Dr. Leonard -- I'm sorry,
20 Mr. Janowitz.
21 Are you familiar with the reasoning in
22 the SDARS decisions as to why this body adopted a
23 percentage revenue rate for satellite radio?
24 THE WITNESS: I read -- read it, but I
25 confess, as I'm sitting here, I don't recall the

1 specific discussion of that.
2 JUDGE FEDER: Okay. All right. Fair
3 enough. Thanks.
4 JUDGE STRICKLER: Another question since
5 we're on the topic of Web IV. Do you recall that in
6 Web IV that there was a different rate set, a play
7 rate for subscription and for ad-supported?
8 THE WITNESS: Again, that sounds
9 familiar, but it has been a while since I've read
10 that.
11 JUDGE STRICKLER: Assuming that's what it
12 says, is that an example of using a per-play rate to
13 create price discrimination?
14 THE WITNESS: So, sorry, what is a
15 per-play rate for -- which one?
16 JUDGE STRICKLER: One for subscription
17 and one for ad-supported.
18 THE WITNESS: Oh, you mean different
19 per-play rates?
20 JUDGE STRICKLER: Different rates. Lower
21 rate for ad-supported.
22 THE WITNESS: Well, yeah, right, that
23 would be an example recognizing that the value in
24 the two settings was different and that the -- you
25 know, the revenues that -- or I should say profits,

1 I suppose, that the Services were getting might be
2 different in the two situations and then the royalty
3 should be different, however that's expressed. So,
4 yeah, it does seem to be an example of that.
5 JUDGE STRICKLER: Thank you.
6 BY MR. JANOWITZ:
7 Q. Dr. Leonard, in -- in paragraph 82 of
8 your rebuttal report, you state that a revenue-based
9 rate structure makes economic sense because
10 songwriters and interactive streaming service
11 providers collectively share in both the upfront
12 investment in the service offering and the upside or
13 downside rewards associated with those investments.
14 Correct?
15 A. Yes, that's what I said here.
16 Q. What investments do the Copyright Owners
17 have in the interactive services?
18 A. Well, I think I'm talking here about to
19 -- the extent to which, I think, Dr. Rysman was
20 talking about, let's say, a price discount to build
21 user base. So that would -- that's what I would
22 term an investment. They're lowering the price
23 today in order to build a base and make more revenue
24 tomorrow.
25 Now, when you do that, because the

1 elasticity of demand is probably sufficiently high,
2 you may actually increase revenue today, which would
3 increase royalties. But let's assume for the moment
4 that you actually forgo some revenue. So that's
5 really what I'm talking about here.
6 So the extent that's happening, you know,
7 if revenue today is lower than it would otherwise be
8 if no long-run view were taken, but it does lead to
9 higher revenue later on, then that's something where
10 there's a sharing in the investment, which is the
11 discount, and the return, which comes later.
12 Q. Is it relevant to your opinion that the
13 Copyright Owners have not voluntarily chosen to make
14 this so-called investment in the promotional pricing
15 strategies of the streaming services?
16 A. Not really because for two reasons. One
17 is, you know, it's pretty rare for a supplier of an
18 input to be able to dictate what the user of that
19 input does with it. You know, the user of the
20 input, the downstream company is going to have a lot
21 more information about -- about the business, about
22 what makes sense.
23 And then perhaps more importantly, it's
24 just the point that, you know, in this sense the
25 incentives are pretty well aligned. And, you know,

1 look, the service wants to make a lot of revenue.
2 That's, of course in a percentage-of-revenue setup
3 going to lead to more royalties as well. So there's
4 -- you know, there's a good aligning of incentives.
5 JUDGE STRICKLER: But when you say
6 there's an aligning of incentives, following up on
7 counsel's question, that's a conclusion that would
8 otherwise be forced upon Copyright Owners if we have
9 this percentage-of-revenue structure as opposed to a
10 per-play structure, right? You're saying it would
11 be efficient, if I'm understanding you correctly,
12 because the Services know how to maximize revenue
13 because they're in the business of supplying the
14 streaming service to listeners.
15 But to the extent the Copyright Owners
16 would not have -- would not share in or concur in
17 that decision, they would have -- under a
18 percentage-of-revenue structure, they would really
19 have no choice but to -- but to join in those
20 investment decisions. Isn't that right?
21 THE WITNESS: Well, I mean, I guess,
22 first off, again, that's the way the world normally
23 works. I mean, it ' somewhat rare, I think, to have
24 control over how a downstream firm operates.
25 And, again --

1 JUDGE STRICKLER: Well, you have control
2 over your own pricing --
3 THE WITNESS: Yes.
4 JUDGE STRICKLER: -- of your own input.
5 THE WITNESS: Right.
6 JUDGE STRICKLER: You don't have control
7 over what they do with the input and the investments
8 that are made downstream. Well, here we're talking
9 about moving those investment decisions and the
10 associated risks upstream to an entity that -- that
11 would just simply have to implicitly go along with
12 that, if the rate incorporates the decision-making
13 process of the downstream purchaser, right?
14 THE WITNESS: Okay, well, you know, under
15 a per-play rate, you know, again, the -- the
16 incentives -- conditional on having a per-play rate,
17 the Services -- I mean, the Copyright Owners would
18 like the Services to make the subscriber base as big
19 as possible, which, you know, is more or less going
20 to be the same as any revenues go up too.
21 But I think the problem is that's
22 conditional on having a per-play rate. But I think
23 the point I'm trying to make is that that actually
24 could lead to a reduction ultimately in revenues.
25 And a reduction in royalties because of the nature

1 of the structure. And businesses and the way
2 they've set things up, I think, is a good indication
3 of the nature of the business, and they're in a
4 better position to know how to -- to operate it.
5 JUDGE STRICKLER: If I could just follow
6 up on that, that seems to suggest that what you're
7 saying is that the existing Subpart B rates, which
8 were the result of a settlement renewed in 2012, are
9 reflective of a willingness of the Copyright Owners
10 to delegate such investment-type decisions and to
11 share in such investment-type decisions with the
12 streaming services, as opposed to the position that
13 has been made by some of the Copyright Owners'
14 witnesses, which is that the industry had previously
15 been not mature, had been expanding, so there was a
16 greater willingness to share risk at the outset, but
17 now that the industry is not only firmly -- more
18 firmly entrenched but that we have much bigger
19 players like Amazon, Apple, and Google, that's a
20 position they no longer want to take.
21 You seem to be saying that there's
22 something inherent in the nature of this market
23 structure that would -- that makes -- makes it in
24 some sense inevitable, a revealed preference for a
25 percentage-of-revenue rate downstream to enlarge the

1 pie for both the Copyright Owners and the streaming
2 services.
3 THE WITNESS: Yeah, so I would say a
4 couple things there. One is, yes, there was a
5 settlement. Yes, they did agree to this particular
6 structure back then. And I do think that's
7 important as a sign of a revealed preference, as you
8 said.
9 So then the question is have things
10 changed? And while they have, of course, changed in
11 the sense that there are more revenues, the question
12 is whether those changes were largely anticipated at
13 the time the settlement was done in 2012. I think
14 what's clear is that I think most people were aware
15 that Google and Apple were considering a service, so
16 I don't think -- although they hadn't actually --
17 weren't actually in then, I think it was known that
18 that was likely to happen.
19 I think they were perhaps involved to
20 some extent in that earlier proceeding.
21 JUDGE STRICKLER: Well, whether --
22 whether the large entities or the ecosystem
23 entities, I'll call them --
24 THE WITNESS: Yeah.
25 JUDGE STRICKLER: -- were in it or not,

1 it seems to me what you're saying is that there's
2 something inherent in the market structure based on
3 the pricing and the marginal cost of additional
4 streams that leads to a percentage-of-revenue -- and
5 maybe I'm putting words in your mouth here and I
6 don't want to so tell me if this is wrong -- but
7 when you add in these ecosystem, larger ecosystem
8 entities, now we have measurement problems on
9 revenue. It's not that revenue is -- is an
10 inefficient or inappropriate structure, if I
11 understand you correctly, but you're acknowledging
12 that we do have new measurement problems that we
13 didn't have when we had a predominantly pure-play
14 grouping of -- of streaming services?
15 THE WITNESS: Yes. So maybe I'm -- I
16 guess what I'd say is I actually do think the -- the
17 percentage-of-revenue structure -- again, and I
18 would agree the minima should be in there, so I'm
19 including that in the whole structure -- is actually
20 the best way to proceed from the Copyright Owners'
21 view, point of view as well. I'm not saying they
22 agree with me on that, but I do think that they're
23 actually -- that that is the right way to go.
24 JUDGE STRICKLER: I know -- I know they
25 don't agree with you.

1 THE WITNESS: Yeah.
2 JUDGE STRICKLER: That's -- that's one of
3 the easy -- easiest things about this case.
4 THE WITNESS: Right, right.
5 JUDGE STRICKLER: I know they don't agree
6 with you.
7 THE WITNESS: Right.
8 JUDGE STRICKLER: But the more -- the
9 more salient question is whether or not -- and
10 you've just addressed it, I guess -- is whether the
11 2012 settlement reveals a preference for that and
12 that the changes -- the question that has to be
13 wrestled with, a question that has to be wrestled
14 with, which is not an easy question, is whether that
15 revealed preference is endemic to this industry so
16 it's -- it exists to this day or whether there have
17 been changes that make that benchmark, that 2012
18 settlement as a benchmark, no longer appropriate?
19 THE WITNESS: Yeah, I think the hard part
20 from my perspective is obviously I don't know what
21 was in people's minds back in 2012, which is, you
22 know, what their considerations were. So it's hard
23 for me to say.
24 But I would say that, you know, from my
25 perspective, again, what people knew or should have

1 known reasonably back in 2012 versus the way things
2 sit today are not sufficiently different that
3 somebody could say, you know, oh, my gosh, back then
4 what we did made sense and all of a sudden it
5 doesn't make sense anymore.
6 JUDGE STRICKLER: I'm not interested in
7 your mind reading or --
8 THE WITNESS: Right.
9 JUDGE STRICKLER: -- unless we have good
10 evidence as to what people were thinking. I'm more
11 interested in your economic analysis and the other
12 experts' economic analysis of the 2012 settlement
13 and why it was entered into with that structure and
14 why those rates were set. And I think you've
15 already said it, so I don't want to beat a dead
16 horse, that you take it to be a revealed preference
17 and that the changes in the market don't change that
18 reason -- the efficiency of that revealed
19 preference.
20 THE WITNESS: Yeah, no, absolutely. I
21 think it's still the right thing to do and, you
22 know, for instance, Google has entered into
23 agreements where that structure has been used. As
24 you pointed out, there's no reason that structure
25 has to be used if the parties thought --

1 JUDGE STRICKLER: Hang on.
2 MR. WETZEL: If we're going to go into
3 more detail about Google's agreements, I'd ask that
4 we go to a closed session.
5 JUDGE STRICKLER: You don't have to
6 answer with specificity, but -- but with regard
7 generally, of course, the response to that which
8 we've already heard is that, well, that's -- all
9 those agreements were done in the shadow of the
10 existing settlement, so they may not be revealing a
11 preference to -- to continue on with the 2012
12 settlement; they just reveal the fact that the 2012
13 settlement becomes -- casts such a shadow that you
14 really can't negotiate around it.
15 THE WITNESS: I guess I disagree. If
16 there was a much more efficient solution, then the
17 parties could have gotten to that, despite the
18 existence of the 115 structure.
19 JUDGE STRICKLER: Well, if it was a more
20 -- maybe if there was a more efficient structure
21 perhaps, but if the Copyright Owners could
22 appropriate more value in a different approach
23 absent the shadow, perhaps they would have. One
24 might differ over whether that's the efficient
25 result, but it might be reflective of the existing

1 market power that would allow the Copyright Owners
2 to obtain a different share, a greater share than if
3 the shadow existed?
4 THE WITNESS: Yeah, but, I mean, if
5 that's market power, then I think under 801(b)(1),
6 you know, that's not something that should be
7 credited.
8 JUDGE STRICKLER: Not that you can answer
9 it, but one of the other witnesses, Dr. Watt,
10 corrected some of his writings to say there's market
11 power, then there's abuse of market power.
12 THE WITNESS: Right.
13 JUDGE STRICKLER: And are you saying that
14 if there's market power that's otherwise not
15 abusive -- I understand that's not a defined term in
16 my question -- that's not otherwise abusive, that we
17 should still correct for it?
18 THE WITNESS: Yes, I think -- well, I'm
19 sorry, let me back up. If what -- again, I don't
20 know what he meant. Here's what I would say, is
21 there's within -- a musical work has some sort of
22 value. It may have a lot of value because of it's
23 -- it's good, you know, it's the Michael Jordan of
24 songs. And in that situation --
25 JUDGE STRICKLER: I think it's called the

1 Michael Jackson of songs.
2 THE WITNESS: Yeah, actually. Okay.
3 Probably even better, but it goes to my point that
4 the artist is -- is much more important than the
5 songwriter. But, anyway, you know, Michael Jordan
6 got paid a lot of money. Does Michael Jordan have
7 market power? No, he's getting paid a lot or was
8 paid a lot of money because he was really good at
9 what he did. Okay?
10 So that -- you could -- I would call that
11 a scarcity, you know, rent or whatever you want to
12 call it, some people might term it market power.
13 That's not what I'm talking about. That is
14 something that should appropriately be -- go to the
15 -- the songwriter or the artist or whoever it is.
16 What I'm talking about is, you know, the Cournot
17 complements problem, which I know has been beat to
18 death, or the, you know, aggregation of copyrights
19 into a must-have that then allows you to get a
20 higher price than you otherwise could. Those are
21 the issues I think need to be factored out in -- in
22 a setting like this where the 801(b)(1) factors come
23 into play.
24 JUDGE STRICKLER: Thank you.
25 JUDGE BARNETT: Dr. Leonard, there is

1 also an issue that continues to bug me and that --
2 THE WITNESS: I'll do my best to help.
3 JUDGE BARNETT: And that's the
4 dysphasia -- that might not be a word -- but the
5 dysphasia. In other words, if a songwriter today
6 writes a Number 1 hit song --
7 THE WITNESS: Yeah.
8 JUDGE BARNETT: -- and the Services are
9 investing in the future, that songwriter is going to
10 get less than a new songwriter will get in three
11 years with a hit -- with a hit song when the
12 investment is done and the revenue is being captured
13 as opposed to reinvested.
14 THE WITNESS: Yeah, so --
15 JUDGE BARNETT: How -- how fair, fair is
16 a strange concept, but --
17 THE WITNESS: Yeah, so I guess I agree
18 that that's an issue. I mean, if somebody writes,
19 they have one hit and its now at a time when, for
20 whatever reason, they don't get as much as they
21 would if they wrote it a year from now, you know, I
22 was here when Dr. Katz talked about maybe the
23 publishers can do some smoothing. That's certainly
24 a solution. But I think another thing to think
25 about is what type of investments are being made.

1 And really -- so, you know, one would be,
2 again, giving a discount off the price of the
3 service. As I noted, you know, what happens is it's
4 true that the price per subscriber might come down
5 as you discounted it, but the whole point is you do
6 that in order to get a lot more subscribers, so if
7 the elasticity of demand is greater than one in
8 absolute value, if I can use that term. What that
9 means is when you lower the price by a certain
10 amount, the revenue actually expands.
11 So that would be the type of investment
12 that would actually benefit the person who's writing
13 the song today because there would be more
14 subscribers. Although they would each be paying a
15 little less, the overall revenue is actually more.
16 So that's one type of investment where I don't think
17 this comes into play or actually goes in the other
18 direction.
19 The other type of investment would be the
20 service spends some money to do advertising or
21 something like that. That, again, is something that
22 hurts the Services' bottom line today, but it
23 doesn't affect or maybe it even benefits the
24 Copyright Owner. So that one isn't a problem.
25 The only one that's really a problem is

1 if you defer revenue from today to some later time.
2 And I confess it's -- it's hard to see what those
3 kind of investments are. And I'm not saying there
4 aren't any, but, you know, I think they're a lot
5 less common than the first two, which aren't
6 creating the problem that you're concerned with.
7 So I'm happy to -- if anybody has got any
8 examples they want to run by me, I'm happy to
9 entertain them. But, you know, the first two types
10 really aren't a problem in this sense. They're all
11 about certainly building a business that's bigger
12 later than it is now but, in general, would tend to
13 benefit the -- the Copyright Owners.
14 JUDGE BARNETT: As a homogenous whole?
15 THE WITNESS: Yeah. I mean, right. I
16 mean, so you could say somebody in the future --
17 well, no. I mean, they would be benefitted by this
18 too. So I think -- just basically, I think it's
19 hard to argue with those kinds. Again, there might
20 be other kinds that somehow do defer revenue. You
21 know, obviously, if you gave it away for free -- so
22 there's an example. I could just give it away for
23 free today. That, although it's like a discount,
24 it's such a big discount that revenue actually falls
25 to zero, obviously.

1 You know, that -- so that would be an
2 example. But I don't think those -- you know, I
3 think some Services have, you know, one month free,
4 but it's not something that lasts for tremendously
5 long. I doubt it would have a huge effect in the
6 sense of redistributing revenues.
7 So, again, there might be other examples,
8 but I think it's less of a problem than maybe has
9 been suggested. Does that help or?
10 JUDGE BARNETT: Thank you.
11 BY MR. JANOWITZ:
12 Q. Dr. Leonard, in -- in response to a
13 question that I think Judge Strickler's has, you
14 said it's rare for suppliers of an input to dictate
15 how that person who they're providing the input to
16 uses it. Do you remember saying that?
17 A. I mean, subject to laws and stuff of
18 course.
19 Q. Sure. And you said that's how it works,
20 right?
21 A. Well, in a lot of situations, yes, that's
22 how it works.
23 Q. Right. But isn't it true that in most of
24 those situations, you have control over your own
25 input? In other words, you get to set your price to

1 the downstream user, correct?
2 A. Well, I mean, again, there's always
3 consideration exchange, but, you know, for instance,
4 again, in IP licensing, I can give you a license and
5 let's say you pay me a lump sum, you pay me 100
6 million dollars, I really have very little say on
7 what you do thereafter, what your business model is
8 or anything else.
9 Q. Right. But you've paid 100 million
10 dollars?
11 A. Right. Not per use, not per unit sold,
12 not anything else. Not even percentage-of-revenue.
13 You've just paid me 100 million dollars, and it's --
14 you know, it's the so-called freedom to operate
15 license, right? It's the ultimate freedom to
16 operate.
17 Q. You -- you also said that, I think, in
18 response to another question, that the -- as an
19 alternative to the revenue model, a percentage of
20 the TCC would be okay too, but you pointed out that
21 21 percent, you think, is too high. Correct?
22 A. I'm saying that you obviously have to
23 look at what the number is, and given things I've
24 looked at, I think it's too high, yes.
25 Q. And Google has proposed a reduction of

1 the TCC to 13 and a half percent, correct?
2 A. As I understand it, yes.
3 Q. And -- but in concept, the -- the --
4 measuring the mechanical royalty by a percentage of
5 the TCC is something that -- that you could find
6 acceptable, given the proper rate, correct?
7 A. I mean, yeah, so it's, you know, part of
8 Google's proposal. I think it's part of the other
9 -- I haven't looked at them in tremendous detail --
10 but the other service providers' proposals as part
11 of the current 115 setup.
12 So, you know, I think it's -- you know,
13 it's obviously a useful part of things. In a
14 situation where revenue is problematic, does it play
15 -- could it play a bigger role? Yes, it could.
16 Q. So measurement by reference to a sound
17 recording royalty rate is not unacceptable to you?
18 A. Again, if you set the percentage properly
19 that takes into account things like the sound
20 recording, I mean the labels' market power and other
21 things like that, yes, I mean, it is part of the
22 current setup and I think in a way it is used, it
23 can serve a useful role.
24 Q. I direct your attention to page 56 of
25 your rebuttal report. The heading of section 4 on

1 that page is as follows: "There is no evidence, and
2 Dr. Rysman presents no evidence, that interactive
3 service providers have defined revenue in
4 opportunistic ways to manipulate revenues resulting
5 in lower royalty payments to songwriters."
6 Did you write that heading?
7 A. Absolutely.
8 JUDGE STRICKLER: Which page were you on,
9 please?
10 MR. JANOWITZ: It's --
11 JUDGE STRICKLER: I see the heading for
12 Number 4.
13 MR. JANOWITZ: Yes.
14 JUDGE STRICKLER:
15 BY MR. JANOWITZ:
16 Q. And in the last sentence of paragraph 85,
17 you say Dr. Rysman does not provide any reliable
18 evidence that music streaming service providers
19 define revenue in opportunistic ways. Is that
20 correct?
21 A. Yes, as I recall his initial report. I
22 didn't see anything --
23 Q. Have you seen any Amazon royalty reports?
24 A. Amazon royalty reports? I may have. I
25 don't recall.

1 Q. Are you denying that Amazon reports
2 literally zero revenues on Prime Music?
3 JUDGE BARNETT: Mr. Janowitz, this is
4 where we close the courtroom as we did before?
5 MR. JANOWITZ: Really?
6 JUDGE BARNETT: When we got into revenue.
7 MR. JANOWITZ: I'm sorry. I apologize.
8 I thought this was -- it was not --
9 JUDGE BARNETT: So are you going to
10 pursue this line or --
11 MR. JANOWITZ: Not much. And certainly
12 not divulging anything, certainly.
13 JUDGE BARNETT: Any more?
14 MR. JANOWITZ: Any more, yes.
15 JUDGE BARNETT: Okay.
16 BY MR. JANOWITZ:
17 Q. Isn't it clear, Dr. Leonard, that the
18 bundling of Amazon Prime Music as part of its Prime
19 service is, in fact, an opportunistic way to
20 manipulate revenues?
21 A. I totally disagree with that.
22 Opportunistic has a particular meaning here. Or at
23 least in economics.
24 Q. I accept -- I accept your answer. Thank
25 you.

1 A. Okay.
2 Q. In paragraph 86, you state that
3 Dr. Rysman's concern might have more theoretical
4 merit if directed against a rate proposal that was
5 purely expressed as a percentage-of-revenue,
6 correct?
7 A. Yes, making the point that there are --
8 the proposals have the minima that are -- address
9 some of the issues he is concerned with.
10 Q. Right. And you point to the fact that
11 under the existing 115 rate structure and the
12 proposal put forth by Google, there is a calculation
13 of the greater of employing certain minimum
14 payments, which you say protect the songwriters
15 against the supposed risk arising from the
16 uncertainty relating to the revenue of the streaming
17 service, correct?
18 A. Yes.
19 Q. Are you saying, going back to your
20 statements about sharing the upside, that the minima
21 in the statute allow the Copyright -- Copyright
22 Owners to "share the upside"?
23 A. The minima?
24 Q. Yeah.
25 A. No, the minima would be protecting on the

1 downside.
2 JUDGE STRICKLER: So if the minima
3 applies, such as in this -- in a hypothetical
4 situation where there's no revenue accruing to a
5 service, then there is no sharing of the upside by
6 the Copyright Owners? All they get is the minima?
7 There's protection on the downside, but no sharing
8 on the upside?
9 THE WITNESS: I'm not sure I understand.
10 If -- if --
11 JUDGE STRICKLER: If you're a service
12 that didn't -- that generated no revenue
13 attributable to the service because it was --
14 because it was bundled with other -- other related
15 -- unrelated goods and services so that the minima
16 applied, as counsel was suggesting --
17 THE WITNESS: Right.
18 JUDGE STRICKLER: -- as you point out,
19 the minima protects the -- the Copyright Owners on
20 the downside. Right?
21 THE WITNESS: Yeah. I mean, this
22 statement is about -- so a company that --
23 JUDGE STRICKLER: Keep it general.
24 THE WITNESS: Yeah, no, any company, but
25 it's not really talking about this situation where

1 there's problems of revenue definition. I think
2 here we're into uncertainty about the Services'
3 revenue because they might make a bad decision or
4 something and that revenues decline unexpectedly. I
5 think that's what this relates to.
6 JUDGE STRICKLER: I didn't think it was,
7 maybe I'm wrong, but I thought -- I mean, if it
8 wasn't the question, so now it's my question.
9 THE WITNESS: Okay. Sure. Yeah.
10 JUDGE STRICKLER: Which is that if a
11 service by its very nature generates no revenues --
12 THE WITNESS: Right.
13 JUDGE STRICKLER: -- so that a
14 per-subscriber minima or some other subminima would
15 apply --
16 THE WITNESS: Okay.
17 JUDGE STRICKLER: -- that protects the
18 Copyright Owners on the downside. That's why it's a
19 minima. It's a floor. But they no longer share in
20 the upside, if that's the business model of the --
21 of the -- of the service to generate no revenues.
22 THE WITNESS: Well, I don't know if I
23 would agree with that. What if there's an
24 explosion -- so let's say the per-subscriber minimum
25 applies and there's -- the service is wildly

1 successful and they get a bunch of subscribers, then
2 they benefit on the upside of that.
3 Or, you know, if it's percent TCC and the
4 sound recording themselves royalties are based on
5 revenues and if there's an explosion in revenue,
6 then that's going to work its way back to the
7 copyright owner.
8 JUDGE STRICKLER: So even the minima in
9 this example creates some upside growth?
10 THE WITNESS: Yeah, absolutely, sure.
11 JUDGE STRICKLER: Thank you.
12 BY MR. JANOWITZ:
13 Q. At the end of paragraph 86 of your
14 rebuttal report, after referring to the
15 per-subscriber minima, you state that "therefore" --
16 this is a quote -- "even Dr. Rysman's theoretical
17 concerns about the transparency issues of service
18 revenues are misguided."
19 Dr. Leonard, how can the existence of
20 minima or a minima, which is a default calculation,
21 when, as in the case of Amazon, revenues are
22 completely concealed, create transparency?
23 A. No, I'm saying the concerns about
24 transparency of revenues are addressed by this kind
25 of minima.

1 Q. By "transparency," you mean the ability
2 to see what's going on, right, in the -- in the
3 calculation of the -- of the revenues, correct?
4 A. Well, let's take -- sorry, are we closed?
5 JUDGE STRICKLER: Open.
6 MR. JANOWITZ: You know what, let me
7 withdraw the question.
8 THE WITNESS: Okay.
9 BY MR. JANOWITZ:
10 Q. I gather that perhaps what you mean by
11 transparency is that the Copyright Owners will know,
12 even before a single stream has been created,
13 exactly what they will receive, correct?
14 A. No, I think -- so I'll just talk
15 hypothetically. The transparency I'm talking about
16 here is a situation where it's not clear what
17 revenue could be attributable to the music part of
18 the service, that there's, you know, difficulties
19 because it's, for instance, bundled with something
20 else. And all I'm saying is that that's a situation
21 where the other prongs come into play or can come
22 into play, and so the lack of transparency -- and so
23 earlier I talked about the various ways this could
24 be addressed with, and I'm saying here that the
25 minima prong are ways to deal with this exact issue.

1 Q. So you're not saying that it's
2 transparent; you're saying that the lack of
3 transparency is dealt with in another way?
4 A. The lack of transparency in revenue is
5 addressed by having these minima that are based on
6 something else, namely number of subscribers or TCC.
7 JUDGE STRICKLER: Well, it's addressed
8 and -- the problem of the lack of transparency and
9 potential hiding, if you will, of revenue is
10 addressed and ameliorated by the existence of the
11 minima, but until you would reach a revenue
12 threshold that would trigger these minima, there's
13 room for all sorts of shenanigans, shall we say,
14 with regard to revenue concealment, theoretically or
15 hypothetically, until you hit that point. So you
16 can get -- you can get away with it as long as you
17 can, but once you hit the threshold, game over. So
18 you've ameliorated the problem, mitigated the
19 problem, but not eliminated the problem?
20 THE WITNESS: Well, I suppose you could,
21 of course, set -- that can be addressed in ways that
22 you set the -- the minima. You know, I think
23 the percent TCC, again, if you set -- I mean, this
24 is true of the subscriber too, but if you set the
25 number correctly, I mean, I think that that can be

1 -- that can be dealt with here.
2 The other thing I would say is, just
3 going back to opportunistic, I just want to be clear
4 what I meant about that. Opportunistic is what
5 you're talking about -- the service is sitting there
6 saying if all I do is I just stick the money over
7 here and I hide it here and I don't put it here --
8 when I said there's no evidence of that, I mean, I
9 literally have seen no evidence that that's what's
10 going on.
11 I think there are issues, legitimate
12 business issues, about, okay, we charge whatever we
13 charge for Amazon Prime, music is part of that, but
14 it's hard to decide how much. I mean, that's just
15 sort of a result of the business. There's no
16 opportunism going on there. It's business choices
17 that Amazon made and completely legitimate, but it
18 does create a problem for us here. I'm not denying
19 that.
20 I am just objecting to the use of the
21 word "opportunistic" with regard to what Amazon is
22 doing, for instance.
23 JUDGE STRICKLER: When you say -- when
24 you challenge opportunistic, it's the intentional
25 aspect of it that's bothering you. It may have the

1 economic result of being the equivalent of
2 opportunism, but -- but there's no nefarious intent.
3 It's a business structure that -- that might happen
4 to result in -- in the movement of revenue away from
5 the -- from the music service?
6 THE WITNESS: Well, it's not even a
7 movement. It's just I'm offering this bundle,
8 right, the bundle has music in it. I haven't moved
9 anything anywhere. It's just my business model.
10 And as a result of that, it does create
11 an issue where it's hard to identify a specific
12 revenue. We could try. We can do the imputed
13 revenue unbundling type thing --
14 JUDGE STRICKLER: Didn't we talk about
15 that when you were here on direct? I feel like we
16 did. How to -- how to unbundle?
17 THE WITNESS: Yeah, and we talked about
18 it a little earlier today. You could -- you could
19 try to do that, just like, I guess, there's a part
20 of Subpart C currently that talks about some
21 percentage, I think, of revenue that gets -- that
22 you could unbundle.
23 Alternatively, you could use the minima
24 and try to get the numbers right there, numbers that
25 would -- would do the job.

1 JUDGE STRICKLER: Thank you.
2 BY MR. JANOWITZ:
3 Q. Dr. Leonard, talking about the minima, in
4 -- in the case of Google's proposal, which you
5 assert has minima built into its proposal, under the
6 Google proposal there will be no mechanical-only
7 floor, correct?
8 A. That's correct. There's -- you know, the
9 other thing to create a floor for all-in --
10 Q. Right. And --
11 A. -- payments for musical works.
12 Q. And you -- and you would argue that the
13 Copyright Owner, under Google's proposal without the
14 mechanical floor, can rely on the subminimum,
15 correct?
16 A. Yes. Again, you know, if we -- I agree
17 we have to think about what the right numbers to
18 stick in there are, but, yes.
19 Q. So Google would remove the 50 cent
20 mechanical-only floor and then ask the Copyright
21 Owners to rely on the subminimum, only the
22 subminimum is now going to be less than it was
23 before, right, under Google's proposal?
24 A. It's going to be less to accord with -- I
25 mean for TCC, it's less. For the per-subscriber,

1 dollar per-subscriber minimum is the same, I
2 believe. The percent TCC, Google is proposing a
3 lower number. And I was -- as I talked about when I
4 was here before, that's consistent with, you know,
5 the lower corresponding percentage in Subpart A
6 PDDs.
7 Q. And the TCC would be paid only as a
8 lesser of calculation as compared to the 80 cents
9 per subscriber per month, correct?
10 A. It would be, yes, as a lesser of, right.
11 Q. And in paragraph 108 of your rebuttal
12 report, you point out to what I suppose could be a
13 -- could be considered a hazard of the increase in
14 mechanical royalties. You point out that if there
15 was such an increase in mechanical royalties, the
16 number of songwriters might increase, but that they
17 would likely be the marginal songwriters in terms of
18 songs, quality of songs, correct? Do you remember
19 that?
20 A. Yes.
21 Q. And you say that the high-quality
22 songwriters are already writing songs given current
23 incentives?
24 A. Yes, that's what you would expect.
25 Q. Can you explain to us what a high-quality

1 songwriter is?
2 A. Sure. A high-quality songwriter is -- as
3 I mentioned before, is somebody who's writing
4 something that ultimately has more appeal than a
5 lower quality songwriter.
6 Q. And in order to be a high-quality
7 songwriter, does a composer have to be commercially
8 successful?
9 A. I don't think in order to be. The
10 quality in this case is something I think is -- that
11 is inherent to the person. Like if I tried to write
12 a song, I'm -- I'm afraid the results would not be
13 particularly good, but there are other people who
14 are, you know, much better than I.
15 Q. Dr. Leonard, you've never testified in a
16 case involving music royalties before, have you?
17 A. No, I have not.
18 Q. And you've never written a paper about
19 music royalties, have you?
20 A. I have not.
21 Q. And this is the first engagement in which
22 you've been asked to testify as an expert in
23 connection with music royalties; isn't that correct?
24 A. I believe that's correct, yes.
25 Q. And you don't have -- you haven't studied

music in an academic way, correct?

A. I haven't written a paper that concerns music specifically, no.

Q. Have you -- have you studied -- have you received a degree in music or music finance?

A. Oh, no. No, I have not.

Q. Have you ever taken a music course?

A. Not from college onward. Perhaps before.

Q. Okay. Now, beginning at paragraph 115 of your written rebuttal statement -- by the way, in terms of, you know, your conclusions about high-quality music, have you done any empirical study of this?

A. Well, I am aware of -- I don't know what you mean by empirical study. I --

Q. Sure. Have you collected data and done, you know, an analysis the way an economist does an analysis?

A. Well, I certainly reviewed the record here, and I've reviewed academic literature. I'm quite familiar with the idea that, as in a lot of things, there's -- you know, it's a situation of a, you know, long tail. There's, you know, relatively few, you know, very successful artists, very successful songs, and then, you know, a long tail of

1 much less successful ones. It's similar to a lot
2 superstar-type situations, which I have written
3 about.
4 So I am quite familiar with that.
5 JUDGE FEDER: Have I reviewed the
6 testimony of any of the songwriters who appeared
7 before us?
8 THE WITNESS: I think I did take a look
9 at them at one time, but I didn't review their --
10 their testimony here.
11 BY MR. JANOWITZ:
12 Q. Now, you've also addressed criticisms to
13 Dr. Gans' work, correct?
14 A. Yes.
15 Q. And beginning at paragraph 115 of your
16 written rebuttal statement, you provide very
17 specific criticisms of Dr. Gans' expert report,
18 correct?
19 A. Yes, I guess so.
20 Q. And your first criticism of Dr. Gans'
21 opinions and his Shapley value analysis is based on
22 the assumption, his assumption, that sound recording
23 rights and musical work rights have equal value,
24 correct?
25 A. That's -- yes, I do dispute that.

1 Q. You point out that Professor Gans
2 believes these two rights are perfect complements,
3 correct?
4 A. Well, they are perfect complements.
5 Q. You're saying they are perfect
6 complements?
7 A. Well, so at the point where, again,
8 somebody needs the copyrights, at that point in
9 time, they are perfect complements in the sense that
10 you need both of them at that point in time. Now,
11 that doesn't mean they are of equal value, though.
12 Q. Now, just following up on your answer,
13 take a look at the -- at paragraph 115 beginning at
14 the bottom, next to the last line. "For example,
15 Dr. Gans claims it is easy to draw parallels between
16 sound recording rights and musical work rights. One
17 right cannot hold any value absent the other right,
18 and the value of sound recording rights and musical
19 work rights for interactive streaming are equal
20 because these two rights are perfect complements to
21 one another."
22 Do you see that?
23 A. Yes.
24 Q. And then you say, "However, Dr. Gans
25 presents no support for this crucial assumption."

1 And -- and that was the assumption, wasn't it, that
2 they are perfect complements?
3 A. No, that they are of equal value. So
4 it's very similar to a situation that is, you know,
5 very popular right now, if I can call it that, in
6 the standard essential patent area. Once you've set
7 a standard, you have a group of patents that are
8 essential to that standard. At that point, they are
9 perfect complements for each other. You need all of
10 them to implement the standard.
11 But I think as widely acknowledged now --
12 I hope at least anyway; I've done a lot of work in
13 this area -- is that not all those patents are of
14 equal value. Some are very important for the
15 standard, and some weren't that important because
16 when the standard was set there were a lot of
17 different technologies that could have been used to
18 solve that particular problem. Other -- other
19 patents, that wouldn't have been the case.
20 So although at the point where somebody
21 needs to implement the standard they are perfect
22 complements, to value them, to figure out what the
23 right royalties are, we need to go back and ask were
24 there substitutes or not? Were there other ways to
25 have achieved that aspect of the standard that's

1 covered by that specific patent using other
2 technologies? And if so, then that -- that
3 particular patent isn't worth a lot. Others, that
4 may not be true. That may have been the only way to
5 do that part of the standard. That one should get a
6 lot more money.
7 And that's really what I'm talking about
8 here, is let's go back to the time when the artist
9 decided to make this recording. What -- what song
10 choices did they have from the songwriter's
11 perspective? What artist could they have sold this
12 thing to? And, you know, again, I think if you
13 think about it, the artists are really driving the
14 bus here and should get more relative value. Not
15 that the songwriters are worth nothing. I'm not
16 saying that at all. But they certainly aren't of
17 equal value.
18 Q. All right. And have you been able to
19 measure that inequality?
20 A. Yeah, I think the Subpart A does that
21 quite nicely.
22 Q. Have you done it? Have you done any
23 empirical analysis and collected data that shows
24 what the difference is between the value of what a
25 songwriter puts into a song versus the artist who

1 performs it?
2 A. Well, I think I talk about a bunch of
3 factors here. I wouldn't call that an empirical or
4 econometric analysis, but it's certainly looking
5 at --
6 Q. Right.
7 A. -- at the market data and --
8 Q. You have some speculation on this point?
9 A. It's not speculation.
10 Q. Popular artists, you say, contribute more
11 value than songwriters and thus would be expected to
12 capture a larger share of the profits from royalties
13 in a market outcome. What is your data for that?
14 A. That the labels, again, have a higher --
15 you know, the artists and labels together make --
16 get a larger share of the value than songwriters.
17 Q. Are you aware that certain songs are
18 what's called covered? Do you know what a cover of
19 a song is?
20 A. Yes, sure.
21 Q. So it comes out, there may be somebody
22 who sings it originally --
23 A. Right.
24 Q. -- and then another person sings the same
25 song?

1 A. Sure.
2 Q. -- and can do so because of the existence
3 of the compulsory license, and maybe five more sing
4 it and maybe ten more sing it and maybe 20 more sing
5 it, and there are lots of successful examples of it.
6 Does that indicate to you that that song itself is
7 of great value?
8 A. Again, there can be songs that are a lot
9 more valuable than other songs, but I think at the
10 end of the day here, all I'm saying is that, you
11 know, artists are -- you know, I'm not saying the
12 songwriters aren't contributing anything. Far from
13 it. But in terms of relative value, the artists are
14 contributing more, and so Dr. Gans' assumption that
15 they should -- that they are of equal value is just
16 not, in my view, correct.
17 Q. Except when it comes to actually having
18 to record the song or to use the song on a streaming
19 service; isn't that right? When the streaming
20 service wants to use the song, it can't negotiate,
21 it can't decide what is more valuable; it has to pay
22 both the songwriter and the record company for the
23 performance, correct?
24 A. It does. But that's what we're here to
25 determine is not to assume that they have equal

1 value and say that the payment should -- should be
2 in line with that but instead just say, at least in
3 part, what -- what are the relative contributions?
4 That's one of the very 801(b)(1) factors. If that
5 wasn't an issue, if it was just clearly 50/50, why
6 doesn't the statute just say that?
7 Q. So I looked at YouTube recently. And I
8 saw that Bruce Springsteen performed a cover of a
9 Bob Dylan song, "Blowin' in the Wind." What's more
10 valuable in that, Springsteen's performance or Bob
11 Dylan's creation of the song?
12 A. Well, you know, again, we can always look
13 at examples and, you know, and there are certainly
14 contexts where a song itself is going to be -- you
15 know, have a lot of value. I'm not saying that.
16 But we -- but we're -- at a rate setting like this,
17 we've got to look overall on average. And overall
18 on average, again, the artist and the sound
19 recording is, in my view, contributing more value
20 than the songwriter. Again, properly valued,
21 evaluated at the time when there was flexibility for
22 each side to -- to choose.
23 Q. And looking at paragraph 117 of your
24 report where you refer to Tom Hanks who appears in
25 the movie called Castaway, do you consider that good

1 data for your opinion?
2 A. Well, this is just making the example,
3 which I don't think is in the least bit disputed, in
4 fact, I think it's well established, that screen
5 writers, who are analogous in some sense to the
6 songwriter, is -- you know, make a lot less money
7 than the stars of the film, who are analogous to the
8 artist. So who's driving things in that industry?
9 It's the -- the artist, not the -- the screen
10 writer.
11 And it's not to say that there aren't
12 some situations where a screen writer could make a
13 lot of money, maybe even more than the stars of the
14 film. I don't know, but on average it's clearly the
15 case that stars make more money than -- than the
16 screen writers.
17 Q. And you -- and you point out -- you quote
18 Bill Mechanic, who's the former chairman of 20th
19 Century Fox, who said that without Tom Hanks, this
20 movie wouldn't have performed the way it did, right?
21 A. His incremental contribution is very
22 large. If you had a different screen writer write
23 the script, would it really have changed the outcome
24 of that nearly as much as Tom Hanks? I doubt it.
25 Q. And you're familiar, aren't you -- and

1 you're familiar, aren't you, with the fact that
2 there are famous flops, famous movies that are flops
3 that star, famous actors, Johnny Depp in the Lone
4 Ranger, Eddie Murphy in the Adventures of Pluto
5 Nash, Brad Pitt in Alexander, Jackie Chen, Around
6 the World in 80 Days? You're aware of that, aren't
7 you?
8 A. Absolutely. I mean, look, things can be
9 successful, they can be not successful. Again, we
10 have to look at it from the point of view of what's
11 more likely to make -- what's making a bigger
12 contribution to its -- its success if it is
13 successful. And, again, that's the -- in that case,
14 the star; here it's the artist. Again, they
15 couldn't -- you know, if there were no songs to
16 record, obviously that's an issue. That's why the
17 songwriters do deserve something. They're making a
18 contribution. But it is a question: Are they
19 making an equal contribution? And I just don't
20 think the evidence is consistent with that.
21 MR. JANOWITZ: I have no further
22 questions.
23 JUDGE BARNETT: Thank you, Mr. Janowitz.
24 If it's a good time for us to take our morning
25 recess, we will do so. 15 minutes.

1 (A recess was taken at 10:42 a.m., after
2 which the hearing resumed at 11:05 a.m.)
3 JUDGE BARNETT: Please be seated.
4 Counsel, the -- the answer to the
5 question you've all been waiting for, we need the
6 six weeks. We need the schedule to stay at six
7 weeks. But we're perfectly happy with four and two
8 or five and one if that's the way you decide to go.
9 But we have to stick with the six weeks.
10 So the record is clear, we're talking
11 about proposed findings and conclusions. And reply
12 findings and conclusions. With respect to the
13 replies, number the reply paragraphs with the same
14 number as the paragraph to which you are replying.
15 A reply is not to restate your case, not to argue.
16 It's simply to reply to the other side's proposal
17 and to cite with specificity what it is you're
18 replying to so that we can -- if we don't see a
19 number in your reply, we'll know that you're not
20 contesting or arguing or whatever with regard to the
21 missing paragraph.
22 And, Judge Strickler?
23 JUDGE STRICKLER: Yes, with regard to
24 proposed findings and conclusions, apropos to that,
25 I just want to remind you, counsel, of what I'm sure

1 you already know, it's in the regulations, section
2 351.4(a) -- excuse me, .4(b)(3), the last sentence
3 says: "No party will be precluded from revising its
4 claim or its requested rate at any time during the
5 proceeding up to, and including, the filing of the
6 proposed findings of fact and conclusions of law."
7 That's all I have to say about that.
8 MR. ZAKARIN: Your Honor, if I can, we
9 haven't talked -- we will talk -- and as long as we
10 stay within the six weeks, I gather that the Court
11 is less concerned about whether we do it three and a
12 half weeks, four weeks, as long as we end on the end
13 date?
14 JUDGE BARNETT: That's exactly right.
15 MR. ZAKARIN: So we'll discuss among
16 ourselves and figure out what works. Thank you,
17 Your Honors.
18 JUDGE BARNETT: Thank you for promoting
19 us to a Court. We always appreciate it.
20 And just off the record.
21 (Discussion off the record.)
22 JUDGE BARNETT: Mr. Wetzel?
23 MR. WETZEL: Yes, I just have -- have a
24 brief redirect, Your Honor.
25

1 REDIRECT EXAMINATION
2 BY MR. WETZEL:
3 Q. Dr. Leonard, do you recall this morning
4 when you were discussing your Subpart A analysis,
5 Mr. Janowitz asked you whether you performed an
6 empirical analysis of the relative contributions of
7 songwriters and recording artists?
8 A. Yes.
9 Q. And you were in the process of
10 responding, "well, I think I talked about a bunch of
11 factors here and I wouldn't call it an empirical or
12 econometric analysis, but it certainly, looking at
13 market data and" -- at which point Mr. Janowitz
14 interjected with a question about speculation, to
15 which you disagreed.
16 Do you recall that?
17 A. Yes, I do.
18 Q. Could you please finish your explanation
19 of how your benchmark analysis is informative of the
20 relative contributions of songwriters and artists?
21 A. Yes. So, I mean, it's market data and
22 facts that you look at where parties negotiated over
23 exactly this split and -- the Subpart A split. It's
24 clearly not equal value to publishers and to -- and
25 to labels.

1 Q. What about the circumstances of the
2 negotiation of the Subpart A rate led you to believe
3 that it was reflective of the relative contributions
4 that we are seeking to assess in the context of this
5 proceeding?
6 A. It was a settlement and it was a
7 negotiation between, as I understand it, publishers
8 and labels. So they were deciding how to split
9 things up, and that was the outcome of that -- that
10 settlement was an outcome of that.
11 Q. Okay. Now I want to go to the part of
12 the morning's discussion when Judge Barnett asked
13 you about the issue of revenue deferment and you
14 mentioned the possibility discussed by Dr. Katz of
15 publishers smoothing the problem. Do you recall
16 that?
17 A. Yes.
18 Q. Can I direct you to paragraphs 89 and 90
19 of your written rebuttal statement. And, in
20 particular, the last couple sentences of paragraph
21 90, footnote 137.
22 A. Yes. I mean, I talked about this too in
23 my -- my report, but I was here when I think I heard
24 Dr. Katz mention specifically, but, yeah, I say
25 publishers could take it upon themselves to

1 reallocate royalties inter-temporally so as to
2 smooth payments to songwriters over time. This is,
3 in fact, actually done in the form of advance
4 payments that are made by publishers to songwriters,
5 so there's a bit of -- of that already in what
6 publishers do.
7 Q. And in footnote 37, in the last few
8 sentences, it reads, "in return the publisher pays
9 the songwriter an advance at the beginning of the
10 contract which is recoupable against the writer's
11 royalties. Additional advance payments are usually
12 due if the publisher exercises options to extend the
13 contract."
14 Can you explain what you're referring to
15 there?
16 A. So this is -- these are contracts between
17 publishers and songwriters. And they specify these
18 kind of advance payments. A publisher makes a
19 payment to the songwriter at the beginning of the
20 contract or if it's extended. And then to the
21 extent royalties would otherwise be due to the
22 songwriter, it gets subtracted -- they basically get
23 subtracted, well. The publisher keeps it until you
24 get to a point where the royalties exceed the
25 advance, and then it would get paid out to the

1 songwriter. If they don't make it, then my
2 understanding is the songwriter keeps the money.
3 JUDGE FEDER: And just to clarify the
4 record, we're talking about footnote 137?
5 THE WITNESS: Yes, correct.
6 JUDGE FEDER: The transcript said 37.
7 MR. WETZEL: Thank you.
8 BY MR. WETZEL:
9 Q. As an economist, and based on the
10 testimony you've seen at the trial, what effect, if
11 any, do you believe a songwriter having written a
12 hit song would have on whether a publisher chooses
13 to exercise the option you were just discussing or
14 on a subsequent advance payment made to the
15 songwriter in the new contract from the publisher?
16 A. Well, having a sit song is a signal,
17 although not a perfect one, of course, that the
18 songwriter will do -- will write hit songs in the
19 future. And, you know, so you would expect that
20 there's going to be competition for such songwriters
21 and they would get paid bigger advances and more
22 money in general.
23 MR. WETZEL: Thank you. I have no
24 further questions.
25 JUDGE BARNETT: Thank you, Dr. Leonard.

1 THE WITNESS: Thank you.
2 JUDGE STRICKLER: Before this witness
3 begins, do we know what the rest of the lineup is in
4 terms of the order of witnesses?
5 MR. ELKIN: I think Mr. Klein is after
6 Mr. Vogel.
7 JUDGE STRICKLER: After Mr. Klein?
8 MR. WEIGESNBERG: And I believe
9 Dr. Leslie Marx will return for rebuttal tomorrow.
10 MR. MANCINI: That's correct.
11 JUDGE STRICKLER: So the next economic
12 expert coming up is Dr. Marx, not Dr. Hubbard?
13 MR. SEMEL: Correct. I believe
14 Dr. Hubbard is the last witness.
15 MR. MANCINI: Your Honors, Spotify would
16 like to call Mr. Paul Vogel as our next witness.
17 JUDGE BARNETT: Mr. Vogel, I don't think
18 you can raise your right hand.
19 MR. VOGEL: I cannot.
20 JUDGE BARNETT: In any event.
21 Whereupon--
22 PAUL VOGEL,
23 having been first duly sworn, was examined and
24 testified as follows:
25 JUDGE BARNETT: Please be seated.

C O N T E N T S

WITNESS	DIRECT	CROSS	REDIRECT	RECROSS
GREGORY LEONARD				
		5209	5280	
PAUL VOGEL				
	5288	5329	5360	
ROBERT KLEIN				
	5366	5409	5462	

AFTERNOON SESSION: 5360

CONFIDENTIAL SESSIONS: 5221-5227
5293-5359, 5396-5408, 5447-5461

E X H I B I T S

EXHIBIT NO:	MARKED/RECEIVED	REJECTED
AMAZON		
249	5372	
250	5406	
251 through 262	5405	
263	5406	
264	5406	
265	5406	
266	5406	
267	5406	

EXHIBIT NO:	MARKED/RECEIVED	REJECTED
PANDORA		
1030	5325	
1038	5310	
1041	5308	
1062	5290	
1068	5291	

1 CERTIFICATE

2

3 I certify that the foregoing is a true and
4 accurate transcript, to the best of my skill and
5 ability, from my stenographic notes of this
6 proceeding.

7

8

9 4/10/17

10 Date Signature of the Court Reporter

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In the Matter of: Determination of Rates and Terms for Making and Distributing Phonorecords (Phonorecords III)	Docket No. 16-CRB-0003-PR (2018-2022)

WRITTEN DIRECT REMAND TESTIMONY OF DR. GREGORY K. LEONARD

I. QUALIFICATIONS AND ASSIGNMENT

1. I am an economist and Vice President at Charles River Associates (CRA), 601 12th Street, Suite 1500, Oakland, CA, 94607. I received a Bachelor of Science degree in Applied Mathematics-Economics from Brown University in 1985 and a Ph.D. in Economics from the Massachusetts Institute of Technology in 1989.

2. My specialties within economics are applied microeconomics, which is the study of the behavior of consumers and firms, and econometrics, which is the application of statistical methods to economics data. I have published over sixty papers in scholarly and professional journals. My publications are listed on my curriculum vitae, attached as Appendix A. A number of these papers address issues in industrial organization, demand for products, intellectual property and the calculation of damages in patent infringement litigation, and econometrics, including publications in the *Journal of Industrial Economics*, the *RAND Journal of Economics*, the *Journal of Econometrics*, the *Berkeley Journal of Technology and Law*, and *les Nouvelles*.

3. I am the Vice Chair for Economics of the editorial board of the *Antitrust Law Journal* and have served as a referee for numerous economics and other professional journals. I have given invited lectures on intellectual property and antitrust issues at the Federal Trade Commission (FTC), the United States Department of Justice (DOJ), the Directorate General for Competition of the European Commission, the Fair Trade Commission of Japan, and China's Supreme People's Court and Ministry of Commerce. I have been retained by the DOJ to consult on antitrust matters.

4. In 2009, I was invited to speak at a session of the FTC's hearings on the "Evolving IP Marketplace" concerning the calculation of patent damages. In the report that the FTC

subsequently issued, my views on damages calculation were cited extensively.[1] In 2007, I served as a consultant to and testified before the Antitrust Modernization Commission, which was tasked by Congress and the President of the United States to make recommendations for revising U.S. antitrust laws. In its *Uniloc* decision, the U.S. Court of Appeals for the Federal Circuit cited one of my publications in support of its conclusion that a method of calculating reasonable royalty damages in a patent case (the so-called "25% Rule") is an unreliable and flawed methodology.[2]

5. I have served as an expert witness in a number of litigation matters before U.S. District Courts, the (U.S.) International Trade Commission, state courts, arbitration panels, and the Copyright Royalty Board. In particular, I testified in *Phonorecords III* and *Web V*. A list of cases in which I have testified (in deposition or at trial) in the last four years is provided in my curriculum vitae, attached as Appendix A to this declaration. My hourly rate for this matter is $1050. My fee is not contingent on the outcome of this proceeding.

6. I have been asked by Google to review the relevant economic evidence in this matter and to provide an opinion concerning whether the rate structure adopted by the Majority in the now vacated *Phonorecords III* determination constitutes an appropriate rate structure.

7. My analysis and this report are based on information currently available to me. I reserve the right to augment or update opinions based on information learned in ongoing discovery.

---

[1] Federal Trade Commission, *The Evolving IP Marketplace: Aligning Patent Notice and Remedies with Competition*, March 2011.

[2] *Uniloc USA, Inc. v. Microsoft Corp.*, Nos. 2010-1035, 2010-1055, 2011 WL 9738 (Fed. Cir. Jan. 4, 2011).

II. SUMMARY OF OPINIONS

8. I have reached the following opinions:

- In my opinion, the new royalty structure adopted by the Majority in its *Phonorecords III* decision is inconsistent with the 801(b)(1) factors. Under the previous statutory structure, the TCC prong served to limit the downside risk to musical works copyright owners by providing a minimum for the royalty; however, the TCC prong was also itself effectively capped by the per subscriber minimum prong, which served to limit the downside risk to the services. By eliminating the per subscriber prong, thereby uncapping the TCC prong, the Majority's royalty structure eliminates the downside risk protection for services, while leaving in place the downside risk protection for musical works copyright owners. This concern is magnified given that the Majority proposed increasing the TCC percentage substantially over time, making it more likely that the uncapped TCC prong will bind.
- An uncapped TCC prong is also problematic because, to the extent it binds, it will directly tie musical works royalties to sound recording royalties. Because the record labels have complementary oligopoly power, such a tie could effectively provide musical works copyright owners with complementary oligopoly power that they would not otherwise have.
- The Majority's primary justification for adopting an uncapped TCC prong while simultaneously raising the TCC rate is economically unsound. The Majority was persuaded by Dr. Watt's claim that an increase in the musical works royalty would be offset nearly dollar-for-dollar by a decrease in the sound recording royalties (the "seesaw effect"), thus leaving the services virtually unaffected by the proposed increase in musical works royalties. However, Dr. Watt bases his claim entirely on his highly stylized and simplified theoretical "bargaining" model. Dr. Watt has performed absolutely no empirical analysis of whether the predictions of his model are borne out in the real world. Specifically, he has not analyzed empirically how changes in the musical works royalty have causally affected (if at all) sound recording royalties. "Pass-through" phenomena of this type are highly complex and real world pass-through is often found to be substantially less than dollar-for-dollar. Making a substantial change to the statutory royalty structure based on a theoretical claim lacking solid empirical support is a recipe for poor policy outcomes.
- In fact, the existing empirical evidence is inconsistent with Dr. Watt's claim. For Google, despite the increase in musical works royalties, sound recording royalty rates have not decreased.

- Finally, the Majority's reliance on Shapley values (rather than benchmarks) to determine the musical works royalty rate is flawed because the highly stylized Shapley model results are driven by assumptions that have no solid empirical basis or are contradicted by the economic evidence.

III. UNCAPPING THE TCC PRONG WHILE INCREASING THE TCC PERCENTAGE IS INCONSISTENT WITH THE 801(b)(1) FACTORS

9. The previous statutory royalty structure provided a minimum for the all-in musical works royalty that was equal to the lesser of (1) a percentage of TCC (e.g., 21% for portable mixed use subscriptions), and (2) a per subscriber dollar amount (e.g., $0.80 per month for portable mixed use subscriptions). For example, for a service subscriber fee of $10, and assuming TCC is equal to 55% of service revenues, the floor on the all-in musical works royalty would be the minimum of $1.16 and $0.80, or $0.80. Given the percentage of revenue prong (10.5% of revenue), the floor would not bind and the all-in musical works royalty would be $1.05.

10. If the per subscriber prong were eliminated from the calculation of the minimum, leaving the TCC prong "uncapped," the minimum in the example above would increase substantially from $0.80 to $1.16 and would in fact now bind (assuming the sound recording royalty remained at 55% of revenues) and replace the percentage of revenue prong as the determinant of the all-in musical works royalty.

11. The economic purpose of the minimum in the previous statutory structure was to protect musical works copyright owners from downside risk presented by the percentage of revenue prong. However, the presence of the per subscriber prong served to protect the service as well by capping the level that the minimum could reach. In this sense, the formulation of the minimum balanced the concerns of the musical works copyright owners and the services. Indeed, the TCC prong and the per subscriber prong were set up in *Phonorecords I* and *Phonorecords II* so that services

charging the typical $9.99 per month price to subscribers would rarely, if ever, be subject to the minimum.[3]

12. The Majority's now vacated ruling, which substantially changed this structure by uncapping the TCC prong while increasing the TCC percentage, creates multiple problems, some of which I addressed during the hearing.[4] In particular, uncapping the TCC prong would remove the protection the per subscriber minimum prong afforded to the services. It would also lead to a substantial increase in the minimum over what existed under the previous statutory structure, so that the minimum would have a greater likelihood of binding. These changes would represent a substantial shift in the royalty structure in favor of the musical works copyright owners, even before consideration of the Majority's proposal to increase the percentage of TCC on which the minimum would be based. In my opinion, this shift in the royalty structure would be inconsistent with the 801(b)(1) factors in that it substantially favors one side over the other and would be disruptive to the marketplace, while not being responsive to any underlying change in the marketplace that would justify it.

13. A further problematic aspect of the Majority's proposed royalty structure is that, to the extent the percentage of TCC minimum binds (which again is more likely given the elimination of the per subscriber prong and the increases in the percentage of TCC that the Majority has proposed over the term of the compulsory license), the all-in musical works royalty would be directly tied to sound recording royalties. Given that the record labels have complementary oligopoly power

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[3] *See* Levine WDT ¶ 35; Parness WDT ¶ 8 ("These minima were set sufficiently below the rates interactive streaming services would pay under the percentage-of revenue prong under prevailing market conditions that the Music Service Participants thought they were unlikely to be triggered.")

[4] Trial Tr. at 5253:17-5254:23; 5226:13-5227:6 (Leonard) (addressing the need to lower TCC percentages in order to bring TCC in-line with the Subpart A benchmark and mitigate the influence of label market power).

that affects sound recording royalties, as the Majority recognized,[5] it is unwise to adopt a structure under which the statutory rate for mechanical rights, which is supposed to reflect "effective competition," could instead be influenced by complementary oligopoly power that the musical works copyright owners themselves do not even possess. For example, if the labels' complementary oligopoly power was exercised during the compulsory license term such that sound recording royalties increased, the all-in musical works royalty would increase as well assuming (as likely) the percentage of TCC prong were binding. Thus, the musical works copyright owners would effectively benefit from (and the services would be harmed by) the increase in the labels' complementary oligopoly power. The resulting increase in the statutory musical works royalty would not be consistent with "effective competition."

14. The concern of a tie between the musical works royalty and the sound recording royalty is substantially reduced when the percentage of TCC prong is capped by the per subscriber prong as is the case in the previous statutory structure.

IV. DR. WATT'S CLAIMS CONCERNING THE "SEESAW EFFECT" ARE BASED ON AN OVER-SIMPLIFIED THEORETICAL MODEL AND HAVE NO EMPIRICAL SUPPORT

15. The Majority's primary justification for adopting an uncapped TCC prong while simultaneously raising the TCC percentage is Dr. Watt's claim that an increase in the musical works royalty would be offset nearly dollar-for-dollar by a decrease in the sound recording royalties (the "seesaw effect"), leaving the services virtually unaffected by the change. Specifically, the Majority cites Dr. Watt as saying that "the total of musical works and sound recordings royalties would stay 'almost the same' in response to an increase in the statutory

[5] Initial Determination, p. 72.

[musical works] rate."[6] Dr. Watt's prediction of an almost dollar-for-dollar decrease in the sound recording royalties if the statutory musical works royalty increased is based entirely on his "bargaining model." He offered no empirical evidence whatsoever to support his claim.

16. Despite the veneer of "complexity" Dr. Watt creates with mathematical formulas and the reference to John Nash, the "seesaw" effect produced by Dr. Watt's "bargaining model" is actually a straightforward implication generated by two assumptions: (1) there is a fixed "surplus" to be divided among labels and services (after having subtracted the statutory musical works royalty) and (2) at the then-existing statutory musical works royalty, the labels have captured almost all that surplus, leaving the services with very little. Dr. Watt uses these two assumptions to generate the following conclusion: if the musical works statutory rate increases by a significant amount, that amount must come from either the labels or the services given that the total amount of the surplus is assumed to be fixed. But, the labels captured almost all of the surplus prior to the increase and the services virtually none. Thus, almost all of the musical works royalty increase *must* come from the labels.

17. As noted above, Dr. Watt did not provide any empirical support for his "bargaining model" in general or for his specific prediction based on the model that an increase in the musical works royalty would be offset virtually dollar-for-dollar by a decrease in the sound recording royalties. In fact, the existing empirical evidence is *inconsistent* with Dr. Watt's bold prediction. [redacted].[7] [redacted]

[6] Initial Determination, p. 73 (citation omitted).

[7] Diab WDT ¶¶ 9-11.

[redacted]

18. Dr. Watt's prediction has failed to bear out because his "bargaining model" is highly stylized and overly simplified. It is thus far removed from the actual workings of this marketplace. It is sometimes helpful when building an economic model to make simplifying assumptions that abstract from certain aspects of the real world to better focus on the specific question the model is meant to address. However, one must be careful not to simplify away economic characteristics of the market that are, in fact, central to the question at hand. In assuming that the surplus is fixed, Dr. Watt's "bargaining model" entirely abstracts away from the nature of consumer demand for streaming services and competing forms of entertainment (music and otherwise), how the streaming services set their prices, what services decide to participate in the market (entry and exit), the nature of the oligopolistic interaction among the labels, the nature and timing of the bargaining between each label and each service, etc. An understanding of these factors is important for determining how sound recording royalties would actually change in response to a change in the statutory musical works royalty.

19. A useful analogy can be found in the concept of "cost pass-through." Cost pass-through refers to the extent to which the price of a product increases when the product's marginal cost increases. Suppose one tries to answer this question by assuming the model of perfect competition with marginal cost that is constant in the relevant range of output. The answer provided by this assumed model is straightforward and requires no empirical analysis: in this model, price will increase dollar-for-dollar with an increase in marginal cost. However, once the theoretical model is expanded to accommodate greater complexity as reflected in the real-world market, the extent

of pass-through becomes indeterminant based on the theoretical model alone, and empirical analysis is needed to determine the extent of pass-through. For example, if the market in question is not actually perfectly competitive, but instead each producer offers a differentiated product, one could alter the model to accommodate this complexity. But, in these more complex models, the extent of pass-through of a marginal cost increase depends on multiple factors, including the shapes of the firms' demand curves, the firms' cost functions, and the nature of their competitive interaction. Pass-through may be substantially less than (or greater than) dollar-for-dollar. Theory by itself tells us very little. The extent of pass-through is an empirical question. Similarly, if firms in a market face consequences to changing prices (e.g., "menu costs"), one should incorporate such costs into the model, as real-world firms may be inhibited by the costs from changing their prices in response to marginal cost increases. Again, omitting this characteristic of the marketplace from the theoretical model would lead to incorrect conclusions regarding pass-through. But, including the characteristic results in a model in which the extent of pass-through is indeterminant; an empirical analysis would be necessary to determine the extent to which menu costs might inhibit price changes.

20. Because the change in sound recording royalties in response to an increase in musical works royalties depends on market characteristics that Dr. Watt did not even attempt to include in his "bargaining model," his prediction of a virtual dollar for dollar decrease in sound recording royalties is unreliable as a basis for formulating policy. The real-world outcomes from increasing musical works royalties will depend on how the labels interact with each other oligopolistically in a dynamic setting, what information each label has about what the other is doing, whether the services are vulnerable to hold-up due to previous specific investments they have made under the assumption that the pre-existing statutory structure would be maintained, how the services change

their prices in response to royalty increases (a form of the cost pass-through discussed above), what the order of negotiations between labels and services is, whether there would be service exit or entry (e.g., by a label-sponsored entity), etc.

21. As just one example of a real-world hurdle to the market functioning as Dr. Watt predicted, each label would prefer to have the other labels lower their sound recording royalties while maintaining its own royalties at pre-existing levels—this is the complementary oligopoly problem. Dr. Watt's "bargaining model" assumes away this problem because it posits a single label (or combines the labels into one entity). In the real world, even if a label were to recognize that it is more efficient for overall sound recording royalties to be lower, the label may not be willing to lower its royalty rate without assurance that the other labels will do the same, which is unlikely to happen absent some form of collusive behavior. The extent to which sound recording royalties decrease, if at all, depends on how this plays out. It is within the realm of theoretical possibility that the labels do not agree to *any* reduction in sound recording royalties even if a reduction in overall royalties would be economically efficient. This is of particular concern if the services are vulnerable to hold-up over sunk costs investments they have previously made.[8] Dr. Watt's model addressed none of these factors and the complexity they would add to the model make the extent of pass-through an empirical question.

[8] For example, suppose services have made sunk cost investments in building their services under the assumption that the musical works statutory rate would not change substantially. Such investments would have been justified on the expectation that they would generate returns in the future. If the musical works statutory royalty subsequently increases well above what had been expected when the investments were made, the services would be stuck. They could not reverse the investments (they are sunk). They would be vulnerable to hold-up by the labels, who could refuse to accept lower sound recording royalties. In that case, the increased musical works royalties may effectively be paid by the services out of what would otherwise have been returns on their investments.

22. Substantially changing the statutory royalty structure based on a purely theoretical claim that is lacking in solid empirical support is a recipe for poor policy.

V. REAL-WORLD BENCHMARKS ARE SUPERIOR TO SHAPLEY VALUE MODELING FOR DETERMINING RATES IN THIS PROCEEDING

23. If done properly, the Shapley value approach may provide a useful data point for rate-setting in this proceeding. However, for reasons including ones about which I testified during the hearing,[9] in my opinion, the Shapley value approach is not sufficiently reliable to provide the sole or primary basis for the rates. Benchmarks based on real market outcomes provide a substantially more reliable basis for rate setting.

24. The problem with the Shapley value approach is that it is highly stylized, thus omitting important economic characteristics of the marketplace that can have a significant effect on rates in the real world, and requires assumptions that factor heavily into the approach's results but have no empirical support.[10] For example, in his "Shapley-inspired" model, Dr. Gans assumed that musical works should capture the same share of the surplus as sound recordings and thus calculated the musical works royalties that would bring publisher profits up to the level of (actual) label profits. This calculation implicitly assumes that the labels have no complementary oligopoly power (otherwise, it would not be appropriate to equilibrate the publisher profits with the label profits). Thus, two key assumptions of Dr. Gans' "Shapley-inspired" model have no empirical support (the assumption of equal values for musical works and sound recordings) or are inconsistent with market facts (the assumption of no complementary oligopoly power for labels).

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[9] Trial Tr. 5181:3-5188:4 (Leonard) (explaining my preference to not rely on Shapley models in this instance because of the number of economic factors the models do not consider).

[10] Leonard WRT ¶¶ 143-147.

25. Benchmarks do not require building a model with the concomitant simplifications and assumptions. While the reliability of a benchmark will depend on the economic comparability of the context in which the benchmark was determined to the context surrounding the royalty to be set, the degree of comparability can be evaluated based on economic evidence. For that reason, the use of benchmarks, where suitable benchmarks are available, is preferable to relying on Shapley value models that are laden with empirically unsupported simplifying assumptions.

Gregory K. Leonard

Dated: April 1, 2021

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Before the
COPYRIGHT ROYALTY BOARD
LIBRARY OF CONGRESS
Washington, D.C.

In the Matter of: Determination of Rates and Terms for Making and Distributing Phonorecords (Phonorecords III)	Docket No. 16-CRB-0003-PR (2018-2022)

WRITTEN SUPPLEMENTAL REMAND TESTIMONY OF
DR. GREGORY K. LEONARD

I. QUALIFICATIONS AND ASSIGNMENT

1. My qualifications are summarized in my Written Direct Remand Testimony ("WDRT"), dated April 1, 2021.

2. I have been asked by Google to review and respond to certain opinions offered by Copyright Owners' experts Drs. Jeffrey Eisenach and Richard Watt in their respective Written Direct Remand Rebuttal Testimonies ("WDRRT").

3. My analysis and this report are based on information currently available to me. I reserve the right to augment or update opinions.

II. SUMMARY OF OPINIONS

4. I have reached the following opinions:

- Dr. Watt and Dr. Eisenach claim that the Phonorecords III Initial Determination [redacted] as a result of the "see saw effect." However, the Phonorecords III Initial Determination could not have caused any [redacted] because [redacted] before the Phonorecords III Initial Determination was issued. Thus, Dr. Watt and Dr. Eisenach have confused correlation for causation.
- In addition, Dr. Eisenach's comparison of [redacted] during the Phonorecords III and Phonorecords II periods is fundamentally flawed and unreliable because:
  - Dr. Eisenach fails to account for a change [redacted] that occurred at the start of the Phonorecords III period. His failure to account for this change means that Dr. Eisenach mistakes an artifact in the data for a [redacted] The data for the YouTube ad-supported service (which was not affected by [redacted]) shows no significant [redacted], contrary to the predictions of the "see saw theory."
  - Dr. Eisenach cherry-picks 2017 as the only year from the Phonorecords II period that he compares against the Phonorecords III period. Had he used

the exact same methodology but examined other years, e.g. 2015, he would have reached a different conclusion [redacted]

- Dr. Eisenach inappropriately aggregates the data for the three Google services (Google Play Music, YouTube subscription, and YouTube ad-supported) together. When each of the three services are instead analyzed separately, the data [redacted]

- Dr. Watt still fails to provide any sound empirical evidence to support the inputs to his theoretical model, including the assumed "see saw effect." As a result, his theoretical model should be accorded no weight.

III. DR. WATT AND DR. EISENACH'S CLAIMS THAT THE PHONORECORDS III INITIAL DETERMINATION CAUSED [redacted] ARE FALSE

5. Dr. Watt and Dr. Eisenach claim to have found evidence of the so-called "see saw effect" in data [redacted].[1] Specifically, Dr. Eisenach claims that [redacted] Dr. Watt and Dr. Eisenach each conclude that this supposed [redacted] was *caused* by the Phonorecords III Determination.[2] However, these claims are incorrect both because they confuse correlation and causation, and because Dr. Eisenach committed several errors when calculating [redacted]

[1] Watt WDRRT ¶¶ 41-45 (referencing Eisenach's analyses of royalty data as support for the see saw theory); Eisenach WDRRT ¶¶ 9 (characterizing his analysis as pertaining to the "impact" of Phonorecords III on royalties), ¶¶24-27 (containing analyses specific to Google).

[2] *Id.*

A. Dr. Eisenach and Dr. Watt Confuse Correlation and Causation

6. As described below, Dr. Eisenach's claims regarding [redacted] are based on calculation errors, selective use of data from a specific time period, and inappropriate aggregation across services. But, even if [redacted] after the Phonorecords III Initial Determination, this would constitute evidence of the "see saw effect" *only if* the Phonorecords III Initial Determination was shown to have *caused* [redacted] by, for example, *causing* a renegotiation of the royalty structure or terms contained in the licensing agreements [redacted]. Otherwise, the [redacted] would be a case of correlation, not causation.

7. However, as a matter of basic causal logic, the Phonorecords III Initial Determination *cannot* have *caused* [redacted] during the 2018-2020 period. This is because the Google license agreements with major labels that governed [redacted] that signaled higher musical works royalty rates.[3] Absent a crystal ball, when negotiating these agreements [redacted] could not have been affected by the Phonorecords III Initial Determination because it had not yet been issued. Thus, the royalty structures and terms contained in these agreements, [redacted], including during the 2018-2020 period, could not have been affected by the Phonorecords III Initial Determination. Nor were the

[3] Diab WDRT ¶¶ 10-11 (describing the time periods when Google entered sound recording agreements governing rates paid on Google Play Music and YouTube Music).

royalty structures and terms of any of these [redacted].[4] Thus, to the extent that [redacted], it must have been due to factors other than the Phonorecords III Initial Determination.[5] Thus, there is no support for the "see saw effect" to be found in [redacted]

B. Dr. Eisenach's Claim That [redacted] Are Based on a Calculation Error

8. Dr. Eisenach calculated what he claims is [redacted] by dividing the [redacted].[6] He uses the result of this calculation as a means of comparing the effective sound recording royalty rates during the Phonorecords II (2017) and Phonorecords III (2018-2020) periods. However, Dr. Eisenach fails to recognize that [redacted].[7] Dr. Eisenach's failure to account for the [redacted] biases his analysis and renders it unreliable.

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[4] *Id.*

[5] In my WDRT, when I stated that the sound recording royalty rates [redacted], I was referring to the fact that [redacted]. Leonard WDRT ¶ 17. Note that, even if there were no change in the underlying royalty structures [redacted], it is possible that the overall [redacted] royalty rate could fluctuate due to changes in the mix of labels, plans, and Google services or other factors. However, changes in the effective sound recording royalty rate due to any such factor were not caused by the Phonorecords III Initial Determination.

[6] Eisenach WDRRT ¶¶ 14, 25-27.

[7] Interview of Jen Rosen (Head of Music Publishing Partnerships at Google), November 8, 2021.

9. Prior to 2018, when the Phonorecords II rate structure applied, the first step of the royalty calculation specified that the all-in royalty for musical works was to be calculated as the maximum of (1) 10.5% of revenue and (2) the minimum of (a) a specified percentage of the sound recording royalty rate for Section 115 content (TCC) and (b) a specified per subscriber amount. [redacted].[10]

10. Given that some subscribers were on family plans, annual plans, or other discounted plans, [redacted].[11] To understand why [redacted] would

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[8] *Id*.

[9] *See* MLC_CRB_PHONO3_00000024 (showing that [redacted] for the Google Play Music services, with [redacted]). It is not surprising [redacted]. As noted, the first step of the Phonorecords II royalty calculation asked which is smaller, a specified percentage of TCC or a specified PSM. Consider as an example a standard standalone portable subscription, priced at $9.99 per month. Under Phonorecords II, the TCC percentage was 21% and the PSM was $0.80 for such a plan. [redacted] Thus, for a standard portable subscription, the Phonorecords II TCC prong was at least 21% [redacted], which would exceed the Phonorecords II PSM prong of $0.80. Thus, the latter would be used as the comparison against the 10.5% of revenue in the next step of the Phonorecords II calculation.

[10] *See* GOOG-PHONOIII-00008681 (Excel sheet containing TCC calculations for Google Play Music during 2016 and 2017).

[11] *See, e.g.*, GOOG-PHONOIII-00007547-555 at 548-51 (Google-Sony agreement allowing [redacted]) and GOOG-PHONOIII-00007885-999 at 935-39 and 990-93 (Google-Warner agreement [redacted]). As further evidence, I have compared the actual [redacted] to a hypothetical outcome using [redacted]

not adversely impact Copyright Owners or significantly impact Google, note that during the relevant period Google [redacted].[12] Moreover, [redacted].[13]

11. Under the new rate structure in the Phonorecords III decision, the specified percentage of revenue is compared directly to the specified percentage of TCC (without the PSM prong to "cap" TCC), which changed the potential [redacted]. Accordingly, starting at the beginning of 2018, [redacted].

12. Because of the [redacted]. Dr. Eisenach failed to account for this in any way. Consequently, what he claims is a [redacted] is at least in part an artifact of the [redacted].

13. Indeed, the evidence suggests that Google's effective sound recording royalty rate, correctly calculated, [redacted], contrary to Dr. Eisenach's claim. Because the Google-label agreements [redacted] for the ad-supported YouTube

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[redacted]. *See* Exhibit 2.

[12] *See* MLC_CRB_PHONO3_00000024.

[13] The TCC calculation could only control the outcome of the royalty calculation where the reported TCC number was *lower* than the PSM. Thus, even if [redacted].

(AVOD) service, Google would not have been able [redacted] for YouTube AVOD as it did for the Google Play Music subscriber service. Thus, if Dr. Eisenach had restricted his analysis to the YouTube AVOD service, he could have avoided the apples and oranges problem [redacted]. I have calculated the effective sound recording royalty rates for the YouTube AVOD service. The rate in the last full year of the Phonorecords III period for which the data exist, 2020, [redacted]—despite the increases in the headline musical works royalty rate specified in the Phonorecords III Initial Determination.[14] Thus, even putting aside the lack of any form of *causation*, as noted above, a more accurate analysis of [redacted] demonstrates that there is not even a *correlation* between [redacted] and the Phonorecords III Initial Determination.

C. Dr. Eisenach Cherry-Picks 2017 As His Phonorecords II Comparison Year

14. Dr. Eisenach uses 2017 as a proxy for the entire Phonorecords II period when comparing [redacted] during the Phonorecords II and Phonorecords III periods.[15] However, he has cherry-picked this year and in so doing has biased his results. Anomalies in the 2017 data suggest that the [redacted] calculated using this one year [redacted].[16] Accordingly, Dr. Eisenach's use of 2017 (rather than other parts of the Phonorecords II period) renders his analyses unreliable.[17]

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[14] *See* Exhibit 1.

[15] *See, e.g.*, Eisenach WDRRT at Figures 4 and 5.

[16] Dr. Eisenach's own Figure 4 shows that his calculation of the [redacted].

[17] The bias induced by Dr. Eisenach's focus on 2017 is not limited to his [redacted] in the Phonorecords II and Phonorecords III periods. He also focused exclusively on a single month in 2017 when arguing (at Eisenach WDRRT ¶¶ 73-74) that [redacted]

15. Reviewing earlier years within the Phonorecords II period demonstrates that Dr. Eisenach's analysis was sensitive to his cherry-picking 2017 as the comparison year. For example, had Dr. Eisenach chosen to use 2015 as the comparison year instead of 2017, he would have found [redacted] during the Phonorecords III period. [redacted].[18]

D. Dr. Eisenach's Incorrect Aggregation of the Three Google Services (Google Play Music, YouTube AVOD, and YouTube SVOD) [redacted]

16. Dr. Eisenach performs two analyses of Google's data. First, he presents results for Google Play Music alone, and second, he presents results based on combining the data for the three Google services — Google Play Music, YouTube AVOD, and YouTube SVOD — together into a single aggregate. He fails to look at each of the two YouTube services in isolation (as he did with Google Play Music) — likely because doing so would [redacted].

17. As discussed above, Dr. Eisenach's results for Google Play Music are fatally flawed because he failed to account for [redacted] and because he cherry-picked 2017 as his year of comparison. When he aggregates the three services together, he introduces his errors concerning Google Play Music into the aggregated data.

18. Additionally, the YouTube AVOD data, when viewed on a standalone basis, demonstrate [redacted] between 2017 and the end of the Phonorecords III period (2020) despite an increase in the headline musical works royalty rate

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[redacted]. Again, the focus on just a single month in 2017 is unreliable, and his cherry-picking of a single outlier month has biased his analysis.

[18] *See* Exhibit 1.

specified in the Phonorecords III Initial Determination over the same period.[19] This result is [redacted] Dr. Eisenach's claim and the "see saw theory."

19. For YouTube SVOD, the [redacted], despite the increase in the headline musical works royalty rate specified in the Phonorecords III Initial Determination over the same period.[20] This pattern is [redacted] what the "see saw theory" would predict.

20. Thus, when the data for the three services are disaggregated and analyzed, they are shown to be [redacted] Dr. Eisenach's and Dr. Watt's claims regarding the "see saw effect."

IV. DR. WATT FAILS TO SUPPORT HIS CLAIMED SEE SAW EFFECT

21. In my WDRT, I critiqued Dr. Watt's testimony concerning the claimed "see saw effect" from the original Phonorecords III proceeding on the basis that it was based on an overly simplified theoretical model for which he had provided no empirical support.[21] In his WDRRT, Dr. Watt continues to provide no valid empirical support for his theoretical model. In particular, he argues at paragraphs 15 through 18 that he is elucidating certain "core principals" of bargaining for the Judges. However, as Judge Strickler observed in his dissenting opinion, "theory must meet reality."

22. Dr. Watt's high-level arguments regarding the usefulness of theoretical models miss the point.[22] As an originator of the "merger simulation" method for evaluating the likely competitive effects of mergers, I myself have used theoretical models, combined with econometric estimates

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[19] *See* Exhibit 1.

[20] MLC_CRB_PHONO3_00000028.

[21] Leonard WDRT ¶¶ 15-22.

[22] Watt WDRRT ¶¶ 15-18 (discussing "core principals" of bargaining).

of the model parameters, to make predictions about competitive effects. However, I have emphasized that the entire enterprise depends crucially on appropriate econometric (empirical) estimation of the model parameters and allowing for model flexibility rather than imposing particular functional forms.[23] Moreover, I have discussed ways in which the validity of the theoretical model as a description of reality can and should be assessed using econometric and other methods.[24]

23. Dr. Watt has failed to do any of this type of "due diligence" for his modeling exercise despite basing claims for hundreds of millions of dollars in royalties on the resulting model. This does not represent sound economic analysis.

24. Indeed, Dr. Watt appears to have not paid any attention to the last 25 years of developments in the economics literature, which have seen a much greater emphasis placed on credible empirical analyses and a reduced emphasis on theoretical modeling. A relevant example is provided by the minimum wage study for which (in part) David Card won the 2021 Nobel Prize. As a popular press article about Card's Nobel Prize stated:

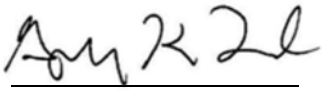
> Up until [Card's study, co-authored with Alan Kreuger], economists thought about the effects of the minimum wage as they did most other subjects — mostly in theoretical terms. Their view of the world was more influenced by cartoon models drawn on chalkboards than hard data. And this cartoon world said that the minimum wage kills jobs.
>
> Card and Krueger wanted to see how the minimum wage affects jobs in the real world … [Using an empirical analysis of a "natural experiment,"] [t]hey found that a modest increase in the minimum wage did not kill jobs. It was a bombshell

[23] J. Hausman, G. Leonard, and D. Zona, "Competitive Analysis with Differentiated Products," *Annales d'Economie et de Statistique*, 1994.

[24] J. Hausman and G. Leonard, "The Competitive Effects of a New Product Introduction: A Case Study," *Journal of Industrial Economics*, 2002.

> for the economic world, challenging an orthodoxy that had dominated the field for decades.[25]

25. Theoretical models predicted that increasing the minimum wage would reduce employment. Card and Kreuger's empirical analysis (which was not dependent on a theoretical model) showed that was not the case in the real world. Dr. Watt's theoretical model here is analogous to the "cartoon models" of the impact of the minimum wage. As with the minimum wage, a credible empirical analysis is needed before conclusions can be drawn regarding the existence of a see saw effect in the real world. Dr. Watt has not provided one.



Gregory K. Leonard

Dated: November 15, 2021

[25] "A Nobel Prize for a revolution in economics," NPR, October 12, 2021, available at https://www npr.org/sections/money/2021/10/12/1045152279/a-nobel-prize-for-a-revolution-in-economics.

APPENDIX A

Appendix A
Documents Cited

Bates Documents

GOOG-PHONOIII-00007547-555.
GOOG-PHONOIII-00007885-999.
GOOG-PHONOIII-00008681.
GOOG-PHONOIII-00008690.
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MLC_CRB_PHONO3_00000024.
MLC_CRB_PHONO3_00000027.
MLC_CRB_PHONO3_00000029.

Other Documents

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Remand Written Rebuttal Testimony of Richard Watt (PhD), July 2, 2021.

Written Direct Remand Testimony of Dr. Gregory Leonard, April 1, 2021.

Written Direct Remand Testimony of Waleed Diab, April 1, 2021.

EXHIBITS

PUBLIC VERSION

Exhibit 1
Google Annual Sound Recording Royalty Rates by Product and Service Type
2013 - 2020

Product	Service Type	Year	Total Cost of Content	Revenue	Sound Recording Royalty Rate[1]
[a]	[b]	[c]	[d]	[e]	[f]
Google Play Music[2]	Subs Service	2013	[redacted]	[redacted]	[redacted]
		2014	[redacted]	[redacted]	[redacted]
		2015	[redacted]	[redacted]	[redacted]
		2016	[redacted]	[redacted]	[redacted]
		2017	[redacted]	[redacted]	[redacted]
		2018	[redacted]	[redacted]	[redacted]
		2019	[redacted]	[redacted]	[redacted]
		2020	[redacted]	[redacted]	[redacted]
YouTube Music	Ads Service	2015	[redacted]	[redacted]	[redacted]
		2016	[redacted]	[redacted]	[redacted]
		2017	[redacted]	[redacted]	[redacted]
		2018	[redacted]	[redacted]	[redacted]
		2019	[redacted]	[redacted]	[redacted]
		2020	[redacted]	[redacted]	[redacted]

Notes: [1] Sound Recording Royalty Rate is calculated as dividing Total Cost of Content by Revenue.

[2] Google Play Music has revenue data starting from June 2013 and ended its service in October 2020. Therefore, the figures for Google Play Music begin in June 2013 and end in September 2020. See MLC_CRB_PHONO3_00000024.

Sources: MLC_CRB_PHONO3_00000024.
MLC_CRB_PHONO3_00000027.
MLC_CRB_PHONO3_00000029.

Exhibit 2

[redacted]

Month [a]	[redacted]
August 2018	[redacted]
September 2018	
October 2018	

Notes: [redacted]

Sources: Diab WDRT ¶¶ 10-11.
MLC_CRB_PHONO3_00000024.
GOOG-PHONOIII-00008690.
GOOG-PHONOIII-00008691.
GOOG-PHONOIII-00008692.

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Before the
COPYRIGHT ROYALTY BOARD
LIBRARY OF CONGRESS
Washington, D.C.

In the Matter of: Determination of Rates and Terms for Making and Distributing Phonorecords (Phonorecords III)	Docket No. 16-CRB-0003-PR (2018-2022) (Remand)

SECOND SUPPLEMENTAL WRITTEN REMAND TESTIMONY OF DR. GREGORY K. LEONARD

I. ASSIGNMENT

1. The Copyright Royalty Board Judges ("the Judges") issued Orders on December 9, 2021 and January 6, 2022.[1] I have been asked by Google to review and respond to these Orders.

2. My analysis and this report are based on information currently available to me. I reserve the right to augment or update opinions based on information learned in ongoing discovery.

II. ASSESSMENT OF THE JUDGES' WORKING PROPOSAL FOR CALCULATING THE HEADLINE MUSICAL WORKS ROYALTY RATE FOR THE PHONORECORDS III PERIOD

3. In their orders, the Judges have proposed a methodology for calculating the all-in musical works royalty rate that would be applicable to the Phonorecords III period ("Working Proposal"). The Working Proposal involves: (1) determining the maximum total royalty rate for musical works rights and sound recording rights (as set by the major labels) that would leave services with sufficient revenue to "survive" in the marketplace, and (2) dividing this maximum total royalty rate between sound recordings and musical works according to a 3.82:1 sound recording-to-musical works ratio derived from the Shapley Value analyses contained in the Initial Determination.[2]

4. I have a number of concerns about the Working Proposal and, in particular, the inconsistency of the Working Proposal with the 801(b)(1) factors.

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[1] Notice and *Sua Sponte* Order Directing the Parties to Provide Additional Materials, *In re: Determination of Royalty Rates and Terms for Making and Distributing Phonorecords (Phonorecords III)*, Docket No. 16-CRB-0003-PR (2018–2022) (Remand), December 9, 2021; Order Granting in Part and Denying in Part Copyright Owners' Motion for Reconsideration or, in the Alternative, Clarification (Restricted), *In re: Determination of Royalty Rates and Terms for Making and Distributing Phonorecords (Phonorecords III)*, Docket No. 16-CRB-0003-PR (2018–2022) (Remand), January 6, 2022.

[2] December 9, 2021 Order, p. 2-4.

A. The Working Proposal Assumes a One-For-One See-Saw, Which Has No Sound Theoretical Basis and Is Inconsistent with Real-World Outcomes

5. The Working Proposal implicitly assumes the existence of a one-for-one "see-saw" between the sound recording royalty rate and the musical works royalty rate. An underpinning of the Working Proposal is that the labels have such strong complementary oligopoly power that they can extract from the services all surplus that remains after the services have covered their costs and paid the statutory musical works royalties. Under the Working Proposal, this necessarily builds in the assumption that the labels would decrease their sound recording rate by the amount of any increase in the musical works rate so as to leave the services at the same "survival" level of revenue retention. As I have discussed in previous written testimony in this proceeding, the assumption that record labels adjust sound recording rates in response to changes to musical works rates on a one-for-one basis is based on a highly stylized theoretical model with many unsupported assumptions that is directly contradicted by real-world outcomes.[3] Therefore, any methodology that implicitly assumes a one-for-one see-saw is flawed.

6. Moreover, if in the real world the sound recording rate were actually to decrease, but it decreased by <u>less</u> than an increase in the statutory musical works rate, so that the total royalty rate increases, services could be left with less than the "survival" level of revenue retention. The likely result would be some services exiting the market, an increase in service prices to consumers, or both.[4] Such an outcome would harm services and consumers. My reading of the 801(b)(1) factors

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[3] Written Direct Remand Testimony of Dr. Gregory K. Leonard ¶¶ 15-22; Written Supplemental Remand Testimony of Dr. Gregory K. Leonard ¶¶ 21-25.

[4] This discussion applies when a rate is being set prospectively. As noted below in the next paragraph, however, given the reality that the musical works rate will be set for the Phonorecords III period only after most of that period is in the past, at this point, the Judges' task in Phonorecords III is largely a retrospective one.

is that a "fair" return to services, as well as the interests of consumers, should be taken into account (e.g., the availability of works to the public and their prices is of concern to consumers).

7. As a more practical matter, the assumption of a one-for-one see-saw ignores an important fact about the Phonorecords III proceeding: at this point, the rate-setting exercise is largely a retrospective one. The Phonorecords III rate period will largely be over by the time the Judges make a rate determination. The sound recording royalties for most of the period will already have been paid by the services, and the sound recording royalty obligations for whatever time remains in the Phonorecords III rate period will be determined by pre-existing contracts negotiated by labels and services in the past. I am not aware of any mechanism by which the services could seek to recover previously paid sound recording royalties if the Judges were to set a musical works royalty that resulted in total royalties above the "survival" level. Thus, the sound recording royalties can be thought of as fixed and exogenous with respect to the setting of the musical works royalty rate for the Phonorecords III rate period. That means that, as a practical matter, there is now a zero see-saw for the Phonorecords III period, as opposed to the one-for-one see-saw that the Working Proposal assumes.

B. The Working Proposal Relies Heavily on Shapley Value Models That Provide an Unsound Basis for Quantification

8. The Working Proposal uses the results of Shapley Value models put forward by various experts in this case to derive the sound recording-to-musical works ratio that is then used to apportion the maximum total royalty between sound recordings and musical works. I have discussed at length in my previous written and live testimony why these Shapley Value models do not provide a sound quantitative basis for determining the musical works royalty in this

proceeding.[5] Instead, real-world benchmarks should be used to determine the sound recording to musical works ratio. The licenses for the Pandora non-interactive service and permanent digital downloads are two examples of such benchmarks (as discussed in more detail below).

C. The Working Proposal is Inconsistent With the 801(b)(1) Factors

9. As noted above, the Working Proposal fails to consider potential adverse outcomes, including the potential impact on consumers, that could result from the total royalty to services exceeding the "survival" level.

10. In addition, because its launching-off point is that the services should receive only their "survival" level of revenue retention, the Working Proposal does not provide services with the "fair" return on their contributions that I understand the 801(b)(1) factors require. Indeed, the Shapley Value results on which the Judges rely for other purposes assign to the services a "fair" share of revenue of [redacted]% to [redacted]% (implying a total royalty of only [redacted]% to [redacted]%), which exceeds substantially all of the potential measures of the services' "survival" level of revenue retention that the Judges identified in their Orders.[6] That is, if one assumes the validity of the Shapley Value models (which I do not), the "fairness" considerations of the 801(b)(1) factors would suggest that

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[5] *Id.*; Trial Transcript at 5183:5-5185:7 (discussing my reasons for not using Shapley modeling).

[6] The majority's 15.1% musical works rate is the midpoint of its "zone of reasonable rates" (Initial Determination, p. 75). The lower end of this zone was based on a total royalty of [redacted]% and (unadjusted) TCC of [redacted]%, while the top end of the zone was based on a total royalty of [redacted]% and (unadjusted) TCC of 40% (*Id.*). This suggests that the midpoint of the range (i.e., the 15.1% rate) corresponds to a total royalty that is the midpoint between [redacted]% and [redacted]%, or [redacted]%. Alternatively, as the majority noted, the 15.1% musical works rate is also consistent with a total royalty of [redacted]% and an (unadjusted) TCC of [redacted]% (Initial Determination, p. 86). Note that the total royalty derived from the Shapley Value results, whether [redacted]% or [redacted]%, corresponds to the situation where the labels, musical works copyright owners, and services each receive their Shapley Values. As noted below, in the real world, this situation does not occur; the labels capture more than their Shapley Values due to their complementary oligopoly power and, as a result, it is impossible for <u>both</u> the services and musical works copyright owners to receive their respective Shapley Values.

the services are entitled to more than the "survival" level of revenue retention that the Working Proposal seeks to deliver.

11. Put another way, the "fairness" considerations of the 801(b)(1) factors are violated by the Working Proposal because it assigns to the copyright owners virtually their entire Shapley Value, while assigning to the services a figure well below their Shapley Value.

12. The central difficulty, as I understand it, is that the Judges have concluded that they do not have the authority to set the sound recording royalty rate and thus are not seeking to set the sound recording rate. Given that the sound recording rate is unregulated and the labels have complementary oligopoly power, the labels have captured more than their Shapley Value. Consequently, either the services or the musical works copyright owners, or both, must ultimately receive amounts below their Shapley Values. The "fairness" considerations of the 801(b)(1) factors suggest that both the services and the musical works copyright owners should receive amounts below their Shapley Values.[7] In contrast, the Working Proposal requires the services to bear the entire burden of the labels' complementary oligopoly power.

D. The Working Proposal Does Not Account for the Effectively Retrospective Nature of the Proceeding

13. As noted above, the Phonorecords III proceeding is effectively now a retrospective one. The Phonorecords III rate period is almost over and the sound recording royalties have largely been paid (or the rates have been set by contract), making them exogenous with respect to the musical works rate that is set in this proceeding.

[7] In other words, the focus should be on the ratio of the Shapley Values of the services and musical works copyright owners, rather than the ratio of the Shapley Values of the labels and the musical works copyright owners.

14. The Working Proposal does not appear to take this fact directly into account. The task facing the Judges at this point could be reformulated as one of dividing the realized surplus that remains after subtracting the sound recording royalties (at their actual levels) between the services and the musical works copyright owners. If one accepted the use of Shapley Value models in this context, one could implement a Shapley Value model to perform this division. While I am not aware of this type of model appearing in the record, Dr. Marx's "rebalancing" analysis, in which she takes the remaining surplus after sound recording royalties have been paid and divides it between the services and musical works copyright owners in proportion to their Shapley Values, is a closely related approach.[8]

III. PREFERRED IMPLEMENTATIONS OF THE WORKING PROPOSAL

15. While I maintain that real-world benchmarks should be used directly to determine the musical works rate (as discussed further below), in this section I lay out what I consider to be the "best" implementations of the Working Proposal. Again, there are two inputs to the calculation: the services' "survival" level of revenue retention, or equivalently the "survival" level of total royalty, and the sound recording to musical works ratio used to divide that total royalty between the labels and musical works copyright owners.

A. "Survival" Level of Total Royalty

16. The December 9, 2021 Order, which explains the Working Proposal, characterizes the "survival" level as a "*market-derived* data point" based on the percent of revenue "the Majors allow the interactive service sector to retain."[9] Accordingly, the Judges seem to envision that the

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[8] See Marx WSSRT, Figure 3. Dr. Marx calculates the musical works royalty on this basis to be between [redacted]

[9] December 9, 2021 Order, p. 2.

survival level depends on the knowledge and decision-making of the labels at the time of their negotiations with the services. This presents the difficult task of surmising — without direct evidence — what the labels knew and/or expected at the time of those negotiations.

17. As a technical matter, the "survival" level of total royalty rate should be the rate that would allow the services to cover their long-run economic costs, including an appropriate risk-adjusted return on capital employed (including investments that may be sunk at the time of assessment). Among the figures the Judges identified in the record, the testimony of Spotify's Mr. McCarthy provides the closest match conceptually. Mr. McCarthy testified that [redacted]."[10] If the Judges are seeking to use something approximating an actual survival rate for services, this is a relevant datapoint.

18. Alternatively, one could consider assessing the level of total royalty rate that the labels expected would prevail during the Phonorecords III period. Using the total royalty rate for this period is conservative (from the point of view of the services) and may be artificially high because the services may have been willing to pay total royalties in the short-run that were higher than the level required for long-run viability in anticipation that the total royalty rate would be lower in the future.

19. To evaluate total royalty rate, Spotify's royalties are a useful datapoint for several reasons. First, [redacted]

[10] McCarthy WDT ¶¶ 28-29. [redacted]

[redacted], so the period of the agreements line up well with the period under evaluation.[11] Second, [redacted]. Third, the Initial Determination used Spotify as a good representative for the interactive streaming marketplace.[12] Similarly, Spotify's rates were used as a datapoint to represent interactive streaming rates in the recent Web V proceeding.[13]

20. Given the Judges' stated objective to determine the amount that labels allow the services to retain, it is most useful to look at "headline" rates because these rates are a reasonable estimate of expected rates at the time of negotiations. Another reason to look at headline rates is that the rate produced by the Working Proposal would itself serve as the headline rate in the statutory rate structure if the Judges, as suggested by the Orders, intend to pair it with mechanical floors or other alternatives to the percentage-of-revenue prong. The headline sound recording rate in Spotify's sound recording agreements that govern during the Phonorecords III period is [redacted]%.[14] For musical works royalties, we do not know what the labels expected, but what we do know is that the labels would have at least known the prevailing Section 115 rates and could have reasonably believed that a likely outcome was that musical works royalties would remain at the existing (Phonorecords II) statutory headline rate going forward, especially since those rates had (at the time of negotiation of the Spotify agreements) already been in place for many years (dating back to the Phonorecords

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[11] Bonavia RWDT ¶¶ 17-19; Marx WSSRT, fn. 22.

[12] The Initial Determination calculates the "adjusted" TCC figures for the various Shapley models using the assumption that the total royalty rate "in the marketplace" was [redacted]% (Initial Determination, fn. 133); the [redacted]% figure is from Spotify (Initial Determination, p. 72 ("Using Spotify as an example, however, actual combined royalties for musical works and sound recordings are approximately [redacted]% of revenue.")).

[13] Web V Initial Determination, p. 126.

[14] Web V Initial Determination, p. 13.

I proceeding).[15] Adding the statutory headline musical works rate of 10.5% to the headline sound recording rate of [redacted]% yields a total royalty rate of [redacted]%.[16]

21. It is important to recognize that the "survival rate" may well differ across services and time. To the extent the Judges set the musical works rate such that Spotify (i.e., one of the largest and most prominent services) survives, other services may not be viable at the same rate.

22. The other potential total royalty measures identified in the January 6, 2022 order[17] are flawed:

- Dr. Eisenach's claim that the "industry standard" is that [redacted]% of service revenue is allocated to rightsholders is inconsistent with both the sum of [redacted] sound recording and musical works headline rates as well as [redacted] total effective rates.
- Dr. Eisenach's claim that the "standard" (headline) sound recording rate is [redacted]% is inconsistent with [redacted].[18]
- Dr. Watt's "conservative" figure of [redacted]% for the total royalty is the product of his Shapley Value analysis, rather than a real-world total royalty rate that any service actually paid.[19] Nor is this figure based on a detailed analysis of the services' long-run costs that need to be covered for viability. Finally, for all of the reasons previously discussed, the results of the Shapley Value models (particularly Dr. Watt's Shapley model, on which the majority

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15 [redacted]

16 As an alternative to the headline rates, one could consider the effective rate for sound recordings if there is reason to believe that the labels expected certain minimum fees or other aspects of the label agreements to be triggered that would push the effective rate about the headline rate. In that instance, the effective rate for sound recordings is [redacted]%. See Marx WSSRT, Figure 2. Adding this effective rate to a reasonable assumption about musical works rates during the period (10.5%) results in a total royalty of [redacted]%. Note, however, that effective rates generally are difficult to predict given uncertainty about the extent to which various alternative prongs may be triggered. In addition, if effective rates, which already incorporate the effect of alternative prongs, are plugged into the Working Proposal to derive a statutory percentage of revenue musical works rate, the alternative prongs in the statutory royalty structure should then be eliminated or at least reformulated to avoid double-counting.

17 January 6, 2022 Order, pp. 9-10.

18 [redacted] Web V Initial Determination, fn. 51.

19 Watt WRT ¶ 6.

declined to rely for the sound recording to musical works ratio[20]) do not provide a reliable quantitative basis for determining the musical works rate in this proceeding.

- Dr. Watt's claim that Spotify's non-content costs were forecasted (in 2016) to decrease to [redacted]% of revenue in 2017, which the Judges assume allows for a total royalty of [redacted]%, is inconsistent with the testimony of Mr. [redacted]. Moreover, it is unlikely that the non-content cost figure Dr. Watt cites includes an appropriate risk-adjusted return on capital. In general, such accounting cost measures would not include such a return and thus would be downward biased.[21] A company will not be viable in the long run if it is unable to provide a competitive risk-adjusted return to its investors. Finally, as Dr. Marx discusses, [redacted].[22]

B. The Sound Recording to Musical Works Ratio

23. A superior alternative to using the sound recording to musical works ratio of 3.82:1 derived from the Shapley Value results is to use a real-world benchmark.

24. The Initial Determination found that Pandora's non-interactive service was a useful benchmark and noted that the sound recording to musical works ratio for this service was [redacted].[23] The sound recording royalty rate for non-interactive services is set by the CRB under the WBWS standard (with effective competition). The musical works rate (for performance rights) for non-interactive services is set in the shadow of the rate court (which similarly requires rates to be set at fair, competitive levels). Thus, the non-interactive ratio has rates the parties or tribunal has determined to be approximately effectively competitive in both the numerator and denominator. Accordingly, to obtain a competitive musical works rate, the non-interactive ratio should be

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[20] Initial Determination, p. 75 ("The Judges give Professor Watt's 1.3:1 [Shapley-derived sound recording to musical works] ratio no weight.") (footnote omitted).

[21] See, e.g., Franklin M. Fisher and John J. McGowan, "On the Misuse of Accounting Rates of Return to Infer Monopoly Profits," *American Economic Review*, Vol. 73, 1983, pp. 82-97.

[22] Marx WSSRT, fn. 11.

[23] Initial Determination, pp. 50-51.

applied to a competitive sound recording rate within the Judges' Working Proposal. If the ratio were instead applied to a sound recording rate that incorporated a market power premium, that market power premium would be incorporated into the resulting musical works royalty, rendering it not competitive.[24] In the case of interactive streaming, for which the sound recording rates are not governed by any regulation, the labels have complementary oligopoly power and therefore the sound recording rates are not consistent with effective competition. The Final Determination in Web V concluded that interactive streaming sound recording rates should be decreased by [redacted].[25]

25. While not adopting permanent digital downloads (PDDs) as a benchmark, the Initial Determination nevertheless found that PDDs were useful in developing a zone of reasonableness for the musical works rate.[26] The Initial Determination cited my calculations that found, for 2015, the musical works royalty as a percentage of revenue for PDDs to be 8.7% and the TCC percentage to be [redacted].[27] This implies a sound recording to musical works ratio of [redacted]. The Initial Determination also cited my calculations that found that, for 2016, the musical works

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[24] As an example, suppose the benchmark market has a competitive sound recording rate of 50% and a competitive musical works rate of 10% (for a ratio of 50%/10% or 5:1). In the "target" market to which the benchmark will be applied, while the competitive sound recording rate would be 50%, the labels are unconstrained by regulation and thus in fact are able to charge a 55% sound recording rate. In the context of this example, given the benchmark, the competitive musical works rate in the target market is 10%. However, if we mistakenly applied the 5:1 ratio from the benchmark market to the unregulated 55% sound recording rate in the target market, we would obtain a musical works royalty of 11%, above the competitive level of 10%. If, instead, we apply the 5:1 ratio to the sound recording rate in the target market, after adjusting to remove the market power premium, we obtain the correct answer for the competitive musical works royalty (50%/5 = 10%).

[25] Web V Initial Determination, p. 72. To the extent that the Judges choose to rely on sources other than Spotify for the "survival rate," it would be appropriate to use the [redacted] market power adjustment rather than the [redacted] market power adjustment.

[26] Initial Determination, p. 61 ("The Judges find that the [PDD] benchmark determined by this second approach is useful—not to establish the appropriate benchmark—but to incorporate into the development of a zone of reasonableness of royalty rates within the rate structure adopted by the Judges in this proceeding.").

[27] Initial Determination, pp. 60-61.

royalty as a percentage of revenue for PDDs was 9.6%.[28] Given that PDD retailers retain [redacted] of revenue, this implies a sound recording to musical works ratio for PDDs of [redacted] for 2016. Given that the publishers and labels voluntarily agreed to these rates for the Phonorecords III period (and again in Phonorecords IV), the real-world PDD ratio of [redacted] is a useful guidepost to suggest that the 3.82:1 ratio does not comport with labels' and musical works copyright owners' own view of the appropriate ratio in a related licensing context.

C. Results

26. The following table summarizes the results of implementing the Working Proposal using the total royalty figures discussed above and the 3.82:1 ratio from the Initial Determination and the [redacted] ratio from Pandora.

[28] Initial Determination, p. 61.

[redacted]

IV. DIRECT USE OF REAL-WORLD BENCHMARKS

27. An alternative to the Working Proposal is to derive the appropriate musical works rate for the Phonorecords III period by directly applying valid real-world benchmarks.

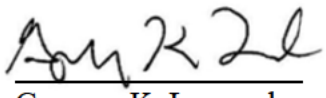
28. Judge Strickler's Dissenting Opinion concluded that the Phonorecords II settlement benchmark is an appropriate benchmark.[29] The Phonorecords II rate and rate structure were the result of a voluntary settlement between the services and the musical works copyright owners. It was with this structure in place that interactive streaming experienced substantial growth in subscribers and musical works copyright owners saw a concomitant growth in interactive

[29] Dissenting Opinion of Judge David R. Strickler, p. 12.

streaming mechanical royalties. The headline musical works royalty rate in the Phonorecords II rate structure is 10.5%.

29. Other benchmarks support a headline musical works royalty in this same range. As noted above, the Initial Determination concluded that Pandora's non-interactive service is a useful benchmark. The sound recording to musical works ratio of [redacted] from this service can be applied to the sound recording rate for interactive streaming after making an adjustment for market power. As noted above, Spotify's headline sound recording rate is [redacted]%. Reducing this rate by the Web V market power adjustment of [redacted]% and dividing by the Pandora ratio, yields a musical works rate of 10.5%.[30] [redacted]

30. As noted above, the Initial Determination concluded that PDDs were of use in developing a zone of reasonableness for the musical works rate. In 2016, the musical works royalty for PDDs expressed as a percentage of PDD revenue was 9.6%. This musical works rate for PDDs provides guidance as to the appropriate musical works rate for interactive streaming.



Gregory K. Leonard

Dated: January 24, 2022

[30] Again, if the sound recording rate from a service other than Spotify were used for this calculation, the market power adjustment of [redacted]% should be used.

PUBLIC VERSION

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Before the
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Washington, D.C.

In the Matter of: Determination of Rates and Terms for Making and Distributing Phonorecords (Phonorecords III)	Docket No. 16-CRB-0003-PR (2018-2022) (Remand)

THIRD SUPPLEMENTAL WRITTEN REMAND TESTIMONY OF DR. GREGORY K. LEONARD

1. I have been asked by Google to review and respond to the Additional Written Direct Testimonies ("AWDT") of Drs. Watt, Eisenach, and Spulber.

I. IT WOULD BE ECONOMICALLY INAPPROPRIATE TO USE A [redacted] SOUND RECORDING-TO-MUSICAL WORKS RATIO IN THE JUDGES' WORKING PROPOSAL

2. Both Dr. Watt and Dr. Eisenach suggest that the Judges should use the [redacted] ratio, obtained from the Gans "Shapley-inspired" model, in their Working Proposal.[1] They are incorrect for several reasons. Their argument appears to be that, because the Judges used the [redacted] ratio to derive the 15.1% musical works rate and 26.2% TCC percentage in the Final Determination, consistency dictates that the same ratio be used in the Working Proposal.[2] However, Drs. Watt and Eisenach ignore the fact that the Judges explicitly adjusted the [redacted] ratio to account for the major labels' complementary oligopoly power (yielding the 3.82:1 ratio) before calculating the musical works rate and TCC percentage. Thus, consistency in fact would dictate that the 3.82:1 ratio be used in the Working Proposal. Dr. Watt's and Dr. Eisenach's argument is also flawed because, as the Judges have recognized, the adjustment to the [redacted] ratio helps mitigate the impact of the labels' complementary market power incorporated into the statutory musical works rate.[3]

3. Additionally, Drs. Watt and Eisenach are confusing the output of Shapley models with economic outcomes in the real world. The [redacted] ratio emerges from the Gans "Shapley-inspired" model. However, real world outcomes do not correspond to the Gans model or other Shapley models due to limitations in those models, as well as the labels' complementary oligopoly power.[4] As a result of this power, the

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[1] Watt AWDT ¶¶ 3, 43-44; Eisenach AWDT ¶¶ 6, 15, 22.
[2] Watt AWDT ¶¶ 3, 43-44; Eisenach AWDT ¶¶ 6, 15, 22.
[3] In my SSWRT, I explained why a ratio based on real-world benchmarks would be superior to the adjusted Gans ratio. Leonard SSWRT ¶¶ 23-25.
[4] I have previously discussed at length other shortcomings of the musical works copyright owners' experts' Shapley-based approaches. See, e.g., Leonard SSWRT ¶ 8.

labels have received more than their Shapley values in the real world. If one were to ignore this divergence between the Shapley models and the real world and use the unadjusted [redacted] ratio in the Working Proposal, the result would be to give the musical works copyright owners more than their Shapley value. For example, suppose hypothetically that a Shapley model suggests that revenue shares should be 47% for the services, [redacted]% for sound recordings, and [redacted]% for musical works (so that the latter two revenue shares are consistent with the [redacted] ratio), while, in the (hypothetical) real world, the sound recording royalty rate was 52%, well above the revenue share suggested by the Shapley model, and musical works royalty rate was 14%. If the Judges were to import those (hypothetical) real-world numbers into the Working Proposal and apply the Shapley model's [redacted] ratio to the 66% (52% + 14%) hypothetical real-world combined royalty rate, the Working Proposal would generate a statutory musical works rate of [redacted]%, which is *above* the hypothetical's Shapley value-based musical works rate of 15.1%. In other words, the failure to adjust the [redacted] rate would result in the labels' complementary oligopoly further distorting the model. Absent a one-for-one see-saw effect, which the evidence has shown does not exist (and is all but impossible on a retroactive basis), the services (and consumers) would bear the brunt of this additional distortion, an outcome that is not consistent with the 801(b)(1) factors. For example, with no see-saw, the combined royalties would increase to 70.9% (52% + 18.9%), which is well above the intended "survival rate" of 66%.

II. SOUND RECORDING RATES ARE ABOVE THE COMPETITIVE LEVEL

4. Underlying Dr. Watt's and Dr. Eisenach's claim that the [redacted] ratio should be used in the Working Proposal is the assertion that the labels do not have complementary oligopoly power.[5] This is

[5] Watt AWDT ¶¶ 50-55; Eisenach AWDT ¶¶ 35-37; Spulber AWDT ¶¶ 6-21.

contrary to the evidence and findings in this proceeding, as well as in *Web IV* and *Web V*.[6]

5. Dr. Watt and Dr. Spulber present largely theoretical arguments as to why the labels do not have complementary oligopoly power. They set up a theoretical straw man and then proceed to argue that, because the assumptions of the theoretical straw man do not hold in the interactive streaming marketplace, complementary oligopoly power *necessarily* does not exist in that marketplace.[7] However, Dr. Watt and Dr. Spulber do not actually prove that complementary oligopoly power is *impossible* outside the confines of their straw man theoretical model, nor could they. Inefficiencies can arise despite the marketplace factors they identify. And such inefficiencies are common in the real-world, including because of incomplete or imperfect information.[8]

6. Thus, whether the labels charge rates above the competitive level due to their "must have" status is ultimately an empirical question.[9] Notably, Drs. Watt and Spulber provide no empirical analysis whatsoever to support either the applicability of their theoretical arguments[10] or their conclusion that

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[6] Final Determination, *Phonorecords III*, p. 47; Dissent, Phonorecords III, p. 3; Final Determination, *Web V*, pp. 12-72; Final Determination, *Web IV*, p. 66.

[7] For example, they argue that in the interactive streaming marketplace, but not in their theoretical straw man, there is negotiation, contracting, repeated interaction, communication, less than perfect competition among services, and competition among labels. Watt AWDT ¶¶ 50-55; Spulber AWDT ¶¶ 6-21.

[8] In my testimony in this matter, I discussed how complementarities, aggregation of rights, and the resulting "must have" status have resulted in rates above the effectively competitive level and analogized this outcome to the "royalty stacking" phenomenon observed in situations where a product manufacturer requires licenses from multiple patent owners who hold rights to complementary technologies. 3/15/2017 Hearing Transcript, pp. 1191-1192, 1248-1249; 4/5/2017 Hearing Transcript, pp. 5183-5184.

[9] Dr. Watt, in particular, cannot now argue without contradicting himself that the major labels are not "must have" for the interactive streaming services. Watt Dep., pp. 225-226 ("Q. And that's because of the market power of the labels, correct? A. Yes. When they come to negotiate. They're the – Q. When they come to negotiate. A. They're the sole holder of an essential input at that point."). Moreover, it is telling that none of the major labels offers a service based on only its own catalog. The existing marketplace demonstrates that the catalogs of multiple labels are necessary. Dr. Watt tries to argue that any market power the labels have is not an "abuse" but rather valid due to their "necessity" or "critical[] importan[ce]" to the services. Watt AWDT ¶ 56-57. However, Dr. Watt fails to recognize that the major labels' "necessity" is a result of their aggregation of works. As I explained during my testimony in this matter, aggregating substitutes (here, individual sound recordings) eliminates competition among them and creates the "must have" status for the aggregate, which in turn leads to higher rates. 4/5/17 Hearing Testimony, p. 5184.

[10] For example, they do not provide any evidence that parties communicated about reducing sound recording rates to avoid the inefficiencies arising from the complementarity of the major labels' catalogs, nor do they discuss any aspects of the

sound recording royalty rates are at the competitive level.

7. In fact, the evidence suggests that sound recording rates are above the competitive level. Sound recording rates are lower in contexts where steering, and thus competition among labels, is possible.[11] However, the nature of an interactive streaming service (offering on-demand access) limits such a service's ability to steer.[12] Moreover, labels have demanded and received "anti-steering" and "most favored nations" provisions from interactive streaming services, which further limit competition among labels.[13] In the *Web V* and *Web IV* proceedings, label witnesses acknowledged the lack of price competition between labels.[14] Also, as discussed above, actual sound recording rates are well above the levels suggested by the Shapley models that have been considered in this case.

III. DR. EISENACH'S DISCUSSION OF ROYALTY RATES IS MISLEADING

8. Dr. Eisenach identifies a range of [redacted]% for the combined royalty rate the Judges should use as the "survival rate" in the Working Proposal.[15] Dr. Eisenach bases this range on combined royalties for interactive streaming services from before the *Phonorecords III* period as well as purported benchmarks such as NetFlix, iTunes, and Hulu.[16]

9. However, combined royalties from before the *Phonorecords III* period are substantially less relevant than the combined royalties from the *Phonorecords III* period. For example, [redacted]. Combined royalties at the

services' contracts with labels that would have achieved this end. They also ignore evidence that is inconsistent with the applicability of their theoretical arguments. For example, the evidence in the *Web V* proceeding suggested that the services have relatively little bargaining power relative to the labels. See Final Determination, *Web V*, pp. 16-21, 48-49.

[11] Final Determination, *Web V*, pp. 21-33.

[12] Final Determination, *Web V*, pp. 21-33.

[13] Final Determination, *Web V*, pp. 25-27.

[14] Final Determination, *Web V*, p. 24; Final Determination, *Web IV*, p. 66.

[15] Eisenach AWDT ¶¶ 28-32.

[16] Eisenach AWDT ¶ 32.

time of these renegotiations are a better gauge of the "survival rate" than royalties from an earlier time. Dr. Eisenach acknowledges that the combined royalties from the *Phonorecords III* period have been [redacted]% (including increased publishing royalties due to the vacated Initial Determination).[17] He argues that this figure is too low to be used in the Working Proposal because (1) musical works rates were being ramped up to the 15.1% level, (2) revenue was increasingly being deferred/hidden by services, and (3) greater use of student/family plans have lowered effective royalty rates.[18] Regarding the first point, under Dr. Watt's assertion as to the existence of a nearly 100% see-saw (upon which adoption of the Phonorecords III rates was premised), a ramped up musical works rate should not affect the combined royalty.[19] Regarding the second point, Dr. Eisenach provides no credible evidence to support his claim that services have manipulated revenue figures, let alone that services have increasingly done so during the *Phonorecords III* period. Finally, regarding the third point, Dr. Eisenach appears to be referring to the fact that the *Phonorecords III* rate structure calls for family plan and student plan subscribers to be weighted at less than a regular subscriber. However, this is a feature of the statutory rate structure that the Judges found to be economically rational and desirable, not a nefarious action by the services.

10. With regard to Dr. Eisenach's purported benchmarks, video streaming does not provide a sound benchmark for interactive music streaming because of the substantial differences between them in terms of the services offered, the rights at issue, the parties, and the geographic scope (he uses worldwide data from NetFlix and Hulu, whereas this case is about the United States). Dr. Eisenach does not address these differences. Similarly, Dr. Eisenach does not explain how a retailer of digital media such as iTunes is comparable in terms of its costs and the value of its contributions to an internet streaming provider.

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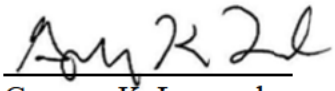
[17] Eisenach AWDT ¶ 31.
[18] Eisenach AWDT ¶ 31.
[19] There is also no evidence suggesting that the 15.1% musical works rate was driving label decisions concerning a hypothetical survival rate at the time of negotiations with services.

IV. DR. EISENACH MISINTERPRETS MLC DATA

11. Dr. Eisenach identifies a [redacted] at the beginning of 2019 in the data Google reported to the MLC. He insinuates that this is indicative of issues with Google's reporting [redacted].[20] In fact, [redacted].[21] [redacted].

12. Dr. Eisenach also claims that mechanical royalties for the 2018-2022 period would be $[redacted] without the TCC prong.[22] But this number is largely driven by assumptions rather than actual data—particularly related to forecasting. Because he does not have actual data for 2021 and 2022 (and for some services in Q4 2020), he forecasts royalties for 2021 and 2022 (and, for some services, certain months in Q4 2020)—over 40% of the 2018-2022 period—by extrapolating based on the growth rate exhibited in the actual data between a single month at the end of 2019 and the same month in 2020.[23] Excluding Dr. Eisenach's forecasts and limiting the calculation to the period for which actual data exist, [redacted]



Gregory K. Leonard

Dated: February 24, 2022

[20] Eisenach AWDT ¶ 41.
[21] Interview of Jennifer Rosen, Head of Music Publishing Partnerships at YouTube Music, conducted by me on Feb. 23, 2022.
[22] Eisenach AWDT ¶ 43.
[23] Eisenach AWDT, fn. 53. He uses September for "Full" and "Limited" offerings and December for "Free" offerings.

TAB B

Before the
UNITED STATES COPYRIGHT ROYALTY JUDGES
The Library of Congress
Washington, D.C.

In the Matter of:	
Determination of Royalty Rates and Terms for Making and Distributing Phonorecords (Phonorecords III)	Docket No. 16-CRB-0003-PR (2018-2022)

WRITTEN DIRECT TESTIMONY OF ZAHAVAH LEVINE
(On behalf of Google Inc.)

I. Introduction and Witness Background

1. My name is Zahavah Levine. I am Vice President of Partnerships for the Android and Google Play divisions of Google Inc. ("Google"). While at Google, I have developed and directed Google's music licensing strategy at Google Play Music. I submit this testimony in support of Google's direct case.

2. I am deeply familiar with the Google Play Music service and its music licensing structure. While at Google, I have been personally involved in music-licensing negotiations with record labels, music publishers, performing rights organizations, and other rights holders. I have personal knowledge of Google's publishing and sound recording licenses in this proceeding. More broadly, I have over fifteen years of experience working with digital music services.

3. This declaration is based on my personal knowledge and information made available to me in the course of performing my duties while I have been

employed at Google.

4. I have worked for digital music services since the early years of the digital music industry. To summarize my career prior to Google Play, I graduated from Brown University in 1991 with a degree in History and received my law degree from the University of California Berkeley School of Law in 1996. After two years of clerking, I started working at the law firm of Bingham & McCutcheon in 1998.

5. I took a position in 2001 as Senior Counsel at Listen.com, where I worked with a team that secured rights from all major and many independent labels for the Rhapsody music service.

6. The earliest days of digital music were challenging because it was difficult for services to enter into any content deals. Record labels were skeptical of digital music due largely to the proliferation of illegal, peer-to-peer file sharing services such as Napster. Early digital music services struggled to get the record labels to embrace digital streaming and digital downloads as a form of revenue.

7. Rhapsody was able to offer one of the earliest incarnations of the on-demand streaming subscription services and digital music stores that exist today in part because the service demonstrated that paying subscription services offered a new source of revenue for copyright holders and an enhanced experience for consumers.

8. I spent nearly three years at RealNetworks after RealNetworks purchased Listen. In 2006, I moved from RealNetworks to YouTube, where I served as General Counsel and VP of Business Affairs. Less than a year after I moved to

YouTube, we began negotiating with Google for Google to acquire YouTube. The acquisition was finalized in November of 2006, and I began my new role as Chief Counsel of YouTube and Associate General Counsel of Google. During my time at YouTube, both before and after Google's acquisition, my colleagues and I negotiated deals with the major labels to begin monetizing and licensing the user-generated content on YouTube.

9. In October 2010, I switched Google divisions from YouTube to Android and took on a new role in business development as Director of Content Partnerships for Google's Android division.

10. During my years in the Android division, I was responsible for all music licensing strategy and music partnerships for Google's music services developed and launched by the Android and Google Play business units, originally called Google Music and later rebranded as Google Play Music. I led the team that developed the music-licensing strategy and music partnerships for the launch and global expansion of Google Play Music.

11. I had primary responsibility for all of Google's agreements with record companies, music publishers, collection societies and artists relating to the Google Play Music service (previously referred to as "Google Music"). These licenses covered Google Play Music's "scan-and-match" locker service that allows consumers to store copies of already-owned music in the cloud and to access that content from remote devices, its digital music store, its on-demand streaming subscription service (previously referred to as "All Access"), and its Section 114-compliant

non-interactive radio service. Beyond the mechanics of music licensing, I was also intimately involved in the strategic growth and development of Google Play Music.

12. In October of 2014, I was promoted to Vice President of Global Music Partnerships for Google Play Music, and continued to oversee Google Play Music's partnerships with music rights holders and with distribution partners.

13. About a year ago, the music licensing team for Google Play Music was combined with the music licensing team for YouTube and moved to the YouTube business unit. I did not move to YouTube with my team. Instead, I began my current position as Vice President of Partnerships for Google Play, in which I oversee all strategic distribution partnerships for Google Play, including distribution of digital music, magazines, books, movies, television programs, and apps. In this role, I oversee a team that enters partnerships with third-party original equipment manufacturers, carriers, retailers, and others to increase the reach and awareness of Google Play generally. In September, I assumed responsibility for an additional team that manages Android's relationships with wireless carriers in the US and Canada.

II. The Business of Music Streaming

14. In my fifteen years in digital music, I have watched the streaming ecosphere change tremendously . The scope and reach of streaming music services and the aggregate amounts paid to labels, publishers, and other rights holders have certainly grown. But many services have left the market due to unviable royalty rate structures.

15. In the early 2000s, many emerging digital music services competed to attract users and develop innovative services. Since then, I have witnessed the launch of increasingly creative, innovative, and ingenious features and products designed to appeal to a public that was initially slow to accept a post-Napster world of paying for digital music. Today's marketplace includes services offering a wide range of feature sets that were all but unimaginable at the dawn of the digital music era.

16. But despite this growth in consumer adoption, innovation, and revenue-generation, streaming music services generally remain unprofitable businesses. Content acquisition costs, primarily in the form of music royalties, are the biggest barrier to profitability for streaming music services.[1] Indeed, most services in existence when I began working in the digital music business in the early 2000s have gone bankrupt or been absorbed by larger services.

17. Just in the span of last year, Rdio filed for bankruptcy in November of 2015, and Rara.com closed in March, 2015 after Omnifone tried to keep the service afloat and then unsuccessfully sought out a buyer to acquire the struggling company. There are many other examples, as have been reported from time to time in the digital media.[2]

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[1] I will go into more detail below regarding the specific terms of Google's licenses for Google Play Music in Sections VI and VII, but briefly, Google's direct licenses with the record labels covering sound recording rights typically require payments of [redacted] of service revenue and Google's licenses with music publishers for composition rights [redacted] of service revenues. Only a small handful of companies have proven able to tolerate such rates to build meaningful subscriber bases, and even those companies are losing money every quarter on streaming music services.

[2] *See, e.g.*, Glenn Peoples, *In Memoriam: The Music Services, Brands, and Companies That Left Us In 2015*, Billboard (Jan. 4, 2016), available at http://www.billboard.com/articles/business/6828956/in-memoriam-music-companies-2015-obit.

III. Google's Interest in this Proceeding

18. Google is participating in this proceeding for two reasons. First, Google is interested in setting sustainable rates for Google Play Music that will allow fair compensation for rights holders while also allowing the Google Play Music service to innovate and operate profitably.

19. Second, and more broadly, Google wants online businesses to thrive. Its ad sales and cloud services businesses, for example, benefit from a healthy internet ecosystem. The rates proposed in this proceeding by Copyright Owners pose a significant threat to innovation, consumer access to music, consumer choice, and the viability of new entrants into the music streaming space.

20. In particular, Copyright Owners' proposal of a per-play rate is problematic. It is problematic because it creates a cost structure for on-demand subscription services that is not proportionate with revenue. On-demand services are marketed to consumers largely by offering access to vast catalogs of music enabling the consumer to listen to those catalogs as much as they would like for one fixed monthly price. The concept of placing restrictions on the number of "plays" that the subscriber can receive as part of their subscription is fundamentally at odds with the value proposition that digital subscription services are trying to sell, especially in seeking to induce users – in the post-Napster era – to pay for music. A per-play rate structure would render services unable to contain their costs unless they imposed limitations on usage and engagement, rather than encouraged such engagement. This dynamic is counter-productive because usage and engagement

are *the* key indicators of retention; the growth of digital music services depends upon active, engaged users. It is thus important to provide for a rate structure that rewards services that effectively engage users, not one that punishes them with higher, unpredictable royalty costs (and one that would create disincentives to use the very service we are trying to sell).

21. A per-play rate structure is also troubling because it would be particularly burdensome for newer services, whose rapid growth would lead to unpredictable and uncontrollable costs under a per-play rate structure. A per-play rate structure would disadvantage new entrants who are not as able to tolerate substantial royalty obligations with no correlation to revenue. It is part of Google's core mission to foster an open and thriving digital marketplace, including for new entrants into the digital sphere to increase innovation and consumer choice.

22. Rates keyed off of a percentage of a service's revenue, on the other hand, allow a service to grow with the understanding that a set percentage of revenue will be earmarked for content costs. Percentage-of-revenue based licenses are superior to foster growth and innovation. As services attract more paying users, the rights holders' payments increase and they share in that success. Moreover, the minimums in Google's proposed structure prevents services from overly discounting or giving music away without providing adequate compensation to the music publishers.

23. Google proposes the following rate structure for services offering interactive streams and conditional downloads under Subpart B of the Section 115

statutory license: the greater of (i) the topline rate of 10.5% of service revenue and (ii) the lesser of (a) 13.5% of the total amount expensed by the service provider for the right to make interactive streams and limited downloads of sound recordings, and (b) the existing per-subscriber per-month minima set forth in 37 C.F.R. 385.13(a).[3] Google proposes the following rate structure under Subpart C: the greater of (i) the existing Subpart C topline rates, and (ii) 13.5% of the total amount expensed by the service provider for the right to make interactive streams and limited downloads of sound recordings. For the two service categories under Subpart C that currently contain a "per subscriber" minimum, those minima would also be retained. For both subparts, the resulting royalty pool would remain subject to a deduction for payments made for public performance rights.[4]

24. Google also proposes that the definitions of "Service Revenue" in 37 C.F.R. § 385.11 and "Subpart C Service Revenue" in 37 C.F.R. § 385.21 be amended to allow for deductions of certain costs of revenue — such as credit card transaction fees, carrier billing fees, and app store commissions — up to a maximum of 15%. The regulations should also be amended to specifically allow services a deduction to account for direct licenses of reproduction and distribution rights in musical works.

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[3] Google's proposal to keep the existing per-subscriber minimum fees set forth in 37 C.F.R. 385.13 is contingent on such fees remaining part of a royalty formula that allows services to pay the lesser of such fees or 13.5% of the amount paid for sound recording rights. If that structure were altered, then lower per-subscriber minima would be appropriate. Google's proposal to keep the existing minima is also contingent on the Section 115 regulations clarifying how family plans are counted for purposes of per-subscriber minima. The minima should track the pricing of the plans. For example, under current pricing where a family plan is priced at 150% of a normal plan, the minima should also be multiplied by 1.5, and such fee should cover the entire family. Additionally, to protect against too low of pricing of family plans, the minimum per-subscriber payment per family plan could be set at 1.5 times the prevailing per-subscriber minimum for each service type.

[4] Under this proposal, all subscriber based floor fees applicable to Subpart B, which are described in 37 C.F.R. § 385.13, would be eliminated.

IV. Prior Phonorecords Proceedings

25. Over the course of my career, I have been involved in prior Phonorecords proceedings concerning digital music services. As a result, I have personal knowledge of how the current general framework for Section 115 license-fee calculations was established.

26. In 2001, the year I joined Listen.com, the Copyright Office initiated a rulemaking proceeding to determine what types of digital services engaged in Digital Phonorecord Deliveries were subject to the Section 115 compulsory license. In particular, there were questions about whether on-demand streams and limited downloads actually resulted in Digital Phonorecord Deliveries ("DPDs").

27. Listen.com, RealNetworks, and other digital media companies submitted comments through the Digital Media Association ("DiMA"). DiMA was founded in 1998 and continues to represent digital media companies including Rhapsody, Microsoft, and CRB participants Amazon, Apple, Google, Pandora, and Spotify. DiMA's comments set forth its members' position, which Google maintains today, that interactive and non-interactive streaming does not result in a DPD. Rather, these activities implicate only public performance rights. DiMA also called for a Copyright Arbitration Royalty Panel to set rates for permanent and limited downloads.

28. Later that year, the National Music Publishers Association ("NMPA"), the Harry Fox Agency ("HFA"), and the Recording Industry Association of America ("RIAA") entered into a voluntary settlement agreement addressing payments and

licenses for DPDs associated with on-demand streams and limited downloads pending the establishment of final rates and terms via a settlement or non-appealable CARP determination. In order to get into business without risk of crushing copyright liability, certain DiMA members signed onto the agreement.

29. In early 2002, DiMA submitted comments on behalf of its members that did not sign onto the agreement, reiterating its position that streaming does not require a mechanical license. DiMA also pointed out that the NMPA-RIAA settlement acknowledged that non-interactive streams, which are technologically indistinguishable from on-demand streams with respect to the need for incidental reproductions, did not require mechanical licenses. I have consistently believed and Google has consistently asserted that streaming does not implicate the mechanical right.

30. These issues shifted to the legislative arena for several years. Meanwhile, in 2006, the *Phonorecords I* proceeding began. RealNetworks participated through DiMA, along with AOL, Apple, MusicNet, Napster, and Yahoo! Music. Google was not a participant in that proceeding. Although I left RealNetworks in 2006 for YouTube, I continued to follow Section 115 developments with interest. At the time I joined Google, it did not have its own audio service. In my role, I took a broad view that Google, as an online service, was always considering offering a music service.

31. In 2007, the Copyright Office held a public roundtable to resume discussion of Section 115's applicability for on-demand streaming and limited

downloads. After the rebuttal phase in *Phonorecords I*, the Copyright Office issued another Notice of Proposed Rulemaking to address the question of whether interactive, on-demand streams and limited downloads require a mechanical license.

32. Google submitted comments objecting to the Proposed Rulemaking for two principal reasons. First, the Proposed Rulemaking could have upset over a decade of industry practice acknowledging that non-interactive streaming did not implicate a mechanical right. And second, the Proposed Rulemaking threatened to impose new licensing obligations for existing and nascent services engaged in interactive streaming, including audiovisual services not eligible for a compulsory license under Section 115. Google also noted that certain services' decision to take Section 115 licenses for streaming services reflected a decision to avoid litigation of the issues addressed by the Proposed Rulemaking.

33. On September 19, 2008, the Copyright Office held a hearing on its proposed Section 115 rulemaking. Before then, during the rebuttal phase of *Phonorecords I*, the NMPA, RIAA, and certain online music services reached a settlement covering the rates and terms for the Section 115 license for the period 2008-2012. Under the terms of the settlement, online music services agreed that interactive streaming required a mechanical license in exchange, among other things, for the publishers' agreement that no such license was required for non-interactive streaming. The parties also agreed that all mechanical rates, including those for limited and incidental downloads, would be subject to Section

115 compulsory licensing and rate-setting.

34. At the hearing, the settling parties argued that the Proposed Rulemaking threatened to upend the settlement reached in *Phonorecords I*. Bill Patry, who was heavily involved in the Section 115 legislative process, also testified and maintained Google's position that on-demand streaming did not implicate the Section 115 license.

35. The *Phonorecords I* settlement established the general framework for Section 115 license-fee calculations that remains in place today for on-demand streaming services: the greater of 10.5 percent of service revenue or the lesser of a percentage of sound-recording payments or a per-subscriber minimum, less public performance royalties, subject to a per-subscriber floor. Under the prevailing rates in 2008 as I understood them, the settlement meant that a ten-dollar-per-month subscription service effectively paid a 10.5 percent of revenue all-in fee for music publishing rights (including public performance rights) associated with a subscription on-demand service. [redacted]

36. In November 2008, the Copyright Office issued an Interim Regulation taking no position on whether buffer copies independently qualify as DPDs and declining to set a threshold for establishing a DPD had occurred. The Interim Regulation simply clarified that, where a DPD occurs, "all reproductions made for the purpose of making a DPD are also included as part of the DPD." 73 F.R. 66173.

37. In January 2011, Google filed a petition to participate in *Phonorecords II* because it contemplated launching a service that would engage in DPDs during the statutory term of 2013-2017. At that time, as Director of Content Partnerships for Android, I remained focused on issues related to the licensing of Google's anticipated music services and was involved in settlement negotiations. In addition to Google's anticipated entry into the music download business, the Section 115 regulations then in place were ill-equipped to address emerging services, including music locker services, that some argued required mechanical licenses.

38. Issues other than rate dominated those settlement negotiations. We negotiated over locker services, "limited" offerings and various bundled offerings, as well as ancillary issues related to accounting and the length of royalty-free previews and cloud storage of purchased music.

39. *Phonorecords II* resulted in another industry-wide settlement. The settlement continued the 9.1-cent Subpart A rate for downloads and physical sales and carried forward the rate structure described above, subject to minor changes, for on-demand streaming services covered by Subpart B. Finally, the settlement created rates and terms for five new digital service categories under the new Subpart C.

40. Google viewed this settlement as maintaining the status quo agreement that non-interactive streams required no mechanical license and that interactive streaming services would pay 10.5 percent of revenue on an all-in basis for music publishing rights (including whatever mechanical and/or performance

rights are implicated by the service's activities). [redacted] Below, I will discuss Google's music services and direct licenses in greater detail.

41. [redacted]

V. The Google Play Music Service

42. Since *Phonorecords II*, Google developed and expanded the Google Play Music service.

43. Google Play is Google's one-stop-shop for the purchase of Android apps. The Google Play Store allows users to browse, purchase, and download content such as music. Users can access the music they purchase through the Play Store on the web, as well as through a mobile "consumption app" called Play Music. The Play Music app is available on Android and iOS smartphones and tablets and on Android TVs, and in some cases on some other devices (e.g. Sonos, Android Auto).

44. Google Play Music is Google Play's entire suite of music services and includes several functionalities: (i) a music store ("Music Store"); (ii) a cloud-based music storage service ("Locker Service"); (iii) an on-demand digital music streaming service ("Streaming Service"), and (iv) in the US, a Section 114-compliant non-interactive digital radio service.

45. **Music Store:** The Music Store primarily sells permanent digital phonorecord deliveries ("DPDs"). But the Music Store also enables on-demand streaming of 90-second "previews" of the songs available for purchase in the Music Store.

46. **Streaming Service:** The Google Play Music streaming service has both an ad-supported, free-to-the-user tier and a subscription tier. The free tier includes a non-interactive streaming radio service. On the non-interactive radio service, users cannot select a specific song to hear on demand. Instead, users can select pre-programmed radio stations that are based around a mood, genre, activity, artist or song. The free radio service generates revenue by placing advertisements on the service.

47. The Google Play Music free tier also includes a cloud-based locker service. This service allows users to store up to 50,000 of their already-owned tracks into their cloud-based Music Locker, to make playlists from such tracks, and to then stream those tracks and playlists from the web and from the Play Music App on Android and iOS devices.

48. Google Play Music's paid tier is an on-demand subscription Streaming Service. It allows users to stream Google's catalog of over 40 million recordings on-demand and ad-free, with the added benefit of offline playback. The standard individual subscription plan is $9.99 a month. The family subscription plan, for up to six (6) family members, is $14.99 a month. Both plans can begin with a free 30-day trial period.

50. Moreover, in an on-demand service, it would not be prudent for Google to offer a particular publisher a higher market share of plays from its catalog in exchange for discounted rates. The hallmark of a great on-demand service is the promise of the best song for the user at the right time, to be played as often as the user wishes, regardless of the licensor of such content.

VI. Google's Direct Licenses with Music Publishers

51. Google has entered into numerous direct deals with publishers that cover the on-demand streaming functionalities of Google Play Music.

VII. Google's Direct Licenses with Record Labels

55.

[5] Labels historically have not passed through mechanical rights to subscription services, hence the lower percentages are irrelevant.

[6]

[redacted]. For example, Google Dir. Ex. 004 (GOOG-PHONOIII-0002560) is Google's form sound recording license for independent labels. [redacted]

VIII. Conclusion

56. The outcome of this proceeding will have a profound effect on Google's music business and on the vibrancy of the streaming music ecosystem. The per play structure and rate increase proposed by Copyright Owners would guarantee that only those very few companies who could both afford and would be willing to incur tremendous losses could continue to offer streaming music services. [redacted]. But losing money should not be a baseline requirement to enter and participate in the business of digital music services. These rates would foreclose new entrants and would challenge even existing, established companies to justify sustaining a service with no hope of future profitability. The potential damage to the streaming ecosystem would ultimately be bad for the market as a whole, including for rights holders that could see the overall revenue base shrink, and consumers who would have fewer alternatives for

accessing music.

Before the
UNITED STATES COPYRIGHT ROYALTY JUDGES
The Library of Congress
Washington, D.C.

In the Matter of:	
Determination of Royalty Rates and Terms for Making and Distributing Phonorecords (Phonorecords III)	Docket No. 16-CRB-0003-PR (2018-2022)

DECLARATION OF ZAHAVAH LEVINE

I, Zahavah Levine, declare under penalty of perjury that the statements contained in my Written Direct Testimony in the above-captioned proceeding are true and correct to the best of my knowledge, information, and belief. Executed this 31 day of October, 2016 in Mountain View, California

Zahavah Levine

Before the
United States Copyright Royalty Judges
The Library of Congress
Washington, D.C.

In the Matter of:	
Determination of Royalty Rates and Terms for Making and Distributing Phonorecords (Phonorecords III)	**Docket No. 16-CRB-0003-PR (2018-2022)**

Written Rebuttal Statement of Zahavah Levine
(On Behalf of Google, Inc.)

I. Introduction

1. My name is Zahavah Levine. I am the Vice President of Partnerships for the Google Play division of Google Inc. ("Google"). I submit this testimony in support of Google's rebuttal case.

II. Prior *Phonorecords* Proceedings

2. I have reviewed the public version of the Witness Statement of David M. Israelite. Mr. Israelite describes the circumstances surrounding the *Phonorecords II* settlement in 2012 and claims that both parties were "prepared to quickly negotiate a settlement" and "were able to do so in the proceedings without need to file a written direct statement, take any discovery or engage in any hearings."[1] I agree with Mr. Israelite that the digital services entered into the *Phonorecords II* settlement discussions prepared to roll over the rates and rate structures negotiated in the *Phonorecords I* proceeding. These rates had been negotiated over a period of six

[1] Witness Statement of David M. Israelite at ¶ 100.

years and had only been in place for two years, and the services were not inclined to jettison six years of work to start afresh on determining new rates. However, I certainly recall the *publishers* initially pressing to raise the previously negotiated rates. Only after considerable negotiations between the parties and after the services made very clear that there would be no increase in rates did the publishers and representatives of the copyright holders accede to this position.

3. In addition, Mr. Israelite glosses over the very substantive discussions that occurred in the *Phonorecords II* proceedings relating to issues beyond just rate and rate structure. After two years of experience under the *Phonorecords I* Subpart B regulations, the parties negotiated modifications to portions of the Subpart B regulations that had proved unclear. The parties spent considerable time negotiating the length of royalty-free preview clips, issues related to accounting and issues related to cloud storage of purchased music. These were hard-fought battles spanning more than a year.

4. The parties also negotiated over additional regulations for new service offerings that had emerged in the years since the prior proceeding. These negotiations resulted in the addition of Subpart C, which provided rates and rate structures for Limited Offerings, Mixed Service Bundles, Music Bundles, Paid Locker Services, and Purchased Content Locker Services.

5. Mr. Israelite claims that streaming services were merely "experimental ventures" at the time that *Phonorecords I* and *II* were negotiated.[2] While reasonable minds can differ with respect to how developed the streaming market was prior to the

[2] *Id.* at ¶ 103.

first *Phonorecords* proceeding, it is undeniable that the market for streaming music was already well past the "experimental" stage by the *Phonorecords II* settlement in 2012.

6. I began at Listen.com in 2001, the same year that the Rhapsody music service launched. Listen.com was bought by RealNetworks in 2003. Rhapsody pioneered the model that still exists today of offering a streaming on-demand music service with unlimited access to a large catalog of music for a flat monthly subscription fee. Pressplay and MusicNet (now known as MediaNet), which were both funded by record labels, also launched in 2001. By the mid-2000s, large technology companies AOL, Yahoo!, and Microsoft were also deeply invested in the interactive streaming market. AOL launched AOL Music Now after the acquisition of a streaming service known as Full Audio. Yahoo! Music Unlimited launched after Yahoo!'s acquisition of the streaming services Launch Media and MusicMatch. And Microsoft released the Zune player in 2006 and offered a subscription-based, on-demand music streaming service called Zune Pass. In the mid-2000s, Sony also offered a music subscription service called Sony Connect. MOG was founded in 2005 and by 2009 had launched a subscription-based, on-demand music streaming service. Rdio launched in 2010 and Rara in 2011—both based on the same model initially pioneered by Rhapsody. Spotify had launched in Europe in 2006 and launched in the U.S. amidst great anticipation in July 2011. By 2012 when we settled the *Phonorecords II* rates, the streaming market was no longer in its infancy. Rhapsody had been in existence for almost a decade and had over one million U.S. paying

subscribers in 2011.[3]

III. The Benefits to Google Play Music of Google's Substantial Reach

7. In addition to Mr. Israelite's statement, I read the public version of the Witness Statement of David Kokakis. In reviewing both of their statements, I was troubled by their unfounded claims about the ways in which Google Play Music supposedly drives value to other parts of Google (which value, they claim, is not captured in the revenues generated by Google Play Music). For example, Mr. Israelite claims that Google Play Music "helps Google maintain users engaged within its vast network of online features, including its search engine, email service and even GPS mapping application that taken together have created one of the [sic] valuable corporations in the world."[4] Mr. Kokakis also claims that "Google do[es] not raise the subscription fees for [its] . . . music service[ ] because, rather than focus on driving revenue and profits from [its] music service[ ] higher, [Google] appear[s] to be more interested in growing [its] base of customers to whom [it] can then market [its] other products and services."[5] In particular, Mr. Kokakis argues that "Google, the colossus of the tech world, has many different avenues for monetizing its users' data, including data from its music streaming service."[6]

8. These claims about Google are unequivocally unfounded. [redacted]

[redacted]

[3] Ryan Nakashima, *Rhapsody passes million US subscriber milestone*, The Seattle Times (Dec. 22, 2011), http://www.seattletimes.com/business/rhapsody-passes-million-us-subscriber-milestone/.
[4] Witness Statement of David Israelite at ¶ 35.
[5] Witness Statement of David Kokakis at ¶ 60.
[6] *Id.*

[redacted].[7] It is public knowledge that Google's other products already reach literally hundreds of millions of people in the U.S.[8] [redacted].

9. The value proposition flows in the opposite direction. [redacted].[10]

IV. Google Play Music's Drive Toward Profitability

10. Google Play Music's primary objective is to achieve standalone, sustainable profitability—a profitability that will in turn be shared with the Copyright Owners.

11. To this end, Google Play Music has analyzed how to grow revenue by

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[7] *See* Google Dir. Ex. 008 (GOOG-PHONOIII-00003330).

[8] *See, e.g.*, Greg Sterling, *Billions served: PC search is down but query volume is way up for Google*, Search Engine Land (Aug. 31, 2016), http://searchengineland.com/billions-served-pc-search-query-volume-way-google-257899 (noting that in July 2016, Google had 64 percent of desktop searches in the United States and 94 percent of mobile searches in the United States).

[9] [redacted]

[10] Richard Nieva, *No faking it, Facebook rakes it*, cnet (Feb. 1, 2017), https://www.cnet. com/news/facebook-earnings-fourth-quarter-2016/.

attracting and maintaining customers. [redacted]

[redacted][11]

12. Google Play Music has also determined that user engagement is the primary indicator of how likely users are to "churn."[12] "Churn" is a term used to describe when users fail to convert to a paying subscriber or fail to continue as paying subscribers. In my experience, decreasing churn is one of the most important ways to grow the subscriber base and increase revenue. Unsurprisingly, users that do not use the product frequently tend to drop off, while frequent, heavy users are more likely to pay for a subscription month after month.

13. In response to a per-play rate such as the rate proposed by the Copyright Owners, usage may be capped to contain content costs. But capping usage runs counter to what digital services ought to be doing, which is to try to increase user engagement. Capping usage detracts from the listeners' experience with the service and will adversely impact user engagement. Engagement is the driving factor in whether a user is likely to churn or stay a loyal user.

14. Google is interested in maximizing revenues associated with Google

[11] Google Reb. Ex. 002; *see also* Google Reb. Ex. 003 at 3747 (identifying "[t]he cost of $10 per month" as a "too high" for some users and a top reason why users disengage).
[12] *See generally* Google Reb. Ex. 003; Google Reb. Ex. 004.

Play Music. As Google Play Music grows, Copyright Owners will share in that success.

Before the
United States Copyright Royalty Judges
The Library of Congress
Washington, D.C.

In the Matter of:	
Determination of Royalty Rates and Terms for Making and Distributing Phonorecords (Phonorecords III)	Docket No. 16-CRB-0003-PR (2018-2022)

Declaration of Zahavah Levine

I, Zahavah Levine, declare under penalty of perjury that the statements contained in my written rebuttal statement in the above-captioned proceeding are true and correct to the best of my knowledge, information, and belief. Executed this 14 day of Feb, 2017 in Mountain View, California.

Zahavah Levine

Google Rebuttal Exhibit 2

GENERAL MEDIA MUSIC

The Price of Music

Based on the patterns of consumer spending on music, streaming services are priced too high.

BY DAVID PAKMAN | MAR 18, 2014, 1:00PM EDT

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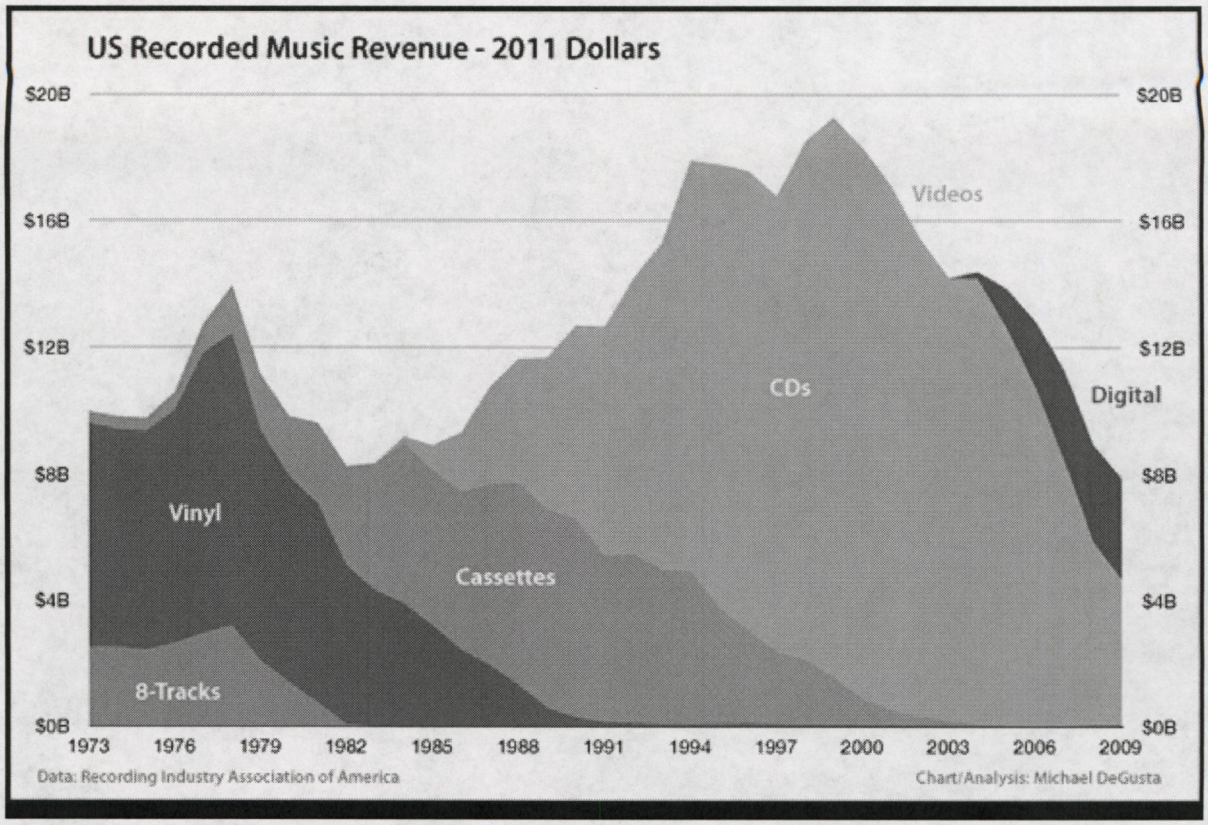
Will the recorded music industry ever grow again? Since 1999, the industry has been in rapid decline as CDs became unbundled into downloaded singles. The digital download market never came close to the size of the physical music market. Now we are in the midst of another format transition, this time from downloaded singles to streaming.

The question many people ask — like the thoughtful Marc Geiger — is how big will the streaming market be? I think the answer lies not in consumers' appetite for streaming songs, but in the price services charge consumers for streaming.



At the 1999 peak of the recorded music market, about $40 billion of recorded music was sold. How much did the average consumer spend per year on recorded music? Hundreds of dollars? Nope. At the time, according to the music trade group International Federation for the Phonographic Industry, across the total 18-and-over population (both across many countries or individually within one), the average amount spent came to $28 per consumer.

But that includes people who did not buy any music that year. If we look at just the consumers who bought music, they spent $64 on average that year. And that was at a time when one had to buy a bundle of 12 songs in the form of a CD in order to get access to just one or two. What has happened since?

Once the bundle broke, the average spending per consumer decreased. This is predictable, since bundles artificially raise the amount of total dollars a consumer spends. The chart below shows the average spending per capita in various countries according to IFPI (in U.K. pounds):

Top 20 markets based on per capita music sales, 2009 and 2010				
	2009	2010	Change (US$)	Change (%)
Japan	45.99	42.07	-3.92	-8.5
Norway	39.88	37.22	-2.67	-6.7
UK	34.70	32.35	-2.35	-6.8
Australia	31.19	28.04	-3.15	-10.1
Switzerland	31.35	27.99	-3.35	-10.7
Denmark	29.62	27.75	-1.88	-6.3
Austria	28.73	25.80	-2.93	-10.2
Germany	25.39	24.69	-0.69	-2.7
US	24.50	23.06	-1.44	-5.9
Iceland	24.80	22.78	-2.02	-8.2
Ireland	22.89	22.34	-0.55	-2.4
Sweden	21.85	22.03	0.17	0.8
France	21.20	20.44	-0.77	-3.6
Belgium	20.16	19.78	-0.38	-1.9
Netherlands	21.17	18.49	-2.67	-12.6
Finland	19.32	18.26	-1.06	-5.5
New Zealand	21.15	16.87	-4.28	-20.2
Canada	17.98	16.24	-1.73	-9.6
Hong Kong	8.75	8.05	-0.70	-8.0
South Korea	6.61	7.46	0.85	12.8
Note: Figures are based on average 2010 exchange rates				
				Sources: IFPI, Music & Copyright

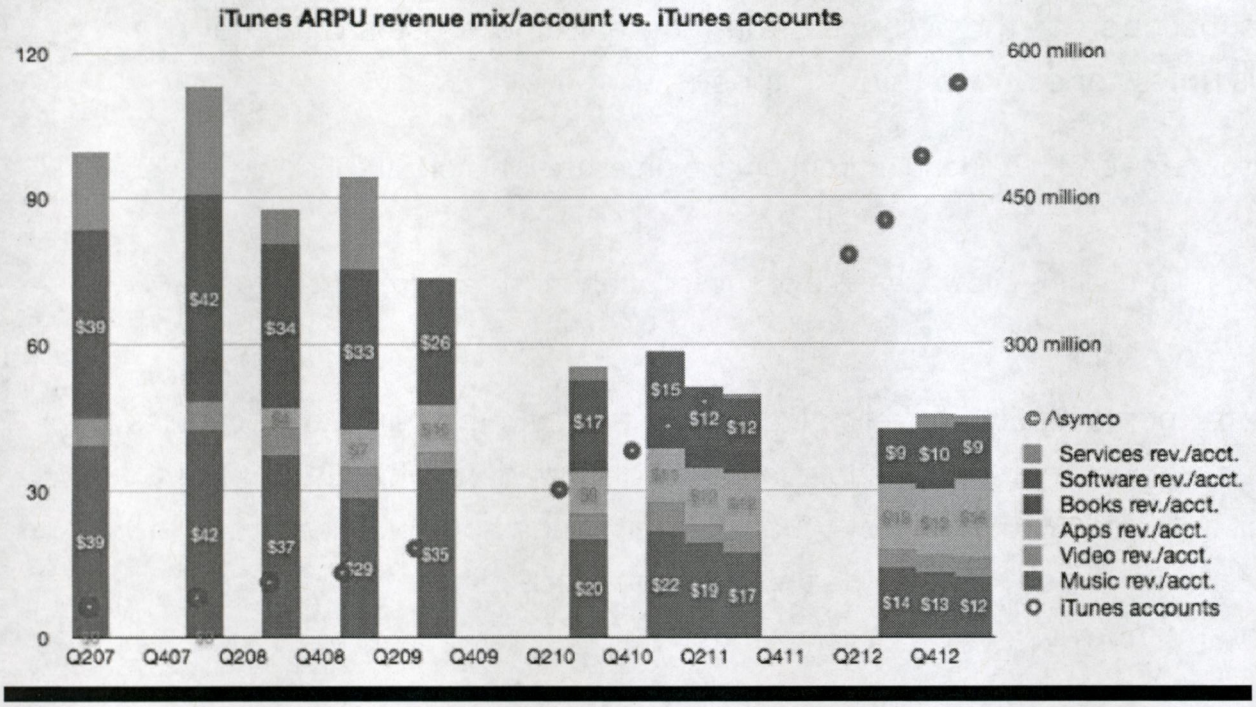
Another study by NPD Group in 2011 found similar spending, about $55 per music buyer per year on all forms of recorded music (they note that this spending is slightly higher among P2P music service users).

Per Capita Spend: Annual 2011: NPD

Category	Non-P2P User 18-35 Music Buyer	P2P User 18-35 Music Buyer
Physical CDs	**$24**	**$23**
Paid Downloads	**$29**	**$35**
Subscription Fees	**$2**	**$5**
Subtotal	*$55*	*$63*
Merchandise	**$20**	**$52**
Concert Tickets	**$63**	**$91**
Grand Total	**$138**	**$206**

But the one retailer on the planet who would really know what consumer are willing to spend on recorded digital music today is Apple. The largest music retailer in the world, their data is very consistent — about $12 per iTunes account per quarter is spent on music, or about $48 per year.

Note that this figure declines year by year as iTunes users are confronted with many more choices on which to spend their disposable income, like apps and videos. Also note that total disposable spending, on average, is decreasing per account as iTunes gets bigger and bigger. *As a service becomes truly mass market, it reaches fewer and fewer consumers willing to spend as much as previous consumers.*



So, the data tells us that consumers are willing to spend somewhere around $45–$65 per year on music, and that the larger a service gets, the lower in that range the number becomes. And these numbers have remained consistent regardless of music format, from CD to download.

Curiously, the on-demand subscription music services like Spotify, Deezer, Rdio and Beats Music are all priced the same at more than twice consumer spending on music. They largely land at $120 per year (although Beats has a family-member option for AT&T users at $15 per month.)

This is because the three major record labels, as part of their music licenses, have mandated a minimum price these services must charge. While it may seem strange that suppliers can dictate to retailers the price they must charge end users for their service, this is common practice in digital music. The services are not able to charge a price they believe will result in maximum adoption by consumers.

The data shows that $120 per year is far beyond what the overwhelming majority of consumers will pay for music, and instead shows that a price closer to $48 per year is likely much closer to a sweet spot to attract a large number of subscribers.

For this reason, I believe the market size for these services is limited to a subset of music buyers, which in turn is a subset of the population. This means that there will

be fewer subscribers to these services than there are purchasers of digital downloads unless one of two things happens:

- (a) Consumers decide to spend more than two times their historical spend on recorded music, or
- (b) major record labels allow the price of subscription music services to fall to $3–$4 per month.

I think the former is highly unlikely, given the overwhelming number of choices competing for consumers' disposable income combined with the amount of free music available from YouTube, Vevo, Pandora and many others. The data shows consumer spending per category decreases in the face of many disparate entertainment choices.

The latter is the big question. My experience with the major labels when I was CEO of eMusic was that they largely did not believe that music was an elastic good. They were unwilling to lower unit economics, especially for hit music, to see if more people would buy. Our experience at eMusic taught us that music *is*, in fact, elastic, and that lower prices lead to increased sales. If the major labels want to see the recorded music business grow again, I believe the price of music must fall.

After 12 years as an Internet entrepreneur, David Pakman joined Venrock in 2008 as a partner, and focuses on early-stage Internet and digital media companies. He is on the board of Dstillery, Dollar Shave Club, Smartling and other Internet companies. Reach him at his blog and @pakman.

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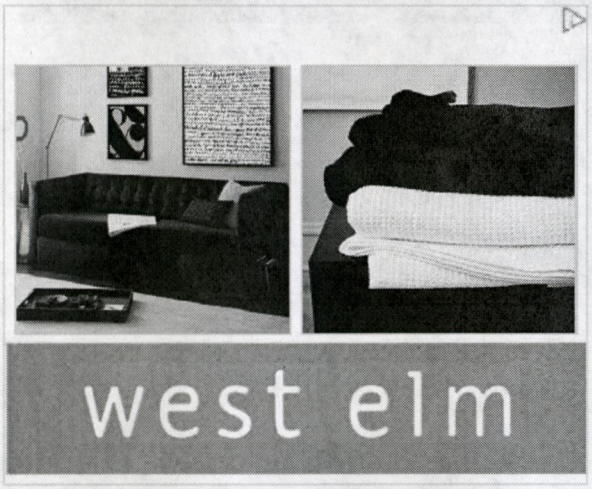

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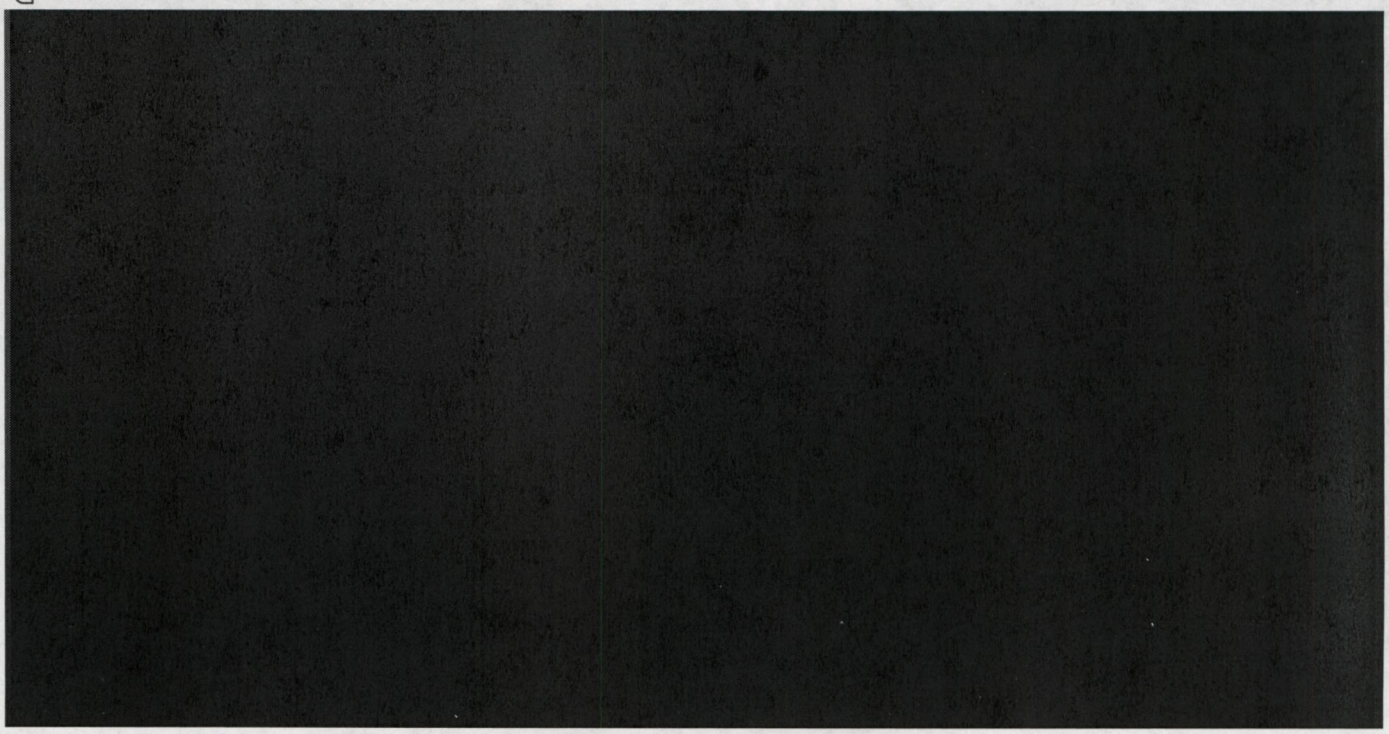

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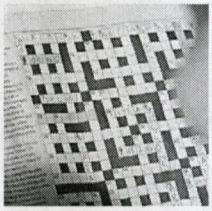

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BY AUBREY BLANCHE

GOOG-PHONOIII-00003723

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THE VERGE

TAB C

PUBLIC VERSION

Before the

UNITED STATES COPYRIGHT ROYALTY JUDGES

The Library of Congress

Washington, D.C.

In re **Determination of ROYALTY RATES AND TERMS FOR MAKING AND DISTRIBUTING PHONORECORDS (Phonorecords III)**	**Docket No. 16-CRB-0003-PR** **(2018–2022) (Remand)**

WRITTEN DIRECT REMAND TESTIMONY OF WALEED DIAB
(On behalf of Google LLC)

I. Introduction and Witness Background

1. My name is Waleed Diab. I am the Global Head of Recorded Music Business Development at Google LLC. In this role, I manage Google's business relationships with record labels, including partnership efforts and licenses with both major and independent record labels.

2. I joined Google in 2011. Before my current role, I served as Head of Major Label Business Development and before that as Senior Legal Counsel. I was responsible for negotiating and drafting content licenses with record labels, music publishers, performing rights organizations, and other rights holders.

3. I have worked with music licensing and business development for digital music services for more than sixteen years. After receiving my law degree from Benjamin N. Cardozo School of Law in 2004, I joined MTV Networks Business & Legal Affairs department, eventually

becoming Senior Counsel of Music Strategy & Relations. I spent six years doing music licensing work at MTV before joining Google.

4. This declaration is based on my personal knowledge and information made available to me in the course of performing my job duties at Google. In this statement, I will discuss the licensing of sound recording rights for the Google Play Music and YouTube Music services. Specifically, I will address how, if at all, publishing royalties have impacted negotiations for the rights to use sound recordings on those services in recent years.

II. Google's Relevant Services

5. In recent years, Google has offered a number of different music services under the Google Play Music and YouTube Music brands. The current YouTube Music offerings include the YouTube Music premium on-demand service, a Section 114-compliant ad-supported radio service available on Google Home hardware devices, and an ad-supported service tier that features on-demand and shuffled plays of static-image tracks and music videos. This statement focuses on the premium on-demand service, given its heavy reliance on the Section 115 statutory license.

6. Prior to this year, Google also operated a separate premium on-demand service under the Google Play Music brand. The Google Play Music service was discontinued in late 2020. However, I understand that historic licensing of the Google Play Music Section 115 compliant service is relevant to this proceeding.

III. Licensing of Google's On-Demand Subscription Services

7. Google enters into direct deals with music labels that cover the on-demand streaming functionalities of Google Play Music and YouTube Music. In order to meet consumer demands and expectations, Google enters direct licenses with all major record labels and a number of independent labels. This is necessary to offer a competitive subscription service where users can find virtually all of the music they want to hear.

8. Google's direct licenses for both Google Play Music and the YouTube Music Premium subscription service with both major and independent record labels [redacted]

9. I understand that in the Copyright Royalty Board's prior determination in this proceeding, the Board suggested that enacting an increase in publishing rates was likely to result in record labels decreasing the rates charged to services like Google for the licensing of sound recordings. [redacted].

10. Google's relevant licenses with the major labels and independents bear that out. For instance, the Google Play Music subscription service entered into licenses with both Sony Music and Universal Music Group [redacted]

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[1] Ex. 538 (2013 Subscription Agreement between Google and Sony Music Entertainment); Ex. 388 (2013 Subscription Agreement between Google and Universal Music Group).

[2] *See* GOOG-PHONOIII-00005326-GOOG-PHONOIII-00005337 (series of term extensions executed during 2020 to the Universal Music Group Subscription Agreement); GOOG-PHONOIII-00005349 - GOOG-PHONOIII-00005356 (December 2019 Extension to Subscription Agreement between Google and Sony Music Entertainment).

[redacted]

11. [redacted] Because these agreements were

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[3] GOOG-PHONOIII-00005678-GOOG-PHONOIII-00005792 (2017 Sound Recording and Audiovisual Content License between Google and Warner Music Group).

[4] *See* GOOG-PHONOIII-0000538 - GOOG-PHONOIII-00005339, GOOG-PHONOIII-00005357-GOOG-PHONOIII-00005358, GOOG-PHONOIII-00005428-GOOG-PHONOIII-00005446, GOOG-PHONOIII-00005795 (series of term extensions executed between 2019 and 2021 to the Sound Recording and Audiovisual Content License between Google and Warner Music Group).

[5] *See, e.g.,* Ex. 542 (Google's standard term sheet for licensing sound recordings on Google Play Music); Ex. 3222 (April 4, 2013 Subscription Agreement between Google and MERLIN); GOOG-PHONOIII-00005796-GOOG-PHONOIII-00005797 (May 30, 2020 19th Fourth Extension Amendment to Subscription Agreement between Google and Merlin); Ex. 3220 (2013 subscription agreement between GPM and Beggars); GOOG-PHONOIII-00005324-GOOG-PHONOIII-00005325 (September 30, 2019 Amendment Number 18 to Content License Agreement between Google and Beggars Group).

[6] *See* GOOG-PHONOIII-00005484-GOOG-PHONOIII-00005574 (2017 Sound Recording and Audiovisual Content License between Google and Sony Music Entertainment); GOOG-PHONOIII-00005575-GOOG-PHONOIII-00005677 (Sound Recording and Audiovisual Content License between Google and Universal Music Group); GOOG-PHONOIII-00005678-GOOG-PHONOIII-00005792 (2017 Sound Recording and Audiovisual Content License between Google and Warner Music Group).

[7] GOOG-PHONOIII-00005891-GOOG-PHONOIII-00005894 (Amendment No. 19 to Sound Recording and Audiovisual Content License between Google and Universal Music Group); GOOG-PHONOIII-00005793-GOOG-PHONOIII-00005794 (Amendment No. 5 to the Sound Recording and Audiovisual Content License between Google and Sony Music Entertainment); *see also* FN 4, *supra.*

[8] GOOG-PHONOIII-00005484-GOOG-PHONOIII-00005574 at Ex. C; GOOG-PHONOIII-00005575-GOOG-PHONOIII-00005677 at Exs. B and C; GOOG-PHONOIII-00005678 - GOOG-PHONOIII-00005792 at Exs. A and C.

negotiated and executed prior to release of the January 2018 initial determination in this proceeding, the agreements could not have been influenced by the increase in publishing rates.[9]

[9] Google has updated some of its sound recording agreements with independent labels following the January 2018 opinion in this proceeding. [redacted] *See, e.g.*, GOOG-PHONOIII-00005855-GOOG-PHONOIII-00005890 (form Sound Recording and Audiovisual Content License); GOOG-PHONOIII-00005447-GOOG-PHONOIII-00005483 (October 2018 Sound Recording and Audiovisual Content License between Google and Believe SAS); GOOG-PHONOIII-00005359-GOOG-PHONOIII-00005427 (January 1, 2020 Sound Recording and Audiovisual Content License between Google and Beggars Group); GOOG-PHONOIII-00005798-GOOG-PHONOIII-00005854 (June 1, 2020 Sound Recording and Audiovisual Content License between Google and Merlin).

Before the
UNITED STATES COPYRIGHT ROYALTY JUDGES
The Library of Congress
Washington, D.C.

DECLARATION OF WALEED DIAB

I, Waleed Diab, declare under penalty of perjury that the statements contained in my Written Direct Testimony in the above-captioned proceeding are true and correct to the best of my knowledge, information, and belief. Executed this 1st day of April, 2021 in 2021.

Waleed Diab

Proof of Delivery

I hereby certify that on Tuesday, April 26, 2022, I provided a true and correct copy of the Written Rebuttal Statement of Google LLC – Volume 4 of 4 to the following:

Zisk, Brian, represented by Brian Zisk, served via E-Service at brianzisk@gmail.com

Amazon.com Services LLC, represented by Joshua D Branson, served via E-Service at jbranson@kellogghansen.com

Powell, David, represented by David Powell, served via E-Service at davidpowell008@yahoo.com

Johnson, George, represented by George D Johnson, served via E-Service at george@georgejohnson.com

Joint Record Company Participants, represented by Susan Chertkof, served via E-Service at susan.chertkof@riaa.com

Pandora Media, LLC, represented by Benjamin E. Marks, served via E-Service at benjamin.marks@weil.com

Sony Music Entertainment, represented by Steven R. Englund, served via E-Service at senglund@jenner.com

Spotify USA Inc., represented by Joseph Wetzel, served via E-Service at joe.wetzel@lw.com

Copyright Owners, represented by Benjamin K Semel, served via E-Service at Bsemel@pryorcashman.com

UMG Recordings, Inc., represented by Steven R. Englund, served via E-Service at senglund@jenner.com

Warner Music Group Corp., represented by Steven R. Englund, served via E-Service at senglund@jenner.com

Apple Inc., represented by Mary C Mazzello, served via E-Service at

mary.mazzello@kirkland.com

Signed: /s/ Victor Jih