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Before the
UNITED STATES COPYRIGHT ROYALTY JUDGES
The Library of Congress
Washington, D.C.

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

INTRODUCTORY MEMORANDUM TO THE WRITTEN DIRECT STATEMENT OF PANDORA MEDIA, LLC

Pandora Media, LLC ("Pandora") hereby submits its Written Direct Statement to the Copyright Royalty Judges pursuant to 37 C.F.R. § 351.4. Pandora's submission includes its proposed rates and terms for the compulsory license for making and distributing phonorecords via interactive streaming during the 2023-2027 license period, the written direct testimony of George White, designated witness testimony from prior Copyright Royalty Board proceedings, and Pandora's exhibits.

SUMMARY OF TESTIMONY

Pandora submits herewith the written direct testimony of George White, Senior Vice President, Music Licensing, for Sirius XM and Pandora. As Mr. White explains, because there are wide differences in the ways consumers wish to engage with and enjoy music streaming services, and in their willingness to pay for music streaming, Pandora offers three tiers of service. Pandora has long been and remains best known for its flagship free internet radio service. With limited exceptions designed to introduce listeners to the features and benefits of paying for a subscription to Pandora's fully on-demand tier of service, Pandora's ad-supported service is noninteractive and does not implicate the mechanical rights at issue in this proceeding.

Pandora's second-most popular offering, Pandora Plus, is a "mid-tier" subscription offering that introduces some interactive features, such as song replays and caching of a limited number of stations to enable offline listening when users do not have internet access, but it does not provide users with the ability to select particular songs or albums on demand. Offered at $4.99 per month, Pandora Plus is half the standard retail price of leading on-demand subscription streaming services. Pandora also offers a fully on-demand subscription service known as Pandora Premium. Like on-demand subscription offerings from other leading music streaming services, Pandora Premium is priced at $9.99 per month. Pandora offers a family plan for Pandora Premium at $14.99 per month for up to six (6) unique users and also offers student and military discounts.

Offering differentiated products across a range of price points allows Pandora to reach millions of additional consumers that it could not reach as an exclusively noninteractive service, and creates opportunities for the company to upsell the tens of millions of listeners using Pandora's radio-style offerings (and, more recently, the offerings of Sirius XM) to Pandora Premium. That sort of product differentiation and innovation has fueled growth in the number of consumers who use interactive services not just for Pandora, but across the broader music streaming marketplace, leading to massive increases in the aggregate royalty payments by services to music publishers, songwriters, and composers in recent years.

Mr. White explains that the licenses that Pandora obtains from music publishers and performing rights organizations accommodate the important differences between Pandora's service tiers and their respective pricing. Marketplace transactions do not take a one-size-fits-all approach, and Pandora respectfully submits that statutory rate-setting should not do so either. Thus, Pandora's proposed rates and terms—which are the same as those being proposed in this

proceeding by Spotify—appropriately distinguish between "Limited Offerings," such as Pandora Plus, and "Standalone Portable Subscription Services," such as Pandora Premium, among other product categories. There are, however, other key elements of Pandora's proposed rates and terms applicable to all product categories that merit emphasis:

- *An "All In" Rate.* Since the inception of statutory licensing for the interactive streaming market, statutory rates for the mechanical rights license under section 115 of the Copyright Act have been set on an "all in" basis that permits services to deduct royalties paid for the rights to publicly perform musical works on their interactive offerings when determining the amount owed for the mechanical rights to the same musical works. Mr. White testifies, as other witnesses have done in prior proceedings and as the Judges recognized in *Phonorecords III*, that the rights to publicly perform musical works in connection with interactive streaming have no value to services without the mechanical rights, and the mechanical rights have no value to services for interactive streaming without the accompanying rights of public performance. Pandora's proposed rates and terms preserve this important feature of the statutory license.
- *A "Headline" Rate Set at 10.5% of Service Revenue.* Pandora proposes that the "headline" rate for interactive streaming be set at 10.5% of revenue generated by the applicable service, subject to certain deductions. Although concerns expressed by music publishers in past Copyright Royalty Board proceedings that services might engage in revenue deferral or otherwise charge below-market rates do not apply to Pandora's product offerings—Pandora has sought aggressively to maximize the revenue it generates from interactive streaming—Pandora's proposal accommodates those concerns by incorporating an alternate rate prong consisting of a capped percentage of the payments

made by services to record labels for the sound recording rights for the same products (referred to in industry parlance as "total cost of content" or "TCC"). Because those sound recording rates are inflated by the market power of major record labels, the cap is an important feature of this proposed alternate rate prong for standalone subscription offerings.

- *A Reasonable Allocation of Revenue from Bundled Products to Service Revenue*. Pandora proposes a sensible modification of the way bundles have been treated under past section 115 regulations for purposes of allocating revenue from bundles to the licensed activity included within a bundle. The *Phonorecords II* regulations called for the deduction of the full standalone price of the *other* components of the bundle, which left open the possibility that the allocation could result in no residual revenue attributable to the covered activity. Pandora proposes instead that the regulations require reasonable allocation of bundled revenue to the covered activity consistent with Generally Accepted Accounting Principles. Importantly, this standard allows for and accommodates the appropriate allocation of revenue within bundles that may incorporate one or more components that do not have standalone pricing, providing the service with the necessary flexibility to make reasonable allocations—and properly exclude bundled revenue *not* attributable to covered section 115 activity—consistent with relevant accounting standards.

Pandora's proposed rates and terms are discussed in additional detail in Mr. White's written testimony. To complement Mr. White's testimony and provide further support for its proposed rates and terms, Pandora also designates the following testimony (including both

written testimony and applicable hearing testimony) provided by other witnesses on behalf of Pandora in prior Copyright Royalty Board proceedings:

Written Direct Testimony of Michael Herring in Phonorecords III

Mr. Herring formerly served as Pandora's President and Chief Financial Officer. In his written testimony in *Phonorecords III* he provided, among other information, an overview of Pandora's history and evolution as a music service, including the enormous effort and ingenuity required to develop Pandora's Music Genome Project and other playlist algorithms to provide the optimal "lean back" radio-like listening experience—as well as the billions of dollars the company invested over the years in developing its innovative product offering. Mr. Herring's testimony also detailed Pandora's development, essentially from scratch, of the market for internet radio advertising, an effort that likewise required the investment of hundreds of millions of dollars.

Written Direct Testimony of Christopher Phillips in Phonorecords III

The written testimony of Christopher Phillips, then Pandora's Chief Product Officer, describes Pandora's flagship internet radio service, its (then new) interactive service offerings (Pandora Plus and Pandora Premium), and the consumer research and feedback that led Pandora to redesign its service to include interactive functionality, including the fact that even lean-back listeners on Pandora's free tier desired at least some interactive functionality that they could not, at the time, get from Pandora.

Written Direct Testimony of Adam Parness in Phonorecords III

Mr. Parness formerly served as Pandora's Head of Publisher Licensing and Relations. Mr. Parness's *Phonorecords III* written testimony detailed the negotiations that led to the settlements in *Phonorecords I* and *Phonorecords II*, which underpin Pandora's proposed rates

and terms in this proceeding. As Mr. Parness explained, key drivers of the settlement for the digital music services included the need for an "all-in" rate structure that allowed for the deduction of performance rights fees from the headline publishing rate, and rates based on a percentage of service revenue rather than a per-play metric.

Written Direct Testimony of Michael L. Katz in Phonorecords III

Michael L. Katz, the Sarin Chair in Strategy and Leadership at U.C. Berkeley, was Pandora's chief economic expert in the *Phonorecords III* proceeding. Professor Katz's written direct testimony detailed the many reasons why the industry-wide settlement in the *Phonorecords II* proceeding was the best benchmark and required only minimal adjustment to establish reasonable rates for the 2018-2022 license period. Chief among those reasons included the fact that the settlement provided for an "all-in" percentage of revenue (subject to certain per-subscriber minima) covering both performance and mechanical rights, which are perfect economic complements, and a multi-category rate structure that provided for product differentiation, price discrimination, and experimentation to serve consumers with differing product desires and willingness to pay for music. Professor Katz found support for his conclusions in other benchmarks, including direct licenses between Pandora and music publishers ([redacted]) and the settlement between music publishers and record companies covering downloads and physical phonorecords—as well as the explosion of revenue flowing to music publishers from interactive streaming services operating under the prevailing rates.

October 13, 2021

Respectfully submitted,

/s/ Benjamin E. Marks

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

PROPOSED RATES AND TERMS OF PANDORA MEDIA, LLC

Pursuant to 37 C.F.R. § 351.4(b)(3), and for reasons described in the Introductory Memorandum to the Written Direct Statement of Pandora Media, LLC and the Written Direct Testimony of George White, Pandora Media, LLC ("Pandora") proposes the following rates and terms for making and distributing phonorecords under the statutory license provided by 17 U.S.C. § 115 during the period January, 1, 2023 through December 31, 2027.

A. Subpart A—Regulations of General Application

§385.1 General.

(a) Scope. This part establishes rates and terms of royalty payments for the use of nondramatic musical works in making and distributing of physical and digital phonorecords in accordance with the provisions of 17 U.S.C. 115. This subpart contains regulations of general application to the making and distributing of phonorecords subject to the section 115 license.

(b) Legal compliance. Licensees relying on the compulsory license detailed in 17 U.S.C. 115 shall comply with the requirements of that section, the rates and terms of this part, and any other applicable regulations. This part describes rates and terms for the compulsory license only.

(c) Interpretation. This part is intended only to set rates and terms for situations in which the exclusive rights of a Copyright Owner are implicated and a compulsory license pursuant to 17 U.S.C. 115 is obtained. Neither the part nor the act of obtaining a license under 17 U.S.C. 115 is intended to express or imply any conclusion as to the circumstances in which a user must obtain a compulsory license pursuant to 17 U.S.C. 115.

(d) Relationship to voluntary agreements. The rates and terms of any license agreements entered into by Copyright Owners and Licensees relating to use of musical works within the scope of those license agreements shall apply *in lieu* of the rates and terms of this part.

§385.2 Definitions.

Unless otherwise specified, terms in this part shall have the same meaning given to them in 17 U.S.C. 115(e). For the purposes of this part, the following definitions apply:

Accounting Period means the monthly period specified in 17 U.S.C. 115(c)(2)(I) and in 17 U.S.C. 115(d)(4)(A)(i), and any related regulations, as applicable.

Active Subscriber means an End User of a Bundled Subscription Offering who has made at least one Play during the Accounting Period.

Affiliate means an entity controlling, controlled by, or under common control with another entity, except that an affiliate of a Sound Recording Company shall not include a Copyright Owner to the extent it is engaging in business as to musical works.

Artificial Accounts are accounts that are disabled or terminated for having engaged in User Manipulation or other fraudulent activity and for which any subscription revenues are refunded or otherwise not received by the Service Provider.

Bundled Subscription Offering means a Subscription Offering consisting of Eligible Interactive Streams or Eligible Limited Downloads that is offered to End Users as a bundle by the Service Provider (or an Affiliate of the Service Provider) with one or more other products or services (including products or services subject to other subparts), as part of a single transaction (*i.e.*, where End Users make a single payment without receiving separate pricing for the Subscription Offering in the bundle).

Copyright Owner(s) are nondramatic musical works copyright owners who are entitled to royalty payments made under this part pursuant to the compulsory license under 17 U.S.C. 115.

Digital Phonorecord Delivery has the same meaning as in 17 U.S.C. 115(e)(10).

Eligible Interactive Stream means a Stream that is an interactive stream as defined in 17 U.S.C. 115(e)(13).

Eligible Limited Download means a transmission of a sound recording embodying a musical work to an End User of a digital phonorecord under 17 U.S.C. 115(c)(3)(C) and (D) that results in a Digital Phonorecord Delivery of that sound recording that is only accessible for listening for—

(1) An amount of time not to exceed one month from the time of the transmission (unless the Licensee, in lieu of retransmitting the same sound recording as another Eligible Limited Download, separately, and upon specific request of the End User made through a live network connection, reauthorizes use for another time period not to exceed one month), or in the case of a subscription plan, a period of time following the end of the applicable subscription no longer than a subscription renewal period or three months, whichever is shorter; or

(2) A number of times not to exceed 12 (unless the Licensee, in lieu of retransmitting the same sound recording as another Eligible Limited Download, separately, and upon specific request of the End User made through a live network connection, reauthorizes use of another series of 12 or fewer plays), or in the case of a subscription transmission, 12 times after the end of the applicable subscription.

End User means each unique person, other than persons using Artificial Accounts, that (1) pays a subscription fee for an Offering during the relevant Accounting Period or (2) makes at least one Play during the relevant Accounting Period.

Free Trial Offering means a subscription to a Service Provider's transmissions of sound recordings embodying musical works when

(1) Neither the Service Provider, the Copyright Owner, nor any person or entity acting on behalf of or *in lieu* of any of them receives any monetary consideration for the Offering beyond nominal amounts (*e.g.*, $0.99 per month);

(2) The usage does not exceed 45 days per subscriber per one year period, which days may be nonconsecutive;

(3) The Free Trial Offering is made available to the End User for no more than a nominal amount; and

(4) The Service Provider offers the End User periodically during the trial an opportunity to subscribe to a non-Free Trial Offering of the Service Provider.

GAAP means U.S. Generally Accepted Accounting Principles in effect at the relevant time, except that if the U.S. Securities and Exchange Commission permits or requires entities with securities that are publicly traded in the U.S. to employ International Financial Reporting Standards in lieu of Generally Accepted Accounting Principles, then that entity may employ International Financial Reporting Standards as "GAAP" for purposes of this subpart.

Household Plan means a discounted Subscription Offering to be shared by two or more members of the same household for a single subscription price.

Licensee means any entity availing itself of the compulsory license under 17 U.S.C. 115 to use copyrighted musical works in the making or distributing of physical or digital phonorecords.

Licensed Activity, as the term is used in subparts C and D of this part, means covered activity, under voluntary or statutory license, via Digital Phonorecord Deliveries in the form of Eligible Interactive Streams, Eligible Limited Downloads, and Restricted Downloads.

Limited Offering means a Subscription Offering providing Licensed Activity consisting of Eligible Interactive Streams or Eligible Limited Downloads for which—

(1) An End User cannot choose to listen to a particular sound recording (*i.e.*, the Service Provider does not provide Eligible Interactive Streams of individual recordings that are on-demand, and Eligible 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 Service Providers in the marketplace providing access to a comprehensive catalog of recordings (*e.g.*, a product limited to a particular genre or permitting Eligible Interactive Streaming only from a monthly playlist consisting of a limited set of recordings).

Locker Service means an Offering providing digital access to sound recordings of musical works in the form of Eligible Interactive Streams, Permanent Downloads, Restricted Downloads or Ringtones where the Service Provider has reasonably determined that the End User has purchased or is otherwise in possession of the subject phonorecords of the applicable sound recording prior to the End User's first request to use the sound recording via the Locker Service. The term Locker Service does not mean any part of a Service Provider's products otherwise meeting this definition, but as to which the Service Provider has not obtained a section 115 license.

Mixed Service Bundle means one or more of Permanent Downloads, Ringtones, Locker Services, or Limited Offerings a Service Provider delivers to End Users together with one or more non-music services (*e.g.*, internet access service, mobile phone service) or non-music products (*e.g.*, a telephone device) of more than token value and provided to users as part of one transaction without pricing for the music services or music products separate from the whole Offering.

Music Bundle means two or more of physical phonorecords, Permanent Downloads or Ringtones delivered as part of one transaction (*e.g.*, download plus ringtone, CD plus downloads). In the case of Music Bundles containing one or more physical phonorecords, the Service Provider must sell the physical phonorecord component of the Music Bundle under a single catalog number, and the musical works embodied in the Digital Phonorecord Delivery configurations in the Music Bundle must be the same as, or a subset of, the musical works embodied in the physical phonorecords; provided that when the Music Bundle contains a set of Digital Phonorecord Deliveries sold by the same Sound Recording Company under substantially the same title as the physical phonorecord (*e.g.*, a corresponding digital album), the Service Provider may include in the same bundle up to 5 sound recordings of musical works that are included in the stand-alone version of the set of digital phonorecord deliveries but not included

on the physical phonorecord. In addition, the Service Provider must permanently part with possession of the physical phonorecord or phonorecords it sells as part of the Music Bundle. In the case of Music Bundles composed solely of digital phonorecord deliveries, the number of digital phonorecord deliveries in either configuration cannot exceed 20, and the musical works embodied in each configuration in the Music Bundle must be the same as, or a subset of, the musical works embodied in the configuration containing the most musical works.

Non-Covered Work means either (1) a work where musical works are not included as part of the work, or are not the main focus of the work (*e.g.*, podcasts, audiobooks, and spoken word recordings) or (2) a work where music is included but is not eligible to be Licensed Activity (*e.g.*, music videos).

Offering means a Service Provider's engagement in Licensed Activity covered by subparts C and D of this part.

Paid Locker Service means a Locker Service for which the End User pays a fee to the Service Provider.

Performance Royalty means the license fee payable for the right to perform publicly musical works in any of the forms covered by subparts C and D this part.

Permanent Download has the same meaning as in 17 U.S.C. 115(e)(24).

Play means an Eligible Interactive Stream, or a play of an Eligible Limited Download, lasting 30 seconds or more and, if a track lasts in its entirety under 30 seconds, an Eligible Interactive Stream or a play of an Eligible Limited Download of the entire duration of the track. A Play excludes an Eligible Interactive Stream, or a play of an Eligible Limited Download caused by User Manipulation. For purposes of the definition of "Play" only, "Eligible Interactive Stream" and "Eligible Limited Download" shall each be defined to include a sound recording embodying a musical work in the public domain, if such sound recording would otherwise qualify as an Eligible Interactive Stream or Eligible Limited Download if the musical work was not in the public domain.

Promotional Offering means a digital transmission of a sound recording, in the form of an Eligible Interactive Stream or an Eligible Limited Download, embodying a musical work, the primary purpose of which is to promote the sale or other paid use of that sound recording or to promote the artist performing on that sound recording and not to promote or suggest promotion or endorsement of any other good or service and

(1) A Sound Recording Company is lawfully distributing the sound recording through established retail channels or, if the sound recording is not yet released, the Sound Recording Company has a good faith intention to lawfully distribute the sound recording or a different version of the sound recording embodying the same musical work;

(2) For Eligible Interactive Streaming of segments of sound recordings not exceeding 90 seconds, the Sound Recording Company delivers or authorizes delivery of the segments for promotional purposes and neither the Service Provider nor the Sound Recording Company creates or uses a segment of a sound recording in violation of 17 U.S.C. 106(2) or 115(a)(2);

(3) The Promotional Offering is made available to an End User free of any charge; and

(4) The Service Provider provides to the End User at the same time as the Promotional Offering stream an opportunity to purchase the sound recording or the Service Provider periodically offers End Users the opportunity to subscribe to a paid Offering of the Service Provider.

Purchased Content Locker Service means a Locker Service made available to End User purchasers of Permanent Downloads, Ringtones, or physical phonorecords at no incremental charge above the otherwise applicable purchase price of the Permanent Downloads, Ringtones, or physical phonorecords acquired from a qualifying seller. With a Purchased Content Locker Service, an End User may receive one or more additional phonorecords of the purchased sound recordings of musical works in the form of Permanent Downloads or Ringtones at the time of purchase, or subsequently have digital access to the purchased sound recordings of musical works in the form of Eligible Interactive Streams, additional Permanent Downloads, Restricted Downloads, or Ringtones.

(1) A *qualifying seller* for purposes of this definition is the entity operating the Service Provider, including Affiliates, predecessors, or successors in interest, or—

(i) In the case of Permanent Downloads or Ringtones, a seller having a legitimate connection to the locker service provider pursuant to one or more written agreements (including that the Purchased Content Locker Service and Permanent Downloads or Ringtones are offered through the same third party); or

(ii) In the case of physical phonorecords,

(A) The seller of the physical phonorecord has an agreement with the Purchased Content Locker Service provider establishing an integrated offer that creates a consumer experience commensurate with having the same Service Provider both sell the physical phonorecord and offer the integrated locker service; or

(B) The Service Provider has an agreement with the entity offering the Purchased Content Locker Service establishing an integrated offer that creates a consumer experience commensurate with having the same Service Provider both sell the physical phonorecord and offer the integrated locker service.

Relevant Page means an electronic display (*e.g.*, a web page or screen) from which a Service Provider's Offering consisting of Eligible Interactive Streams or Eligible Limited Downloads is directly available to End Users, but only when the Offering and content directly relating to the Offering (*e.g.*, an image of the artist, information about the artist or album, reviews, credits, and music player controls) comprises 75% or more of the space on that display, excluding any space occupied by advertising. An Offering is directly available to End Users from a page if End Users can receive sound recordings of musical works (in most cases this will be the page on which the Eligible Limited Download or Eligible Interactive Stream takes place).

Restricted Download means a Digital Phonorecord Delivery in a form that cannot be retained and replayed on a permanent basis. The term Restricted Download includes an Eligible Limited Download.

Ringtone means a phonorecord of a part of a musical work distributed as a Digital Phonorecord Delivery in a format to be made resident on a telecommunications device for use to announce the reception of an incoming telephone call or other communication or message or to alert the receiver to the fact that there is a communication or message.

Service Provider means that entity governed by subparts C and D of this part, which might or might not be the Licensee, that with respect to the section 115 license

(1) Contracts with or has a direct relationship with End Users or otherwise controls the content made available to End Users;

(2) Is able to report fully on Service Provider Revenue from the provision of musical works embodied in phonorecords to the public, and to the extent applicable, verify Service Provider Revenue through an audit; and

(3) Is able to report fully on its usage of musical works, or procure such reporting and, to the extent applicable, verify usage through an audit.

Service Provider Revenue. (1) Subject to paragraphs (2) through (5) of this definition and subject to GAAP, *Service Provider Revenue* shall mean, for each Offering subject to section 385.21 of this Part:

(i) All revenue from End Users recognized by a Service Provider and directly derived from the provision of the Offering;

(ii) All revenue recognized by a Service Provider by way of sponsorship and commissions as a result of the inclusion of third-party “in-stream” or “in-download” advertising as part of the Offering, *i.e.*, advertising placed immediately at the start or end of, or during the actual delivery of, a musical work, by way of Eligible Interactive Streaming or Eligible Limited Downloads, except that notwithstanding the foregoing and with respect to advertisements or sponsorships that are placed between content that constitutes Licensed Activity and content that constitutes non-Licensed Activity (*e.g.*, an advertisement placed between the performance of a sound recording of a musical work and the performance of a Non-Covered Work), only 50% of revenue from such advertising will be included; and

(iii) All revenue recognized by the Service Provider, including by way of sponsorship and commissions, as a result of the placement of third-party advertising on a Relevant Page of the Service Provider or on any page that directly follows a Relevant Page leading up to and including the Eligible Limited Download or Eligible Interactive Stream; provided that, in case more than one Offering is available to End Users from a Relevant Page, any advertising revenue shall be allocated between or among the Service Providers on the basis of the relative amounts of the page they occupy.

(2) Service Provider Revenue shall:

(i) Include revenue recognized by the Service Provider, or by any associate, Affiliate, agent, or representative of the Service Provider *in lieu* of its being recognized by the Service Provider; and

(ii) Include the value of any barter or other nonmonetary consideration, to the extent recognized by the Service Provider as revenue under GAAP; and

(iii) Except as expressly detailed in this part, not be subject to any other deduction or set-off other than for Taxes and refunds to End Users for Offerings that the End Users were unable to use because of technical faults in the Offering or other bona fide refunds or credits issued to End Users in the ordinary course of business.

(3) Service Provider Revenue shall exclude revenue derived by the Service Provider solely in connection with activities other than Licensed Activity, including delivery of Non-Covered Works. For the avoidance of doubt, in the case of advertising or sponsorship revenue, Service Provider Revenue shall (1) exclude revenue from advertisements or sponsorships that are embedded or served within a copy or phonorecord that constitutes a Non-Covered Work; and (2) include 50% of the revenue subject to the exception set out in paragraph (1)(ii) above.

(4) For purposes of paragraph (1) of this definition, advertising or sponsorship revenue shall be reduced by the actual cost of obtaining that revenue~~,~~ not to exceed 15%.

(5) In instances in which a Service Provider provides to End Users a Bundled Subscription Offering or another Offering as part of the same transaction with one or more other products or services that are not Licensed Activities, then the revenue from End Users deemed to be recognized by the Service Provider for the Offering for the purpose of paragraph (1) of this definition shall be, reasonably determined by the Service Provider on a consistent basis during the Accounting Period in accordance with GAAP.

Sound Recording Company means a person or entity that:

(1) Is a copyright owner of a sound recording embodying a musical work;

(2) In the case of a sound recording of a musical work fixed before February 15, 1972, has rights to the sound recording, under chapter 14 of title 17, United States Code, that are equivalent to the rights of a copyright owner of a sound recording of a musical work under title 17, United States Code;

(3) Is an exclusive Licensee of the rights to reproduce and distribute a sound recording of a musical work; or

(4) Performs the functions of marketing and authorizing the distribution of a sound recording of a musical work under its own label, under the authority of a person identified in paragraph (1) through (3).

*Standalone Non-Portable Subscription Offering—Streaming Only m*eans a Subscription Offering through which an End User can listen to sound recordings only in the form of Eligible Interactive Streams and only from a non-portable device to which those Eligible Interactive Streams are originally transmitted while the device has a live network connection.

Standalone Non-Portable Subscription Offering—Mixed means a Subscription Offering through which an End User can listen to sound recordings either in the form of Eligible Interactive Streams or Eligible Limited Downloads but only from a non-portable device to which those Eligible Interactive Streams or Eligible Limited Downloads are originally transmitted.

Standalone Portable Subscription Offering means a Subscription Offering through which an End User can listen to sound recordings in the form of Eligible Interactive Streams or Eligible Limited Downloads from a portable device.

Stream means the digital transmission of a sound recording of a musical work to an End User—

(1) To allow the End User to listen to the sound recording, while maintaining a live network connection to the transmitting service, substantially at the time of transmission, except to the extent that the sound recording remains accessible for future listening from a Streaming Cache Reproduction;

(2) Using technology that is designed such that the sound recording does not remain accessible for future listening, except to the extent that the sound recording remains accessible for future listening from a Streaming Cache Reproduction; and

(3) That is subject to licensing as a public performance of the musical work.

Streaming Cache Reproduction means a reproduction of a sound recording embodying a musical work made on a computer or other receiving device by a Service Provider solely for the purpose of permitting an End User who has previously received a Stream of that sound recording to play the sound recording again from local storage on the computer or other device rather than by means of a transmission; provided that the End User is only able to do so while maintaining a live network connection to the Service Provider, and the reproduction is encrypted or otherwise protected consistent with prevailing industry standards to prevent it from being played in any other manner or on any device other than the computer or other device on which it was originally made.

Student Plan means a discounted Subscription Offering available on a limited basis to students.

Subscription Offering means an Offering for which End Users are required to pay a fee to have access to the Offering for defined subscription periods of 3 years or less (in contrast to, for example, a service where the basic charge to users is a payment per download or per play), whether the End User makes payment for access to the Offering on a standalone basis or as part of a bundle with one or more other products or services.

Taxes means any applicable tax paid by a Service Provider in connection with an Offering.

Total Cost of Content or *TCC* means the total amount expensed by a Service Provider or any of its Affiliates in accordance with GAAP for rights to make Eligible Interactive Streams or Eligible Limited Downloads of a musical work embodied in a sound recording through the Service Provider for the Accounting Period, which amount shall equal the Applicable Consideration for those rights at the time the Applicable Consideration is properly recognized as an expense under GAAP. As used in this definition, "Applicable Consideration" means anything of value given for the identified rights to undertake the Licensed Activity, including, without limitation, ownership equity, monetary advances, barter or any other monetary and/or nonmonetary consideration, whether that consideration is conveyed via a single agreement, multiple agreements and/or agreements that do not themselves authorize the Licensed Activity but nevertheless provide consideration for the identified rights to undertake the Licensed Activity, and including any value given to an Affiliate of a Sound Recording Company for the rights to undertake the Licensed Activity. Value given to a Copyright Owner of musical works that is controlling, controlled by, or under common control with a Sound Recording Company for rights to undertake the Licensed Activity shall not be considered value given to the Sound Recording Company. Notwithstanding the foregoing, Applicable Consideration shall not include in-kind promotional consideration given to a Sound Recording Company (or Affiliate thereof) that is used to promote the sale or paid use of sound recordings embodying musical works or the paid

use of music services through which sound recordings embodying musical works are available where the in-kind promotional consideration is given in connection with a use that qualifies for licensing under 17 U.S.C. 115. For the avoidance of doubt, Applicable Consideration shall not include any consideration paid to a Sound Recording Company (or Affiliate thereof) for Non-Covered Works, with any allocation of TCC between Licensed Activity and Non-Covered Works to be made in accordance with GAAP.

User Manipulation means any behavior that artificially distorts the number of Plays, including but not limited to the use of manual (*e.g.* click farms) or automated (*e.g.* bots) means.

§385.3 Late payments.

(a) *Accrual of late fees*. Except as otherwise specified in this subparagraph, a Licensee shall pay an annual late fee equal to the Internal Revenue Service underpayment rate specified in 26 U.S.C. 6621(a)(2), to be applied as specified in 26 U.S.C. 6622(a), for any payment owed to a Copyright Owner and remaining unpaid after the due date established in 17 U.S.C. 115(c)(2)(I) or 17 U.S.C. 115(d)(4)(A)(i), as applicable and detailed in part 210 of this title. Late fees shall accrue from the due date until the Copyright Owner receives payment. Late fees shall not be owed for any adjustments to monthly reports of usage made in accordance with section 210.27(f) or (k), or for any adjustments to any annual reports of usage made in accordance with section 210.27(k)(6)(i), (ii) or (v). In the case of underpayments found after an audit pursuant to 17 U.S.C. 115(d)(4)(D), or an audit referenced in section 210.27(k)(6)(iv), interest on underpayment shall be calculated at the post-judgment rate specified in 28 U.S.C. 1961, accrued from and after the date the payment was originally due.

(b) *Waiver of late fees*. The Mechanical Licensing Collective may waive or lower late fees for immaterial or inadvertent failures of a Licensee to make timely payment.

B. Subpart B – Physical Phonorecords, Permanent Downloads, Ringtones, and Music Bundles.

§385.10 Scope

This subpart establishes rates and terms of royalty payments for making and distributing physical phonorecords, including by means of Permanent Downloads, Ringtones and Music Bundles, in accordance with the provisions of 17 U.S.C. 115.

§385.11 Royalty rates.

(a) Physical phonorecords and Permanent Downloads. For every physical phonorecord and Permanent Download the Licensee makes and distributes or authorizes to be made and distributed, the royalty rate payable for each work embodied in the phonorecord or Permanent Download shall be either 9.1 cents or 1.75 cents per minute of playing time or fraction thereof, whichever amount is larger.

(b) Ringtones. For every Ringtone the Licensee makes and distributes or authorizes to be made and distributed, the royalty rate payable for each work embodied therein shall be 24 cents.

(c) Music Bundles. For a Music Bundle, the royalty rate for each element of the Music Bundle shall be the rate required under paragraph (a) or (b) of this section, as appropriate.

C. Subpart C—Eligible Interactive Streaming, Eligible Limited Downloads, Limited Offerings, Mixed Service Bundles, Bundled Subscription Offerings, Locker Services, and Other Delivery Configurations

§385.20 Scope.

This subpart establishes rates and terms of royalty payments for Eligible Interactive Streams and Eligible Limited Downloads of musical works, and other reproductions or distributions of musical works through Limited Offerings, Mixed Service Bundles, Bundled Subscription Offerings, Paid Locker Services, and Purchased Content Locker Services provided through subscription and nonsubscription digital music Service Providers in accordance with the provisions of 17 U.S.C. 115, exclusive of Offerings subject to subpart D of this part.

§385.21 Royalty rates and calculations

(a) Applicable royalty. Royalties payable by Service Providers for Offerings covered by this subpart shall be calculated as provided in this section, subject to the royalty floors for specific types of services described in subsection (b) of this subpart.

(b) Rate calculation. Royalty payments for Licensed Activity in this subpart shall be calculated as provided in this paragraph (b). If a Service Provider offers different Offerings, royalties must be calculated separately with respect to each Offering provided that Service Provider Revenue and TCC associated with such different Offerings shall be allocated between such different Offerings in accordance with GAAP to prevent subjecting all or any portion of Service Provider Revenue and TCC to a royalty calculation of more than one Offering in an Accounting Period. For purposes of calculating rates pursuant to this section and all of its subparts, a Household Plan shall be treated as 1.5 subscribers per month, prorated in the case of a Household Plan in effect for only part of a calendar month and a Student Plan shall be treated as 0.5 subscribers per month, prorated in the case of a Student Plan End User who subscribed for only part of a calendar month. Artificial Accounts shall not be counted as subscribers.

(1) Step 1: Calculate the All-In Royalty for the Offering. For each Accounting Period, the all-in royalty for each Offering in this subpart (other than Plays subject to subpart D of this part) shall be the greater of (A) the applicable percent of Service Provider Revenue as set forth in in Column A of the table below and (B) the applicable percent of TCC or TCC amount as set forth in Column B of the table:

Offering	**Column A** % of Service Provider Revenue	**Column B** TCC % or TCC Amount
Standalone Non-Portable Subscription Offering—Streaming Only	10.5%	The lesser of 22 % of TCC for the Accounting Period or 50 cents per subscriber per month
Standalone Non-Portable Subscription Offering—Mixed	10.5%	The lesser of 21% of TCC for the Accounting Period or 50 cents per subscriber per month

Offering	Column A % of Service Provider Revenue	Column B TCC % or TCC Amount
Standalone Portable Subscription Offering	10.5%	The lesser of 21 % of TCC for the Accounting Period or 80 cents per subscriber per month
Bundled Subscription Offering	10.5%	21 % of TCC for the Accounting Period
Mixed Service Bundle	11.35%	21% of TCC for the Accounting Period
Limited Offering	10.5%	21% of TCC for the Accounting Period
Paid Locker Service	12%	20.65% of TCC for the Accounting Period
Purchased Content Locker Service	12%	22% of TCC for the Accounting Period
Free nonsubscription/ad-supported services free of any charge to the End User	10.5%	22% of TCC for the Accounting Period

(2) *Step 2*: Subtract Applicable Performance Royalties. From the amount determined in step 1 in paragraph (b)(1) of this section, for each Offering of the Service Provider, subtract the total amount of Performance Royalty that the Service Provider has expensed or will expense pursuant to public performance licenses in connection with uses of musical works through that Offering during the Accounting Period that constitute Licensed Activity. Although this amount may be the total of the Service Provider's payments for that Offering for the Accounting Period, it will be less than the total of the Performance Royalties if the Service Provider is also engaging in public performance of Non-Covered Works. In the case in which the Service Provider is also engaging in the public performance of Non-Covered Works, the amount to be subtracted for Performance Royalties shall be the amount allocable to Licensed Activity through the relevant Offering on the basis of GAAP.

(3) *Step 3*: Determine the Payable Royalty Pool. The payable royalty pool is the amount payable for the reproduction and distribution of all musical works used by the Service Provider by virtue of its Licensed Activity for a particular Offering during the Accounting Period. This amount is the greater of

(i) The result determined in step 2 in paragraph (b)(2) of this section, and

(ii) The royalty floor (if any) set forth in the following table:

Offering	Royalty Floor
Standalone Non-Portable Subscription Offering—Streaming Only	15 cents per subscriber per Accounting Period
Standalone Non-Portable Subscription Offering—Mixed	30 cents per subscriber per Accounting Period
Standalone Portable Subscription Offering	50 cents per subscriber per Accounting Period
Bundled Subscription Offering	25 cents per month for each Active Subscriber during that Accounting Period
Mixed Service Bundle	n/a

Offering	Royalty Floor
Limited Offering	n/a
Paid Locker Service	n/a
Purchased Content Locker Service	n/a
Free nonsubscription/ad-supported services free of any charge to the End User	n/a

Computation of royalty floors. For purposes of this paragraph (b)(3), to determine the royalty floor, as applicable to any particular Offering, the total number of subscriber-months for the Accounting Period, shall be calculated by taking all End Users who were subscribers for complete months, prorating in the case of End Users who were subscribers for only part of a month (such proration taking into account the End User's monthly billing period), and deducting on a prorated basis for End Users covered by an Offering subject to subpart D, except in the case of a Bundled Subscription Offering where subscriber-months shall be determined with respect to Active Subscribers. The product of the total number of subscriber-months for the Accounting Period and the specified number of cents per subscriber (or Active Subscriber, as the case may be) shall be used as the subscriber-based component of the royalty floor for the Accounting Period.

(4) *Step 4*: Calculate the Per-Work Royalty Allocation. This is the amount payable for the reproduction and distribution of each musical work used by the Service Provider by virtue of its Licensed Activity through a particular Offering during the Accounting Period. To determine this amount, the result determined in step 3 in paragraph (b)(3) of this section must be allocated to each musical work used through the Offering. The allocation shall be accomplished by the Mechanical Licensing Collective by (1) dividing the payable royalty pool determined in step 3 for the Offering by the total number of Plays of all musical works through the Offering during the Accounting Period (other than Plays subject to subpart D of this part) to yield a per-Play allocation, (2) identifying and locating copyright owners of each musical work and shares thereof, or determining whether such work is in the public domain, and (3) multiplying the per-Play allocation by the number of Plays of each matched musical work or matched share of such work (other than Plays subject to subpart D of this part and/or Plays of public domain works) through the Offering during the Accounting Period. For purposes of determining the per-work royalty allocation in all calculations under this step 4 only (*i.e.*, after the payable royalty pool has been determined), for sound recordings of musical works with a playing time of over 5 minutes, each Play shall be counted as provided in paragraph (c) of this section.

Notwithstanding the foregoing, if the Service Provider is not capable of tracking Play information because of *bona fide* limitations of the available technology for Offerings of that nature or of devices useable with the Offering, the per-work royalty allocation may instead be accomplished in a manner consistent with the methodology used for making royalty payment allocations for the use of individual sound recordings.

(c) *Overtime adjustment.* For purposes of the calculations in Step 4 in paragraph (b)(4) of this section only, for sound recordings of musical works with a playing time of over 5 minutes, adjust the number of Plays as follows.

(1) 5:01 to 6:00 minutes—Each Play = 1.2 Plays

(2) 6:01 to 7:00 minutes—Each Play = 1.4 Plays

(3) 7:01 to 8:00 minutes—Each Play = 1.6 Plays

(4) 8:01 to 9:00 minutes—Each Play = 1.8 Plays

(5) 9:01 to 10:00 minutes—Each Play = 2.0 Plays

For playing times of greater than 10 minutes, continue to add 0.2 Plays for each additional minute or fraction thereof.

D. Subpart D – Promotional Offerings, Free Trial Offerings and Certain Purchased Content Locker Services

§385.30 Scope.

This subpart establishes rates and terms of royalty payments for Promotional Offerings, Free Trial Offerings, and Certain Purchased Content Locker Services provided by subscription and nonsubscription digital music Service Providers in accordance with the provisions of 17 U.S.C. 115.

§385.31 Royalty rates.

*(a) Promotional Offerings***.** For Promotional Offerings of audio-only Eligible Interactive Streaming and Eligible Limited Downloads of sound recordings embodying musical works that the Sound Recording Company authorizes royalty-free to the Service Provider, the royalty rate is zero.

(b) Free Trial Offerings. For Free Trial Offerings, the royalty rate is zero.

(c) Certain Purchased Content Locker Services. For every Purchased Content Locker Service, the royalty rate is zero.

Before the
UNITED STATES COPYRIGHT ROYALTY JUDGES
The Library of Congress
Washington, D.C.

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

INDEX OF WITNESS TESTIMONY FOR PANDORA MEDIA, LLC

Witness	**Title**
George White	Senior Vice President, Music Licensing, for Sirius XM Radio Inc. and Pandora Media, LLC

Designated Witnesses from Docket No. 16-CRB-0003-PR (2018-2022) (*Phonorecords III*)	
Witness	**Title**
Adam Parness	Former Head of Publisher Licensing and Relations at Pandora Media, LLC (*Phonorecords III* Written Direct Testimony)
Michael Herring	Former Chief Financial Officer of Pandora Media, LLC (*Phonorecords III* Written Direct Testimony)
Chris Phillips	Chief Product Officer, Pandora Media, LLC (*Phonorecords III* Written Direct Testimony)
Michael L. Katz	Professor of Strategy and Leadership, Haas School of Business, University of California at Berkeley (*Phonorecords III* Written Direct Testimony)

Before the
UNITED STATES COPYRIGHT ROYALTY JUDGES
The Library of Congress
Washington, D.C.

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

INDEX OF EXHIBITS SUBMITTED ON BEHALF OF PANDORA MEDIA, LLC

Exhibit No.	Sponsoring Witness	Description	Bates No.
PAN WDT Ex. 001	George White	Pandora Plus User Interface	N/A
PAN WDT Ex. 002	George White	Pandora Premium User Interface	N/A
PAN WDT Ex. 003	George White	Pandora – UMPG, License Agreement [redacted] [Restricted]	PAN_PHONO4_00000248
PAN WDT Ex. 004	George White	Pandora – UMPG, License Agreement [redacted] [Restricted]	PAN_PHONO4_00000320
PAN WDT Ex. 005	George White	Pandora – Sony ATV, License Agreement [redacted] [Restricted]	PAN_PHONO4_00000226
PAN WDT Ex. 006	George White	Pandora – Warner/Chappell, License Agreement [redacted] [Restricted]	PAN_PHONO4_00000395
PAN WDT Ex. 007	George White	Pandora – Kobalt Music Publishing America, License Agreement [redacted] [Restricted]	PAN_PHONO4_00000121
PAN WDT Ex. 008	George White	Pandora – BMG Rights Management (US), License Agreement [redacted] [Restricted]	PAN_PHONO4_00000036

Exhibit No.	Sponsoring Witness	Description	Bates No.
PAN WDT Ex. 009	George White	Pandora – Audiam Inc., License Agreement [redacted] [Restricted]	PAN_PHONO4_00000880
PAN WDT Ex. 010	George White	Pandora – Atlas Music Publishing, License Agreement [redacted] [Restricted]	PAN_PHONO4_00000859
PAN WDT Ex. 011	George White	Pandora – Downtown Music Publishing, License Agreement [redacted] [Restricted]	PAN_PHONO4_00000086
PAN WDT Ex. 012	George White	Pandora – Spirit Music Group, License Agreement [redacted] [Restricted]	PAN_PHONO4_00001373
PAN WDT Ex. 013	George White	Pandora – Sony ATV, Amendment #1 to License Agreement [redacted] [Restricted]	PAN_PHONO4_00000198

Before the
UNITED STATES COPYRIGHT ROYALTY JUDGES
The Library of Congress
Washington, D.C.

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

DECLARATION AND CERTIFICATION OF TODD D. LARSON

(On behalf of Pandora Media, LLC)

1. I am counsel for Pandora Media, LLC ("Pandora") in the above-captioned case. I respectfully submit this declaration and certification pursuant to the terms of the Protective Order issued July 20, 2021 (the "Protective Order"). I am authorized by Pandora to submit this Declaration on Pandora's behalf.

2. I have reviewed Pandora's Introductory Memorandum to the Written Direct Statement, the written direct testimony of George White, Senior Vice President, Music Licensing, for Sirius XM and Pandora (the "White Testimony"), including the accompanying exhibits, and the designated testimony submitted by Pandora in this proceeding. I have also reviewed the definitions and terms provided in the Protective Order. After consultation with my client, I have determined to the best of my knowledge, information and belief that portions of Pandora's written direct statement contain "Restricted" information as defined by the Protective Order ("Protected Material"). The Protected Material is shaded in Pandora's restricted filing, and described in more detail below.

3. The White Testimony and exhibits sponsored by Mr. White contain Protected Material, including, but not limited to, (a) Pandora's license agreements with various music

publishers, including the rates and terms contained therein, all of which are proprietary, not available to the public, highly competitively sensitive and, at times, subject to express confidentiality provisions with third parties; and (b) highly confidential internal business information, research, financial projections, financial data, and usage, subscriber, and performance data that are proprietary, not available to the public, and commercially sensitive.

4. If such contractual, financial, and proprietary business information were to become public, it would place Pandora at a commercial and competitive disadvantage, unfairly advantage other parties to the detriment of Pandora, and jeopardize its business interests. Information related to confidential contracts or relationships with third-party content providers could be used by Pandora's competitors, or by other content providers, to formulate rival bids, bid up payments, or otherwise unfairly jeopardize Pandora's commercial and competitive interests.

5. In addition to the White Testimony and exhibits described above, Pandora has submitted designated testimony from Docket. No. 16-CRB-0003-PR (2018-2022) ("*Phono III*") from Adam Parness, Michael Herring, Christopher Phillips, and Professor Michael L. Katz. Pandora seeks restricted status solely for the portions of that testimony that were previously granted restricted status in the prior proceedings.

6. The Introductory Memorandum to the Written Direct Statement of Pandora Media, LLC also contains information that has been designated as Restricted in the White Testimony, the accompanying exhibits, or the aforementioned designated testimony.

Pursuant to 28 U.S.C. § 1746, I hereby declare under the penalty of perjury that, to the best of my knowledge, information and belief, the foregoing is true and correct.

Dated: October 13, 2021
New York, NY

/s/ *Todd Larson*

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Before the
UNITED STATES COPYRIGHT ROYALTY JUDGES
The Library of Congress
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In re **DETERMINATION OF RATES AND TERMS FOR MAKING AND DISTRIBUTING PHONORECORDS (Phonorecords IV)**	**Docket No. 21-CRB-0001-PR (2023-2027)**

WRITTEN DIRECT TESTIMONY OF GEORGE WHITE
(On behalf of Pandora Media, LLC)

INTRODUCTION

1. My name is George White. I am the Senior Vice President, Music Licensing, for Sirius XM Radio Inc. and Pandora Media, LLC (together, the "Company"). I have served in that role for Sirius XM since September 2013, and my responsibilities expanded to include Pandora when Sirius XM acquired Pandora in 2019. I have testified in two prior CRB proceedings: on behalf of Sirius XM in *SDARS III* and on behalf of Pandora in the *Phonorecords III* remand.

2. My work prior to joining the Company includes executive posts at *Billboard*, as General Manager of *Billboard* Digital, and Warner Music Group, where I served as Senior Vice President, Strategy and Product Development, working for over a decade to lead the development of new mobile and online distribution and promotion channels for music. I have a Bachelor of Arts in Economics from Davidson College.

3. My chief responsibility at the Company is to secure licenses with rights owners—music publishers, performance rights organizations, and record companies—for the rights necessary to operate our services. I supervise a team of 16 people, who assist in the negotiation and drafting of license agreements.

4. I present this testimony to the Judges to provide: (i) an overview of Pandora, a description of its service offerings, and information regarding its acquisition by Sirius XM in 2019; (ii) information about Pandora's direct license dealings with music publishers and its agreements with performing rights organizations ("PROs"); and (iii) Pandora's proposed rates and terms and the bases for our proposal.

5. As I explain in greater detail below, Pandora proposes rates and terms similar to those proposed by the digital streaming services in the *Phonorecords III* remand proceeding—essentially a continuation of the rates that were agreed to by copyright owners and services to settle *Phonorecords II*—with some modest updates for the 2023-27 license period. Our proposal is rooted in the following key concepts: (i) section 115 license rates should remain set as an "all-in" rate with permitted deductions for the royalties paid by the services for music performance rights; (ii) the headline, all-in rate that services pay should remain the greater of (a) 10.5% of revenue attributable to the service and (b) a specified percentage of the royalties paid to record companies for the rights to reproduce, distribute and perform sound recordings through the applicable service tier (which, in industry parlance, is referred to as "total cost of content" or "TCC"); (iii) as has always been the case, "Limited Offerings" such as Pandora Plus should not be subject to any mechanical-only "floor" fee after the deduction of performance rights royalties; and (iv) a sensible approach to allocating revenues between the components of a bundled offering that incorporates both interactive streaming subject to the section 115 license and other products and services should be adopted. Pandora's proposal is both broadly consistent with its direct licenses with the music publishing industry and reasonable—indeed, generous—given the economics of its services.

6. I understand that Pandora is designating certain testimony from prior Copyright Royalty Board ("CRB") proceedings for use in this proceeding.[1] I will refer to aspects of that prior testimony from time to time below.

PANDORA, ITS SERVICE OFFERINGS, AND ITS RELATIONSHIP WITH SIRIUS XM

7. Pandora is the leading internet radio service in the United States. Pandora is best known for its personalized, noninteractive radio stations that provide a "lean-back" or radio-style listening experience.

8. Using Pandora for radio-style listening is, and always has been, simple. After creating an account, a listener need only "seed" a station or select a "genre" station and then music will begin to play. To create a seeded station, the listener simply types in the name of an artist, composer (for classical music), or song title to serve as the starting point or "seed" for the station. Pandora then automatically creates a station centered around that seed, which—through use of our patented Music Genome Project technology and a combination of proprietary playlist algorithms—will play tracks whose musicological characteristics our Music Genome Project reveals as resembling those of the seed.[2] As an alternative, a user can select one of Pandora's genre stations, which begin as pre-programmed collections of tracks thpat reflect a certain musical style or preference. Pandora's genre stations range from hit-driven stations such as "Today's Hits" or "Today's Country" to highly specialized genres such as "Korean Hip Hop," "Minneapolis Alternative," and "Renaissance Music." Each genre station is initially populated

[1] The designated testimony includes the written direct testimony of Michael Herring, Christopher Phillips, Adam Parness, and Michael Katz from the *Phonorecords III* proceeding.

[2] The Music Genome Project and Pandora's proprietary playlist algorithms are described in more detail in the Written Direct Testimony of Michael Herring submitted on behalf of Pandora in *Phonorecords III* and designated by Pandora for use in this proceeding. Mr. Herring at the time was Pandora's President and Chief Financial Officer.

with tracks that are hand-selected by Pandora's music curation team to reflect that musical genre or style.

9. When users start their experience by seeding a station, they can then influence the music played by adding information that we refer to as "variety," such as a favorite artist or song, or by "thumbing up" a song (indicating that they like it) or "thumbing down" a song (indicating dislike of that song, or that they do not want that song to play on that station in the future). Users also have the ability to skip a track (subject to hourly limits) and typically have the option to view lyrics and an artist's biography for each track they hear.

10. In addition to music, Pandora users can also listen to "spoken word" content, such as podcasts and comedy routines.

11. Prior to 2016, Pandora offered two noninteractive service tiers: its flagship ad-supported internet radio service and a subscription internet radio service known as Pandora One. Neither of these products offered users the ability to select the tracks they heard on their chosen station or the ability to replay selections. Pandora relied on the statutory licenses for ephemeral copies and public performances of sound recordings available to noninteractive webcasters under sections 112 and 114 of the Copyright Act, and the playlists generated by the Music Genome Project and our proprietary playlist algorithms comported with the sound recording performance complement in section 114(j)(13), which limits the frequency with which an artist or album can be played by a statutory webcaster. To obtain the right to publicly perform the musical works underlying the sound recordings it transmitted, Pandora relied on licenses from PROs such as ASCAP and BMI, which offer blanket licenses to publicly perform the works in their respective repertories. Because noninteractive services do not implicate mechanical rights, Pandora did not

utilize the section 115 statutory license at issue here. At its peak in 2014, more than 80 million people were listening to Pandora each month.[3]

12. After that 2014 peak, Pandora began to experience some erosion in its base of monthly active users ("MAUs"), and by 2016, Pandora had determined to make a strategic shift and expand its offerings to include interactive tiers of service to complement its flagship free internet radio service. Pandora's research showed that a meaningful group of our radio users, even though "lean back" listeners most of the time, wanted occasional access to at least some interactive features such as replays or on-demand plays, and needed to leave Pandora to satisfy those preferences. For some of our users, that meant utilizing free services like YouTube or the free tier of Spotify; for others that meant paying for a monthly subscription to an on-demand streaming service to complement their use of Pandora. (And either way, Pandora's free tier was a complement and not a substitute for other, more interactive services; our research to this day reveals that our listeners regularly patronize a wide variety of services.) Pandora's hope was that by introducing tiers of service with interactive features, it could keep users within the Pandora environment longer and "upsell" some of them to one of its new interactive subscription offerings. Pandora's research and the reasons for this strategic shift were discussed in more detail in the Written Direct Testimony of Christopher Phillips submitted in *Phonorecords III*, which Pandora has designated for use in this proceeding.[4]

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[3] As described in the designated testimony, Pandora capitalized on its massive user base to pioneer the market for online radio advertising, investing hundreds of millions of dollars to build that market, and the technological and business process and systems to support it, essentially from scratch. *See* Herring *Phonorecords III* WDT (designated) at ¶¶ 35-38; Phillips *Phonorecords III* WDT (designated) at ¶¶ 33-35.

[4] See Phillips *Phonorecords III* WDT (designated) at ¶¶ 9-14.

13. Pandora's revamped product lineup now includes three different offerings: free internet radio, a "mid-tier" subscription service known as Pandora Plus, and a fully interactive subscription service known as Pandora Premium.

14. Pandora's noninteractive ad-supported internet tier is essentially the same great product it always has been—although Pandora has added certain, limited interactive features to its free tier in order to help introduce and upsell users to its subscription tiers of service. Specifically, by engaging with additional video advertising, free-tier users can unlock "Premium Access" sessions in which they can skip and replay tracks and enjoy on-demand listening for a time-limited window (typically 30 minutes). The ability to unlock a period of replay functionality and obtain additional skips was added in 2016 and the ability to enjoy a limited window of on-demand listening was added in 2017.

15. Pandora Plus replaced Pandora One as Pandora's subscription service in 2016. Unlike Pandora One, Pandora Plus offers several features that implicate mechanical licensing, including unlimited replays, unlimited skips, and the ability temporarily to cache a limited number of stations on the user's device (approximately three hours' worth) for offline listening, *e.g.*, on an airplane or subway where a live internet connection is lacking. Pandora Plus, however, does not offer the ability to select particular songs or albums. PAN WDT Ex. 001 presents a series of screenshots showing the Pandora Plus Interface.

16. Pandora Plus is offered to subscribers at the price of $4.99 per month. Its "mid-tier" feature set—which offers much less than full interactivity—has been carefully calibrated to address that segment of the market unwilling to pay $9.99 for a fully on-demand service but willing to pay a more modest amount for an ad-free environment and certain features not allowed under the statutory licenses.

17. Since its 2016 launch (when former Pandora One subscribers were automatically converted to Pandora Plus subscribers), subscribership for Pandora Plus has been modest but fairly steady, [redacted] Revenue generated from Pandora Plus has followed a similar trend, [redacted]

18. Pandora Premium is our fully interactive service tier. Subscribers have access to all of the same features as those who subscribe to Pandora Plus, including the ability to start seeded stations and to select genre stations, the ability to thumb tracks up or down, unlimited skips, replay functionality, and access to cached stations for offline listening. Pandora Premium also offers a number of features that are not available on Pandora Plus, including:

- the ability to play any song, artist, or album in the Pandora library on demand;
- the ability to create and manage playlists and share them with other Pandora Premium subscribers; and
- enhanced offline listening that enables subscribers to listen to selected songs, albums, stations and playlists of their own devising, in addition to the cached stations that are available with Pandora Plus.[5]

19. While the functionality available on Pandora Premium is competitive with the feature set of other on-demand music streaming services available in the marketplace, the inclusion of our existing radio features and our incomparable knowledge of our users' music

[5] Additional detail on these features and the decision to offer them is set forth in the designated written direct testimony of Christopher Phillips in *Phonorecords III*. *See* Phillips *Phonorecords III* WDT (designated) ¶¶ 27-32.

tastes enables us to provide a richer, curated interactive experience and to continue to serve as an engine of music discovery. For example, Pandora Premium's suite of features allows subscribers to immediately start listening to music that they already love (*e.g.*, stations they already have listened to either on Pandora or Pandora Plus, and an on-demand library based on those stations and users' thumb preferences), introduces subscribers to music they have not heard before, and makes recommendations of additional music they may want to add to a playlist.

20. Pandora Premium also allows users to move effortlessly between user-selected listening and Pandora-programmed listening. In our search results, subscribers see not only their chosen song, artist, or album, but also stations based on that search that are created using the Music Genome Project and Pandora's proprietary algorithms; users can listen to the music for which they searched, select the station generated by Pandora from their search, or add the selected music to a playlist of their own creation. They can also add tracks to a playlist based on tracks they thumb up on their customized Pandora radio stations.

21. Pandora Premium's auto-play feature likewise capitalizes on the expertise we have gained though our free service: after a user's on-demand music concludes, the auto-play feature kicks in and continue to play music determined by Pandora's Music Genome Project and proprietary algorithms, based on the user's previous on-demand selection and what Pandora knows about that user and similar users across the service. As Mr. Phillips testified in *Phonorecords III*, this feature addresses the "pain point" we saw in consumers' use of other interactive services, in which the music stopped playing at a time when they cannot easily and conveniently stop to search for another selection. Along similar lines, our automatic-fill feature helps users populate playlists based on the information the user has provided in starting the list

and Pandora's knowledge of his or her music preferences and the preferences of similar users. PAN WDT Ex. 002 presents a series of screenshots of the Pandora Premium Interface.

22. Pandora Premium is offered to consumers at $9.99 per month, a price comparable to that of premium offerings in the marketplace provided by other services, and also is offered (as is Pandora Plus) in various bundles with other products and services, including mobile phone service. Pandora offers a family plan for Pandora Premium for $14.99 that allows up to six unique users, and we offer discounted rates to students and military members. Subscriber levels for Pandora Premium are currently just over [redacted] million subscribers.

23. Unfortunately, Pandora's strategic shift into the interactive streaming market did not stem the steady erosion of its user base. By late 2017, the number of MAUs across all three tiers of service had declined to [redacted] million, and today the number is approximately [redacted] million. While Pandora attracted [redacted] subscribers to Pandora Premium and the number of subscribers to Pandora Plus has been roughly on par with the number of subscribers to Pandora One, those figures are well below Pandora's expectations when it made the decision to offer interactive streaming.

24. As user levels (and thus available ad slots) fell, and without sufficient growth on the subscription tiers to offset the declines, Pandora's financial performance suffered as well. After enjoying modest profitability on an adjusted EBITDA basis in 2014-2015, the Company experienced significant losses in adjusted EBITDA during the next three years, and its stock price plummeted from its peak of $39.43 in 2014 to as low as $4.13 in 2018. In short, after becoming a public company in 2011, Pandora never reported a calendar year in which it realized positive free cash flow or positive earnings according to Generally Accepted Accounting Principles.

25. Faced with these financial challenges, Pandora engaged investment banking firms to evaluate its strategic alternatives and seek additional funding for its business. In 2017, Pandora received a $480 million investment from Sirius XM. That investment took the form of a purchase of newly issued Series A preferred stock, which was convertible into approximately 20% of Pandora's outstanding common stock. As part of this investment, Pandora granted Sirius XM the right to three of nine seats on its Board of Directors, including the Chairmanship of the Board. Pandora was subsequently acquired by Sirius XM in February 2019 in an all-stock deal.

26. As summarized in the December 20, 2018 Proxy Statement/Prospectus delivered to Pandora's stockholders in connection with their approval of the transaction, the proposed sale of Pandora to Sirius XM reflected a number of strategic considerations by the Pandora Board of Directors:

- Pandora's business operations, financial condition, and prospects, and the Board's understanding of Sirius XM's operations, financial condition, and prospects;
- The current and prospective competitive climates in which Pandora and Sirius XM were operating;
- The opportunities for cross-promotion;
- Greater scale for investment in technology and content relative to what Pandora could achieve on its own;
- Improved opportunities for growth, cost savings, and innovation relative to what Pandora could achieve on its own;
- The ability to "go shop" for a better option prior to closing; and
- The fact that Pandora had never received another offer to buy the Company from anyone other than Sirius XM, notwithstanding efforts spanning several years to solicit other offers.

27. From Sirius XM's perspective, the acquisition of Pandora served several strategic purposes: (i) ownership of a free-to-the-consumer offering (and accompanying ad sales

infrastructure) to complement Sirius XM's subscription services; (ii) co-marketing opportunities for the combined companies; (iii) compelling content that can be offered to Sirius XM subscribers; and (iv) a rich trove of user data for content recommendations and others uses.

28. Pandora, now a wholly-owned subsidiary of Sirius XM, continues to operate as a separately branded service offering the three above-mentioned service tiers.

LICENSING FOR PANDORA'S INTERACTIVE OFFERINGS

29. Pandora requires numerous licenses in order to deliver its interactive service offerings. Because Pandora Plus and Pandora Premium include features beyond those permitted under the statutory licenses for sound recordings under Sections 112 and 114, Pandora has entered into direct licenses with record companies for the sound recording rights it needs on those service tiers (as well as for Premium Access sessions on the free radio service).[6] For the rights to the musical works underlying the sound recordings needed to offer interactive streaming, Pandora relies on three different types of license. First, Pandora has direct licenses with many music publishers. Second, to the extent that mechanical rights to musical works it needs are not covered by a direct license, Pandora relies on the section 115 statutory license. Third, to the extent that public performance rights to musical works it needs are not covered by a direct license, Pandora has secured blanket licenses from PROs such as ASCAP and BMI. The vast majority of these licenses apply rates and rate structures specific to Pandora's various tiers, such that the fees paid for Pandora Plus are [redacted] than those paid for Pandora

[6] Before adding interactive features beyond the scope of the statutory licenses for sound recordings available under sections 112 and 114, Pandora entered into direct licenses with some record companies, including those affiliated with Merlin, [redacted]

Premium. The following paragraphs identify some of the key relevant terms of Pandora's voluntary publishing agreements.

30. ***Universal Music Publishing***: Pandora first entered into a voluntary license agreement with UMPG in late 2016. After a series of extensions and amendments to that original agreement, we executed a new long-form agreement with UMPG on December 9, 2019. Pandora Plus is covered in the current agreement (as with its predecessor agreements) as a "[redacted] which is defined as "[redacted] The agreement grants Pandora the rights to [redacted][7] Among other things, this means that UMPG has, throughout the life of our license relationship (whether the *Phonorecords II* or since-vacated *Phonorecords III* rates were then in effect) [redacted] *See* PAN WDT Ex. 003 and PAN WDT Ex. 004.

[7] [redacted]

31. One additional notable term in the UMPG agreement specified that [redacted] This is also true of the other direct licenses discussed below.

32. ***Sony/ATV Music Publishing***: Pandora entered its first direct license with Sony/ATV (now called Sony Music Publishing) in November 2015. The agreement has been amended several times since then to extend its term, [redacted] but the main rate provisions have remained the same throughout the life of the agreement. Pandora Plus is covered in the agreement as a [redacted] *See* PAN WDT Ex. 005.

33. ***Warner Chappell***: The Warner Chappell license agreement, effective January 1, 2016 and amended several times thereafter to extend the original term, [redacted] *See* PAN WDT Ex. 006.

34. ***Independent publishers***: In addition to the major publishers, Pandora has entered to direct agreements with dozens of independent publishers ("indies"), from mini-majors such as

Kobalt and BMG to smaller publishers such as Audiam, Atlas, Spirit, and Downtown. [redacted] See PAN WDT Ex. 007-012.

35. The above agreements have been amended from time to time, not only to extend their terms for additional periods of time, [redacted] As part of those amendments, [redacted]

36. With the 2016-2017 introduction of Pandora Plus and Pandora Premium, Pandora also expanded its performance rights licenses with ASCAP, BMI, SESAC, and GMR to cover the new functionality. For ASCAP and BMI, the rates paid for Pandora Plus and Pandora Premium [redacted] in the wake of the now-vacated *Phonorecords III* determination, [redacted]

[8] *See, e.g.*, PAN WDT Ex. 013.

PANDORA'S PROPOSED RATES AND TERMS

37. For the 2023-2027 rate period, Pandora proposes the same rates and terms proposed by the digital music services in the *Phonorecords III* remand, with certain limited alterations explained below. Pandora's proposal, which is the same as what is being proposed by Spotify in this proceeding, is largely based on the prevailing *Phonorecords II* rates, with certain updates to the accompanying terms to reflect issues decided by the Judges in *Phonorecords III* and no longer live issues in the case (*e.g.*, family plan definitions), to reflect changes resulting from passage of the Music Modernization Act, and to make certain other reasonable updates. Pandora has designated the expert testimony of Professor Michael Katz from *Phonorecords III*, which provides additional support for its proposed rates. (To the extent the Judges issue a ruling in *Phonorecords III* that addresses the Services' proposed rates and terms that remain in dispute, we will consider whether any revisions to our proposal here are merited and/or necessary.) I offer the following observations in support of Pandora's proposal.

38. First, Pandora's proposal preserves the "all in" rate structure that takes into account fees paid for performance rights in determining fees payable for mechanical rights. Since the inception of the interactive music streaming marketplace, fees for the section 115 statutory license have been set as an "all in" rate that permits deductions for performance rights royalties paid with respect to the same musical works. The distinction between mechanical rights and performance rights is not meaningful to Pandora as a service operator. In both cases, the payments are coming from Pandora and going (ultimately) to the same music publishers, songwriters, and composers. The mechanical rights at issue in this proceeding are worthless unless we also have performance rights, and with respect to the interactive service offerings at issue here, the performance rights are worthless unless we also have the mechanical rights.

Moreover, the "all in" rate structure is consistent with our direct publisher deals covering the musical works we perform.

39. Second, Pandora has proposed rates and terms that distinguish between Limited Offerings like Pandora Plus and fully interactive, premium offerings like Pandora Premium and other Standalone Portable Subscription Offerings. Limited Offerings are substantially different products than full-catalog, fully on-demand service offerings. They appeal to different consumers with different willingness to pay for music. All of our direct label and publisher licenses distinguish between Pandora Plus and Pandora Premium and require us to pay less for Pandora Plus than we pay for Pandora Premium. Preserving a flexible rate schedule that accommodates different types of products is, in our view, critically important to protecting innovation and ensuring a diverse array of products that will expand the market for interactive streaming to the benefit of services, the Copyright Owners, and consumers alike.

40. Third, Pandora has proposed to keep the "headline" royalty rate that services pay set as a percentage of revenue and at prevailing *Phonorecords II* rate levels. This structure helps to align changes in royalty expense to changes in revenues, given the subscription model that allows users to stream as many songs as they like in exchange for a set monthly fee.

41. Fourth, consistent with the Judges' ruling in *Phonorecords III*, upheld on appeal, the proposal counts Student Plans as .5 subscribers and Family Plans as 1.5 subscribers for purposes of calculating per-subscriber minima. This sensible approach provides an incentive to services to offer discounted plans to users who otherwise might not be willing to pay for a subscription—and money in the pockets of songwriters that might not otherwise be earned.

42. Fifth, consistent with the rates agreed to in *Phonorecords II* and the Services' remand proposal in *Phonorecords III*, Pandora's proposed terms do *not* include a mechanical-

only floor fee for Limited Offerings. Since launching our interactive service offerings, the percentage-of-revenue prong of the section 115 statutory license typically has been the binding prong under which Pandora has made its mechanical royalty payments for both the Plus and Premium tier, although very occasionally the TCC measurement—especially after the caps were removed in *Phonorecords III*—has been the binding prong instead. The $0.50 mechanical floor applicable to Premium (as a portable subscription service) has never kicked in, likely a reflection of the low level of price discounting that Pandora offers, not to mention the substantially higher percentage-of-revenue and TCC rates that prevailed when the *Phonorecords III* rates were in effect. And, because neither the *Phonorecords II* nor the since-vacated *Phonorecords III* rate structures had a mechanical floor for Limited Offerings, Pandora has *never* paid a mechanical floor for Pandora Plus.

43. It is vitally important that stay as it is. Based on our annual projections for Pandora Plus subscriber counts, revenue, and performance and sound recording license fees for 2023-2027—and assuming rate levels at the prevailing *Phono II* rates—any mechanical floor above $[redacted] per subscriber per month would lead to an increase in incremental royalties during the license term because that "floor," rather than the percent-of-revenue or TCC prongs, would be the binding prong in at least certain months of the license period. That is neither necessary nor warranted. The projections on which this analysis is based do not reflect any deep discounting or revenue deferral strategies for Pandora Plus that would cause the payments under the revenue prong to be artificially low, as the Judges have identified in the past with respect to certain services. And even if there were, there is a TCC prong to provide a backstop against diminished revenue-based payments. Thus, there is no argument to also add a mechanical floor for Pandora Plus, much less to set it at a level that might come into play at Pandora's projected

revenue levels: such a "floor" would be no floor at all, just another (third) payment prong that might be binding and result in even *higher* payments than due under the revenue-share or TCC prongs.

44. Rate structure aside, our proposed terms do vary from those proposed by Pandora and other services in the *Phonorecords III* remand in certain respects. Among other things, they have been edited to further conform with certain legislative and regulatory changes introduced by Congress and the Copyright Office in relation to the Music Modernization Act.

45. In addition, we have proposed a change in how Service Revenue for Bundled Offerings. That provision calls for a licensed service to reasonably allocate a portion bundled revenue to the portion of the bundle comprising Covered Activity. It is supported by, among other benchmarks, [redacted] Importantly, [redacted] (as can often be the case), [redacted]

46. This is a reasonable and sensible proposal relative to both the *Phonorecords II* and (now vacated) *Phonorecords III* approaches. The *Phonorecords II* regulations called for the deduction of the full standalone price of the *other* components of the bundle—meaning one could end up with no residual revenue attributable to the covered activity. The *Phonorecords III*

regulations, even worse, called for the full standalone price of the licensed activity to be included as revenue, a definition that overlooks the key economic point of bundles: to combine items at a price point *less* than the total of their combined standalone prices and thus capture sales that wouldn't occur with each component priced at its full standalone price.

PUBLIC VERSION

Before the
UNITED STATES COPYRIGHT ROYALTY JUDGES
The Library of Congress
Washington, D.C.

In re **DETERMINATION OF RATES AND TERMS FOR MAKING AND DISTRIBUTING PHONORECORDS (Phonorecords IV)**	**Docket No. 21-CRB-0001-PR (2023-2027) (Remand)**

DECLARATION OF GEORGE WHITE

I, George White, declare under penalty of perjury that the statements contained in my Written Direct Remand Testimony in the above-captioned proceeding are true and correct to the best of my knowledge, information, and belief.

Executed this 13th day of October, 2021 in New York, NY.

George White

Before the
UNITED STATES COPYRIGHT ROYALTY JUDGES
The 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 DIRECT TESTIMONY OF ADAM PARNESS

(On behalf of Pandora Media, Inc.)

INTRODUCTION

1. My name is Adam Parness. I am the Head of Publisher Licensing and Relations at Pandora Media, Inc. ("Pandora" or "the Company") and have served in that position since I joined the Company in July 2016.

2. I have worked in the music industry for over fifteen years. Before joining Pandora, I was the Principal Content Acquisition Manager at Amazon Digital Music, where I led the company's music publishing initiatives and helped launch its Prime Music service. Before that, I worked at Rhapsody International Inc. ("Rhapsody") as Vice President of Music Licensing and at RealNetworks, Inc. ("RealNetworks") as Director of Music Licensing. Earlier in my career, I worked at AMI Entertainment Network, Inc. as Senior Licensing Coordinator. Prior to transitioning to working for content licensees, I worked as a Legal and Licensing Specialist for The Harry Fox Agency. I graduated in 2000 from New York University with a Bachelor of Music.

3. I present this testimony to the Copyright Royalty Judges to describe the negotiations that led to the settlements in *Phonorecords I* & *II* and to explain certain changes in the music industry since the *Phonorecords II* settlement was reached that warrant modification of the statutory rates for mechanical licenses for the period of 2018-2022.

THE *PHONORECORDS I* SETTLEMENT

4. The *Phonorecords I* proceeding commenced in 2006. In August 2006, I became the Director of Music Licensing for Real Networks. That proceeding, no differently than this one, affected three distinct segments of the music industry: (i) the music publishers, composers, and songwriters who owned or were otherwise entitled to royalties from the musical work copyrights at issue; (ii) the record labels who relied on the statutory license under section 115 to make and distribute phonorecords (the "Labels"); and (iii) music services that offered digital downloads, limited downloads, streaming, or other forms of access to music.

5. Music publishers, composers, and songwriters were represented in *Phonorecords I* by the National Music Publishers' Association, Nashville Songwriters Association International, and Songwriters Guild of America (collectively, the "Copyright Owners"). Record labels were represented by the Recording Industry Association of America, Inc. ("RIAA"). Music services were represented by the Digital Music Association ("DiMA") and its member companies at the time: AOL, Apple, MusicNet, Napster, RealNetworks, and Yahoo! (collectively, the "Music Service Participants"). I was actively involved on behalf of RealNetworks.

6. A key disputed issue at the time was whether music streaming implicated mechanical rights at all or merely required music services to secure rights of public performance. This issue and others were the subject of proposed rulemaking by the Copyright Office during

the litigation of the rate proceeding.[1] Moreover—if a mechanical right for streaming existed at all—the positions on reasonable rates and terms diverged wildly.

7. In late 2008, following the trial of *Phonorecords I* but before the Copyright Royalty Board ("CRB") had issued its decision, the Copyright Owners and the Music Service Participants reached a settlement of those issues pertaining to music streaming. For Music Service Participants, there were four key drivers of the settlement. First, the Copyright Owners agreed to forgo claims that noninteractive streaming implicated mechanical rights under section 115 or otherwise required license authority to use musical works beyond rights of public performance. Second, the Copyright Owners agreed to an "all-in" rate structure for interactive streaming that would allow interactive services to deduct their payments for performance rights from a "headline" royalty rate to determine the mechanical rights royalties owed. Third, the royalty structure would be a percentage of revenue, as the Music Service Participants preferred, albeit one subject to certain minima and floor payments. Fourth, the percentage of revenue that music services expected to pay for both mechanical rights and performance was 10.5% (and 8.5% for accounting periods prior to 2008)—an amount that was higher than we would have preferred to pay but was deemed acceptable by Music Service Participants given prevailing market conditions, the possibility that the CRB would adopt a different rate structure (in particular, a penny rate "per play"), and the finality settlement would provide to services, some of whom had been operating without rate certainty for years, with respect to both retroactive impact and going-forward rates.

8. At the time, the prevailing business model for interactive streaming was subscription-based, rather than ad-supported, and interactive streaming services were typically

[1] *See, e.g.*, 73 Fed. Reg. 66173-82.

charging subscribers $10-$15 per month, with prices that varied by service characteristic, such as whether the service was "portable" or "non-portable." In negotiations, the Copyright Owners expressed a concern that structuring the rate solely as a percentage of service revenue could lead to a sharp decline in royalty payments in the event of lower retail pricing by services. Accordingly, the Music Service Participants agreed to accept certain minima that varied by service characteristic that would ensure a base level of compensation to Copyright Owners for the combined mechanical and performance rights in the event of price declines or the emergence of business models that monetized streaming activity less effectively. 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.

9. In negotiations, the Copyright Owners also asked the Music Service Participants to accept a "floor" fee for mechanical rights royalties below which payments could not fall after deducting performance rights payments. As noted above, it had been quite important to the Music Service Participants to have an "all-in" rate structure for both mechanical rights and performance rights. The "floor" fee for interactive streaming was set low enough, however, that it was viewed by the Music Service Participants as extremely unlikely to be triggered and considered by us to be a negotiating concession without economic impact.

10. The *Phonorecords I* settlement determined the musical work royalties paid by interactive streaming services through December 31, 2012.

PHONORECORDS II SETTLEMENT

11. In 2011, the Copyright Royalty Board commenced the proceeding for the *Phonorecords II* royalty rate proceeding for the period of January 1, 2013 – December 31, 2017.[2] At that time, I was Vice President of Music Licensing at Rhapsody.

12. Many of the same participants from *Phonorecords I*, as well as a number of new digital music services, filed petitions to participate in *Phonorecords II*. That proceeding, however, settled in 2012 in advance of the submission of written direct cases (the "2012 Settlement").[3] The amendments to 37 C.F.R. § 385 were published in the Federal Register on November 13, 2013.[4]

13. With respect to the rates and terms covered by 37 C.F.R. § 385, Subpart B, the participants agreed to continue the royalty rates and rate structure from the *Phonorecords I* settlement, although they did propose certain amendments to other aspects of the regulations set forth in that subpart that were adopted by the CRB.[5] The *Phonorecords II* settlement also included the negotiation of rates and terms for various additional types of services that had emerged. Those rates and terms were adopted by the CRB and are now embodied in 37 C.F.R. § 385, Subpart C.[6]

14. The Subpart C rates we negotiated had similar elements to the Subpart B rates: an "all-in" rate structure for both mechanical and performing rights, a percentage-of-revenue rate structure with various minima that varied by service characteristics. There was one notable

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[2] *See* 78 Fed. Reg. 67939.

[3] *Id*.

[4] 78 Fed. Reg. 67942-51.

[5] *See id.*

[6] *See id.*

difference, however. Subpart C does not contain a "floor" fee for mechanical rights following the deduction for performance rights payments.

CHANGING LANDSCAPE OF MUSIC PERFORMANCE RIGHTS

15. For many years, the acquisition of music performance rights was quite straightforward. Music publishers, composers, and songwriters affiliated with a performance rights organization ("PRO"), and the PRO would offer so-called "blanket" licenses to music users that authorized the use of any musical work in the PRO's repertory, without regard for which specific songs were played or how often, in exchange for a single fee. Since at least the middle of the last century through the time we reached an agreement to settle *Phonorecords II*, the rights to all musical works of any commercial significance could be obtained from at least one of three PROs operating in the U.S.: ASCAP, BMI, and SESAC. ASCAP and BMI are much larger than SESAC and have long been subject to consent decrees with the Antitrust Division of the U.S. Department of Justice ("DOJ").[7] These consent decrees, which were the result of antitrust litigation brought by the DOJ against those organizations, provide important protections for music users, including a right to a license upon application, protection against copyright infringement lawsuits while rates are negotiated, a prohibition against exclusive license arrangements such that affiliated publishers can grant direct licenses if they choose to do so, and in the event of a negotiating impasse, a right to have the federal court judge who supervises the decree set reasonable rates and terms in a litigated "rate court" proceeding.[8] These decrees are intended to address the market power that otherwise arises out of collective

[7] *See* PAN Dir. Ex. 1 at 1. (Statement of the Department of Justice on the Closing of the Antitrust Division's Review of the ASCAP and BMI Consent Decrees, dated August 4, 2016).

[8] *See id.* at 6-7.

licensing of performing rights by copyright owners.[9] SESAC is much smaller than ASCAP or BMI. It is not subject to an antitrust consent decree with DOJ, although its collective licensing practices create similar leverage over music users. On occasion, these practices have led to private antitrust litigation in which SESAC has agreed to settlements that addressed, at least in part, the plaintiffs' concerns.[10]

16. For many years, it had been prevailing practice for interactive streaming services to secure all of their rights to publicly perform musical works by taking a blanket license from each of ASCAP, BMI, and SESAC. In recent years, there has been fragmentation of the manner in which public performance rights are licensed by digital music services, and there is potential for significant additional fragmentation.

17. First, in 2011, ASCAP and BMI attempted to modify their practices to allow publishers to "partially withdraw," such that ASCAP and BMI would remain authorized to license certain categories of music users on their behalf, such as bars and restaurants, but would no longer be authorized to offer licenses that included their works to digital music services such as Pandora. EMI partially withdrew from ASCAP and BMI in 2011 but offered Pandora a direct license at the same percent-of-revenue rate as ASCAP had been charging. After the 2012 Settlement was reached, in late 2012 and early 2013, other major publishers partially withdrew from ASCAP and BMI and demanded significant increases from Pandora for public performance

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[9] *See id.* at 1, 6-7.

[10] *See, e.g.*, *Meredith Corp. v. SESAC, LLC*, 87 F. Supp. 3d 650, 657-59 (S.D.N.Y. 2015); *Meredith Corp. v. SESAC LLC*, 1 F.Supp.3d 180 (S.D.N.Y. 2014); Settlement Agreement in *Radio Music License Committee, Inc. v. SESAC, Inc., et al.*, No. 2:12-cv-05807-CDJ (E.D. Pa.), dated July 23, 2015, *available at* http://imgsrv.radiomlc.org/image/rmlc/UserFiles/File/Final%20SESAC% 20RMLC%20 Settlement%20Agreement.pdf.

rights.[11] These partial withdrawals—announced at a time when Pandora and other music services were already using their works and generally lacked access to reliable ownership information about which works were covered by the withdrawals—caused considerable chaos. They were ultimately determined to be inconsistent with ASCAP and BMI consent decrees, although, of course, music publishers are free to withdraw entirely from those PROs.[12] Several publishers of significant commercial importance have threatened to do just that. An on-demand service would not be viable in my view without a license to publicly perform the repertory of a major music publisher.

18. Second, in 2014, a fourth U.S. PRO known as Global Music Rights ("GMR") emerged. While the size of the GMR repertory is small in relation to ASCAP, BMI, and even SESAC, it has already attracted the rights to musical works performed by a significant number of marquee recording artists, including Bruce Springsteen, Bruno Mars, the Eagles, Pharrell Williams, and others, and it continues to grow. GMR is not subject to an antitrust consent decree.

19. In part because the PROs aggregate large numbers of commercially important rights owners into a single bundle, in part because music users lack real-time access to reliable ownership and PRO-affiliation information about the musical works they perform, and in part because the Copyright Act authorizes significant statutory damage awards for copyright

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[11] *See generally In re Pandora Media, Inc.*, 6 F. Supp. 3d 317 (S.D.N.Y. 2014) ("*Pandora/ASCAP I*"), *aff'd, Pandora Media, Inc. v. Am. Soc'y of Authors, Composers and Publishers*, 785 F.3d 73, 77 (2d Cir. 2015) ("*Pandora/ASCAP II*").

[12] *See Pandora/ASCAP II*, 785 F.3d 73, 77 (2d Cir. 2015) ("[T]he plain language of the consent decree unambiguously precludes ASCAP from accepting such partial withdrawals."); *Broadcast Music, Inc. v. Pandora Media, Inc.*, 140 F. Supp. 3d 267, 275-77 (S.D.N.Y. 2015);

infringement, a license from each of the four PROs is a "must-have" for an interactive streaming service.

20. Third, the performing rights licensing marketplace has become further complicated by recent efforts by PROs to limit the blanket licenses they offer to the "fractional" interests owned by their respective members. While ASCAP and BMI have long touted that their blanket licenses offer the right to perform any of the millions of songs in their respective repertories and immediate access to new compositions created by their members, these benefits would no longer be available under fractional licenses. Many musical works are co-owned by multiple parties, who may affiliate with different PROs (and are not obligated to affiliate with a PRO at all). Under fractional licenses, interactive streaming services and other music users would need to know what share of a work is owned by the affiliate of the licensing organization and whether any remaining share is covered by an agreement with any other licensor. Pandora does not currently have access to that information.[13] Fractional licenses would give considerable leverage to owners of even very small partial interests in works. The DOJ earlier this year announced that the ASCAP and BMI consent decrees do not permit those organizations to offer fractional licenses and declined requests for modification by ASCAP and BMI.[14] On September 16, 2016, the federal judge who supervises the BMI consent decree disagreed as to BMI,[15] but there has not been an equivalent determination for the ASCAP consent decree or appellate review. Even though the value of the underlying rights has not changed, fractional licensing will

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[13] *See* PAN Dir. Ex. 1 at 15 ("The Division's investigation uncovered that no such authoritative information source exists today, even for existing works, and, further, that songwriting credits for new releases may not be fully established until after the songs have been released.").

[14] *See id.* at 11-17.

[15] *See U.S. v. Broadcast Music, Inc.*, 64 Civ. 3787 (LLS), 2016 WL 4989938 (S.D.N.Y. Sept. 16, 2016).

almost certainly lead to higher total payments for performance rights, higher transactions costs, and greater uncertainty.

21. Rising prices for music performance rights make it increasingly likely that interactive streaming services operating under Subpart B category with a floor fee will trip the floor fee and pay an effective rate that is higher than 10.5% of revenue, even though the relative contribution of Copyright Owners to interactive streaming has not increased since the 2012 Settlement. The music services would not have agreed to extend the floor fee provisions in Subpart B in the 2012 Settlement if we had thought that services charging subscribers $9.99 per month might pay an effective percentage of revenue higher than 10.5%.

Before the
UNITED STATES COPYRIGHT ROYALTY JUDGES
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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)

DECLARATION OF ADAM PARNESS

I, Adam Parness, 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 27 day of October 2016 in New York, New York.

Adam Parness

Adam Parness

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IN THE MATTER OF:

DETERMINATION OF RATES

AND TERMS FOR MAKING AND

DISTRIBUTING PHONORECORDS

(PHONORECORDS III),

----------X

OPEN SESSIONS

Pages: 1 through 316 (with excerpts)

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4 IN THE MATTER OF:
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6 DETERMINATION OF RATES
7 AND TERMS FOR MAKING AND
8 DISTRIBUTING PHONORECORDS
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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17 Madison Building
18 101 Independence Avenue, S.E.
19 Washington, D.C.
20
21 March 8, 2017
22 9:00 a.m.
23 VOLUME I
24 Reported by:
25 Karen Brynteson, RMR, CRR, FAPR

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O P E N S E S S I O N

JUDGE BARNETT: Thank you. Could you please stand and raise your right hand.

Whereupon--

ADAM PARNESS,

having been first duly sworn, was examined and testified as follows:

JUDGE BARNETT: Please be seated.

MR. MARKS: Judge Barnett, I apologize. I didn't hear because it didn't pick up on the mic. Has he stated his name for the record or would you like me to start with that?

JUDGE BARNETT: Start with that if you would, please.

DIRECT EXAMINATION

BY MR. MARKS:

Q. Mr. Parness, would you state your name for the record?

A. My name is Adam Harris Parness.

Q. Where do you work?

A. I work at Pandora Media.

Q. What is your job title?

A. My job title is head of publisher licensing and relations.

Q. And what are your job responsibilities?

A. My team manages everything at Pandora involving the musical composition copyright. We own music publishing licensing strategy, which means that we negotiate licensing agreements with music publishers and with performing rights organizations, globally.

We operationalize those agreements, fulfilling all contractual obligations, including reporting and royalty requirements. My team also manages Pandora's day-to-day relationships with music publishers and songwriters and any entity that represents either.

Q. How long have you worked for Pandora?

A. I have worked for Pandora since July of 2016.

Q. Do you have a university degree?

A. Yes, I do.

Q. From where and when?

A. I have a Bachelor of Music obtained from New York University in 2000.

Q. And would you please briefly describe for the judges the jobs you have held since graduating from NYU?

A. Sure. I graduated from NYU in 2000 and began work at the Harry Fox Agency. At the time it

was a subsidiary of the National Music Publishers Association and was and I believe still is the largest United States based licensor of mechanical licensing rights.

I stayed in that position -- I should tell you more about it. I had a hybrid role where I worked on anti-piracy efforts, particularly in the digital sphere and worked on mechanical licensing initiatives, both in digital and the more physical worlds as well.

I left that position in 2002 to focus on running my music production and consulting business full time. I did that for a number of years. One of my clients was a digital Jukebox company by the name of AMI Entertainment Network. I eventually went to work for that company full-time.

In 2006 I joined RealNetworks running the music licensing team, focusing primarily on a business that they wholly-owned named Rhapsody, they had recently acquired from listen.com. Rhapsody at the time was the largest music subscription streaming business.

I ran music licensing strategy and relations both on the record label and music publishing side, stayed in that role through 2013

1 including the spinout of the Rhapsody business from,
2 as a separate unit from RealNetworks.
3 In the year 2013 I joined Amazon as
4 principal content acquisition manager, where I owned
5 global music publishing strategy for the company,
6 working across both digital music and digital video,
7 and stayed in that role until 2016 where as
8 mentioned before, July of last year I joined Pandora
9 as head of publisher licensing and relations.
10 Q. Mr. Parness, over the course of your
11 career, have you had any professional involvement
12 with the Digital Media Association?
13 A. Yes, I have.
14 Q. And what does DiMA do?
15 A. DiMA is a trade organization that
16 represents the collective interests of digital media
17 companies, particularly in the music sphere. They
18 represent and aggregate together those interests
19 working on legislative efforts, on rate-setting
20 proceedings, as well as all sorts of other music
21 licensing issues and matters generally affecting
22 their membership.
23 Q. And what has your personal involvement in
24 DiMA been?
25 A. I have been personally involved with DiMA

since 2006. Right now I hold the Pandora Board seat for DiMA. I held that Board seat for a number of months since joining Pandora.

I have also held a Board seat at DiMA on two previous occasions during my tenure at Amazon and during my tenure at Rhapsody, and I have attended numerous meetings over the years, both general, Board-related, and related specifically to music licensing and rate-setting proceedings.

Q. Did you prepare written direct testimony in connection with this proceeding?

A. Yes, I did.

Q. If you could please turn to the first tab of the binder in front of you, and do you see the document marked as Pandora Exhibit 875.

A. Yes, I do.

Q. And do you recognize that document?

A. Yes, I do.

Q. What is it?

A. This is my written direct testimony.

Q. And if you could please turn to the last page. Is that your signature?

A. Yes, it is.

MR. MARKS: I offer Pandora Exhibit 875 into evidence.

MR. SCIBILIA: No objection.

JUDGE BARNETT: 875 is admitted.

(Pandora Exhibit Number 875 was marked and received into evidence.)

BY MR. MARKS:

Q. If you could turn to the second tab of the binder. Do you recognize the document that has been marked as Pandora Exhibit 876?

A. Yes, I do.

Q. Is that the document that was appended to your written direct testimony as an exhibit and referred to in your written direct testimony?

A. Yes, it is.

Q. And what is that document?

A. This is the Department of Justice's closing statement regarding their Antitrust Division's review of the ASCAP and the BMI consent decrees.

Q. And is this document available to the public?

A. Yes, it is.

Q. Where can you find it?

A. You can download it where it is published on the Department of Justice's web site.

MR. MARKS: I offer Pandora Exhibit 876

into evidence.

MR. SCIBILIA: No objection.

JUDGE BARNETT: 876 is admitted.

(Pandora Exhibit Number 876 was marked and received into evidence.)

BY MR. MARKS:

Q. Where were you working when the Copyright Royalty Board commenced the Phonorecords I proceeding?

A. At that time I was working at RealNetworks.

Q. What was your title?

A. My title was director of music licensing.

Q. Were you involved in the Phonorecords I proceeding?

A. Yes, I was.

Q. And in what capacity?

A. I worked internally with my fellow colleagues at RealNetworks, you know, in working with DiMA as well, discussing the Phonorecords I proceeding, particularly in the settlement phase, assessing various offers and counteroffers around the settlement and analyzing them to discuss what rates and terms we would put forward and the viability of rates and terms that we received.

I was also part of the DiMA member working group working with other DiMA members where we would receive updates from DiMA and from our counsel, we were jointly represented in that matter, on the status of the Phonorecords I proceeding and direct involvement as well in the settlement that ultimately resolved that proceeding.

Q. Was RealNetworks one of the services that participated in Phonorecords I?

A. RealNetworks was one of the participants.

Q. And what was the role of DiMA in Phonorecords I?

A. DiMA played a coordinating role amongst all of the member companies, and we were jointly represented.

Q. What do you recall is the key elements of the dispute between music services, on the one hand, and music publishers and songwriters on the other?

A. There were a few key areas of dispute. First and foremost was whether streaming would implicate a mechanical right at all. We believed that it didn't.

There was a dispute over the overall structure of what the rates should be and then, furthermore, dispute over the general level of what

the rates should be beyond the structure itself.

Q. And how was the dispute over whether streaming implicates a mechanical right resolved?

A. That was resolved as part of the settlement amongst the participants, ultimately arriving at an agreement that interactive streaming would implicate a mechanical right and that non-interactive streaming would not implicate a mechanical right.

Q. And what was the dispute over the rate structure?

A. I'm sorry, can you repeat the question?

Q. Sure. What do you recall the dispute was over the rate structure?

A. The digital service providers largely preferred that the rate structure would be structured as a percentage of revenue versus what the Copyright Owners were asking for at the time, which was largely a per play or so-called penny rate.

Q. Do you recall any other disputes over how the rates should be structured, other than the dispute between percentage of revenue and a per-play rate?

A. Yeah. Speaking larger to the structure,

there was a fundamental dispute about what that rate should encompass; namely, the digital services taking the viewpoint that that should be an overarching, all-in publishing rate that would include the impact of both mechanical and public performance royalties or whether that rate should just be a pure mechanical-only rate.

Q. And what was the dispute over rate levels?

A. There was a very big gap between the digital service companies and the Copyright Owners during that proceeding about what the appropriate rate level would be.

JUDGE STRICKLER: Excuse me. Was that dispute, since there was a dispute between the parties as to rate structure, was there a dispute both on whether -- what the percentage would be if it was a percentage structure or what the penny rate would be, if it was a penny rate structure?

THE WITNESS: Yeah, there was a dispute on that as well.

JUDGE STRICKLER: So the dispute was sort of bifurcated, it was a dispute on the penny rate, if there was a penny rate, what it should be, and if there was a percentage rate, what it would be?

THE WITNESS: Well, speaking specifically to the percentage rate, the DiMA member companies initially believed that that rate should be 4.1 percent of revenue, and, again, just for limited downloads, because we didn't think that interactive streaming involved the mechanical right; whereas the publishers believed that it did and they were asking for a much higher rate.

JUDGE STRICKLER: Counsel.

THE WITNESS: Does that answer your question?

JUDGE STRICKLER: Yes, thank you.

THE WITNESS: Thank you.

BY MR. MARKS:

Q. How were the disputes over rate structure and rate levels resolved?

A. Can you repeat the question?

Q. Yeah, I'm sorry. How were the disputes over the rate structure and the rate levels resolved?

A. They were resolved as part of a settlement agreement between the participants that was arrived at during the Phonorecords I records proceeding before the judges had issued a decision.

Q. And what were the key drivers of the

settlement from RealNetworks' perspective?

A. A couple key drivers. One was that we arrived at a rate that was an all-in rate that encompassed both a mechanical and public performance royalties.

A couple other key drivers as well, we got to a headline rate that was a percentage of revenue, albeit with certain minima that potentially could kick in. And in looking at the level of that rate, we believed that it was viable. So this is a 10 and a half percent of revenue rate.

We did a lot of forecasting and analysis around that rate, and we believed that it was viable and sustainable for our business, as well as we got a discount -- not a discount -- but it was a lower rate for prior periods.

And the other key factor as well was that there was an acknowledgment by the publishers that non-interactive streaming would not implicate a mechanical rate.

Q. And is that consistent with your understanding of the music user perspective generally, from your discussion with DiMA and other DiMA members?

A. Yes, it is.

JUDGE STRICKLER: Question along the lines of these drivers that you are testifying to now. Up until the time of the settlement, while you were negotiating, there was a dispute as to whether or not even interactive services should be subject to a mechanical rate. Correct?

THE WITNESS: That's correct.

JUDGE STRICKLER: And eventually it was decided that a mechanical rate would apply?

THE WITNESS: For interactive streaming, yes.

JUDGE STRICKLER: And because -- was there a quid pro quo? Was the rate reduced by the Copyright Owners in negotiation because they were able to get a mechanical rate? Did they say in words or substance if we get a mechanical rate, we will agree to a lower mechanical rate?

THE WITNESS: Part of what informed that was the fact that we got an all-in rate that included -- it was an all-in rate that encompassed mechanical plus public performance. In other words, it was a headline rate of 10 and a half percent of revenue but we were able to deduct out public performance costs from that.

So that was the reason from the Services

1 point of view about why we were willing to agree to
2 a mechanical rate and interactive streaming because
3 it specifically encompassed an all-in rate where you
4 get a credit for the public performance royalties
5 that you pay.
6 JUDGE STRICKLER: Did the Copyright
7 Owners say we will accede to this all-in rate where
8 you carve out the public performance rate because
9 you are giving us your -- you are conceding that a
10 mechanical rate does apply to interactive streaming?
11 THE WITNESS: I mean I don't want to
12 overly speak to their mind, but that seemed to be a
13 determining factor.
14 JUDGE STRICKLER: Yeah. I don't want you
15 to speak to their mind. I want you to speak to what
16 you heard, what they said or what was told to you by
17 someone from DiMA as to how, what they said in the
18 negotiations.
19 THE WITNESS: Yeah. Then the answer is
20 yes.
21 JUDGE STRICKLER: Thank you.
22 THE WITNESS: Thank you.
23 MR. SCIBILIA: I would like to lodge an
24 objection to the answer that was given, the question
25 and answer before Your Honor raised a question which

was what other, the other key factor as well was that there was an acknowledgment by the publishers that non-interactive streaming would not implicate a mechanical rate and is that consistent with your understanding of the music users generally. And he said yes, I believe that is hearsay, and I object to it.

JUDGE BARNETT: Do you want to respond, Mr. Marks? Don't forget you have to turn that mic on.

MR. SCIBILIA: I'm sorry.

JUDGE BARNETT: So do I.

MR. MARKS: The question was intended to be broader than that and I -- the question was about his understanding of what the key drivers were from the perspective of music users generally, all of the key drivers of the settlement, not that last comment in particular.

JUDGE BARNETT: The objection is overruled.

BY MR. MARKS:

Q. Mr. Parness, did you expect at the time of the Phonorecords I settlement that music services would pay under the percentage of revenue prong or under the minima or floor fees that were negotiated

as part of the settlement?

A. We expected to pay based upon the percentage of revenue prong.

Q. And why is that?

A. Again, we did extensive modeling and analysis that included all of the various financial inputs and metrics that are part of that calculation, public performance costs, label costs, users, and we believed both retroactively, as well as going forward, we expected to pay on the percentage of revenue prong.

Q. Where were you working when the Copyright Royalty Board commenced the Phonorecords II proceeding?

A. I was then working at Rhapsody, which had by that point been spun out as a separate entity from RealNetworks.

Q. Were you involved in the negotiations that led to the settlement of the Phonorecords II proceeding?

A. I was, yes.

Q. In what capacity?

A. Again, I worked with, internally with my colleagues at Rhapsody to inform our viewpoints on what would be appropriate for the various rates and

terms in Phonorecords II.

I was also involved directly with DiMA, including the work groups that worked specifically on Phonorecords II. We were jointly represented in those negotiations, and I was involved with the selection and retention of counsel as well.

Q. What were the issues that were the subject of the negotiations that led to the Phonorecords II settlement?

A. There were two kind of highlight points. The first was the approach to the existing rates and terms, particularly for Subpart B, whether, you know, there was a consensus ultimately to roll those terms over or not, which was our view and initially the Copyright Owners did want to -- did ask for higher rates, so that was the first thing.

JUDGE STRICKLER: If I may interrupt, when you say the Copyright Owners did ask for higher rates, did they generically say we want the rates to be higher or did they propose specific higher rates?

THE WITNESS: There was a general, you know, dialogue, you know, we opened up by kind of talking generally about the approach. And it was mentioned that they did want to see higher percentages of revenue specifically for -- I don't

recall them turning a formal offer on that, but I was aware of one conversation that I was in the room for in person when the Copyright Owners were saying that they were going to be seeking higher rates for Subpart B services.

JUDGE STRICKLER: And the higher rates they were seeking for the Subpart B services was in the form of a higher percentage?

THE WITNESS: We spoke a little bit about that they would certainly be asking for higher percentages of revenues. I can't say that we really got into the weeds on what would happen to some of the other things, but there was talk from them about specifically wanting higher percentages of revenue.

JUDGE STRICKLER: Did they mention specific percentages?

THE WITNESS: Not that I can recall.

JUDGE STRICKLER: You said you recall what they said. Do you recall who the individual or individuals were who you were discussing this with?

THE WITNESS: Yes.

JUDGE STRICKLER: Who was that?

THE WITNESS: There was one meeting in particular that I remember with NMPA.

JUDGE STRICKLER: Who was representing

1 NMPA, who actually -- what human being actually made
2 that statement?
3 THE WITNESS: David Israelite.
4 JUDGE STRICKLER: Thank you.
5 THE WITNESS: Thank you.
6 BY MR. MARKS:
7 Q. Why did --
8 A. Just to answer -- sorry, I wasn't
9 finished with the answer from before. There was the
10 other thing that we talked about in the run-up to
11 Phonorecords II was that there were a number of
12 services that were starting to emerge at that time,
13 locker services, cloud-based offerings for which the
14 digital services and others thought that they
15 weren't either covered by the current regs or that
16 the current regs, meaning, you know, coming out of
17 Phonorecords I, Subpart B, didn't really -- didn't
18 suit the needs of those particular businesses very
19 well.
20 So one of the other things we sought to
21 talk about on that, those discussions was the
22 creation of additional service offerings for new
23 models that were emergent at the time, not just
24 cloud and locker.
25 JUDGE STRICKLER: That is the genesis of

what became Subpart C licensing.

THE WITNESS: That ultimately became Subpart C.

JUDGE STRICKLER: Was there any negotiations, as you recall them, was there quid pro quo, in other words, where the interactive streaming services said we will give you the Subpart C licenses but we're not going to give you the higher rates on Subpart B?

THE WITNESS: Can you repeat that again?

JUDGE STRICKLER: Yeah. Was there a quid pro quo, where the interactive streaming services said: All right, there will be a license and a payment under Subpart C, but in response, in return for that, there is going to be no increase in the percentage rate on Subpart B?

THE WITNESS: No, I wouldn't characterize it at that. They were largely dealt with as separate, where they were largely considered separate issues. I mean, to be clear, the Subpart C services were services that the digital services and the record labels asked for the creation of those services.

So we wanted Subpart C to be created, but I think, by and large, the creation of those service

offerings was dealt with as a separate issue from whether or not there would be increases for the existing Subpart B categories.

JUDGE STRICKLER: Well, in the negotiations did anyone, Mr. Israelite or anyone else on behalf of the Copyright Owners, indicate that there was -- that they wanted to receive a benefit in exchange for not raising the Subpart B percentage rate?

THE WITNESS: Not that I can recall.

JUDGE STRICKLER: Thank you.

BY MR. MARKS:

Q. Mr. Parness, why did you agree to continue the Subpart B rates as part of the Phonorecords II settlement?

A. We took a fresh look at the Subpart B categories, all of them, at the beginning of those discussions and beginning of the proceeding. And we drew the same conclusion that we did upon the conclusion of Phonorecords I in that settlement, which is that, you know, while, you know, not perfectly ideal, we thought that those rates including the 10 and a half percent of revenue were viable and sustainable for digital music services.

And we thought that taken on its -- on

its total, we were willing to roll over those rates rather than reopen everything for a discussion.

Q. For Subpart C, that is the outgrowth of the Phonorecords II settlement, is there a mechanical-only floor fee that applies after the deduction of fees paid for music performance rights by the Services?

A. There is not.

Q. Why not?

A. We specifically -- that was an ask of the digital services and something we negotiated for in Subpart C. To be clear, as I mentioned before, we didn't like it in Subpart B, but we agreed to it because we didn't think, you know, we would be paying the minima.

But in Subpart C, we didn't want to open up Subpart B because taken on its whole we thought the rates were viable and sustainable, but it was something that we sought to approach differently in Subpart C.

Q. Mr. Parness, how many licenses with performing rights organizations have you negotiated over the course of your career?

A. Approximately two dozen.

MR. MARKS: I have no further questions.

JUDGE BARNETT: Are you going to have more than five minutes of cross-examination?

MR. SCIBILIA: Yes, Your Honor.

JUDGE BARNETT: Okay. I think we have all had just about enough today. No reflection on the company, just the hour.

Housekeeping, let's see, first of all, we will reconvene at 9:00 o'clock in the morning. And what we have done in these larger cases for our own sanity is put together a reference paper that has a picture of each witness with their name and who they were testifying for.

And we noticed that some of you had slides early on with photos and name identification of your witnesses. We would very much appreciate you sending us JPEGs of those photos with the identifying information, and that way we won't have to take the pictures.

Judge Feder has been doing it surrepetitiously, which is probably a violation of somebody's rights.

MR. MARKS: Can we submit that by e-mail or how would you prefer?

JUDGE BARNETT: E-mail would be fine and probably preferable. Send it to CRB.

MR. ZAKARIN: We will have to arrange to send our witnesses to photographers -- I am only kidding.

JUDGE FEDER: It doesn't have to be full face, it can be profile.

MR. ZAKARIN: And not against something that tells you how tall they are?

JUDGE BARNETT: No, not at all. Thank you.

MR. STEINTHAL: Can I raise one housekeeping issue?

JUDGE BARNETT: Yes, please.

MR. STEINTHAL: We had a witness who is no longer in the employ of Google and we're unable to compel his attendance. And as a consequence in an exchange of e-mails and the like the Copyright Owners objected to our having another Google employee knowledgeable about the facts and circumstances adopt the testimony and come in and be subject to cross-examination.

JUDGE STRICKLER: Is that the substance of your emergency motion?

MR. STEINTHAL: Yes. From a logistics perspective, since we didn't hear this morning that motion mentioned, obviously we would want to arrange

1 to have that witness here next week, if the motion
2 is going to be granted and if the Copyright Owners
3 decide they want to cross-examine, rather than waive
4 cross.
5 So I just want to put that high on the --
6 I know there is a big mountain that you are dealing
7 with, but because of the logistics issues associated
8 with getting that witness who happens to be in
9 California, I just wanted to put that near the top
10 of the logistics issues.
11 JUDGE BARNETT: Thank you. I only became
12 aware of that motion during the noon recess, so we
13 will definitely elevate it.
14 MR. SCIBILIA: Yes, Your Honor. We
15 actually received the motion late last night so we
16 haven't had a chance to oppose it. We will probably
17 submit something tonight in opposition to that.
18 We believe that the witness who -- Google
19 has known the witness is no longer at the company
20 since January. They have said nothing about it.
21 JUDGE BARNETT: You know what, you don't
22 need to argue on your feet right now.
23 MR. SCIBILIA: Thank you.
24 JUDGE BARNETT: We will accept what you
25 have to say. Anything else? Thank you all. It has

been a long, warm day. Please, I implore you, if it becomes too warm, take off your jackets. I don't want to have anybody passing out here in the hearing room. It would slow us down.

We're in recess until 9:00 o'clock in the morning.

(Whereupon, at 5:06 p.m., the hearing recessed, to reconvene at 9:00 a.m. on Thursday, March 9, 2017.)

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UNITED STATES COPYRIGHT ROYALTY JUDGES

The Library of Congress

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	)
DETERMINATION OF RATES	) Docket No.
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25 Karen Brynteson, RMR, CRR, FAPR

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P R O C E E D I N G S

(9:07 a.m.)

JUDGE BARNETT: Good morning. Please be seated.

Mr. Scibilia, I think we were about ready to cross-examine Mr. Parness; is that correct?

MR. SCIBILIA: We are. Thank you, Your Honor.

JUDGE BARNETT: And, Mr. Parness, you remain under oath.

Whereupon--

ADAM PARNESS,

a witness, called for examination, having previously been duly sworn, was examined and testified further as follows:

CROSS-EXAMINATION

BY MR. SCIBILIA:

Q. Good morning, Mr. Parness.

A. Good morning, sir.

Q. Now, you graduated college in 2000, right?

A. That is correct.

Q. Okay. And you joined RealNetworks in August of 2006, right?

A. That is correct.

Q. Okay. And the Phonorecords I proceeding commenced in January 2006, right?

A. That is correct.

Q. Okay.

JUDGE BARNETT: I'm sorry. Is your mic turned on?

THE WITNESS: I was trying to figure that out.

JUDGE STRICKLER: Is there a button there for you to push.

JUDGE BARNETT: There's no button. That one should be live all the time.

THE WITNESS: I don't see a -- I don't a button anywhere.

JUDGE BARNETT: No, there is no button there, so --

THE WITNESS: Okay.

JUDGE BARNETT: If anyone didn't hear, the first question was -- I lost my volume too. The first question was you joined RealNetworks in 2006; is that right? And the answer was yes. That's not a direct quote but close enough.

(Discussion off the record.)

BY MR. SCIBILIA:

Q. So you're very familiar with your written

direct testimony in this proceeding, correct?

A. I am familiar with my written direct testimony.

Q. You read it again recently?

A. I did.

Q. Okay. And you state in paragraph 5 of your written direct testimony that "music publishers, composers, and songwriters were represented in Phonorecords I by the National Music Publishers Association, Nashville Songwriters Association International, and Songwriters Guild of America, collectively the Copyright Owners; record labels were represented by the Recording Industry Association of America, Inc., the RIAA; and music services were represented by the Digital Music Association, DiMA, and its member companies at the time, AOL, Apple, MusicNet, Napster, RealNetworks and Yahoo, collectively the music service participants. I was actively involved on behalf of RealNetworks."

Do you see that?

A. I do, yes.

Q. Okay. And you don't state anywhere in that paragraph or anywhere else in your written direct testimony that you were directly involved in

negotiating the Phonorecords I settlement, do you?

A. What do you mean by negotiating it?

Q. Directly negotiating with the Copyright Owners as defined in paragraph 5 of your statement.

A. I did not negotiate directly with the Copyright Owners.

Q. Okay. Did you negotiate directly with anybody else?

A. I worked with the other member companies in DiMA.

Q. Okay. So -- okay. So -- and you don't state anywhere in your written direct testimony that you were directly involved in negotiating the Phonorecords II settlement, correct?

A. Not in my statement, but I did meet with the Copyright Owners during Phonorecords II.

Q. Okay. When did you meet with the Copyright Owners during Phonorecords II?

A. During the months-long settlement discussions to negotiate the rates and terms for Phonorecords II.

Q. Okay. What particular month did you meet with the Copyright Owners, month or months?

A. I don't remember -- well, actually, let me think about that. That settlement was in -- I

1 don't remember the exact months offhand, but that
2 settlement took about four to five months in earnest
3 to negotiate. It was -- the whole thing was a bit
4 -- over a longer bit, period of time, but I met with
5 the Copyright Owners multiple times, both in person
6 and over the phone during that period during
7 Phonorecords II.
8 Q. Okay. And that would have been in 2012?
9 A. That would have been in 2012, yeah.
10 Q. Okay. And who did you meet with at the
11 Copyright Owners in 2012?
12 A. Specifically with members of the NMPA
13 including David Israelite.
14 Q. And who else -- was anybody else from the
15 Copyright Owners at that meeting or those meetings?
16 A. I remember their general counsel being
17 present.
18 Q. And what was the name of the general
19 counsel?
20 A. That was Jay Rosenthal at the time, I
21 believe.
22 Q. Okay. And how many meetings did you have
23 in-person meetings, where you attended with Jay
24 Rosenthal, with the -- with the Copyright Owners?
25 A. There is at least one in meeting --

in-person meeting that actually took place at NMPA that I recall.

Q. Okay. Do you recall any other meetings, in-person meetings, that you attended with the Copyright Owners in 2012 to discuss the Phonorecords II settlement?

A. There's only one that I can recall that was in person. But there's one that I specifically recall, yes.

Q. Okay. Do you recall --

JUDGE BARNETT: Mr. Marks?

MR. MARKS: I'm sorry to interrupt, but if we could ask the witness to speak a little closer to the microphone, those in the back are having a little trouble hearing. Sorry to interrupt.

JUDGE BARNETT: Thank you.

JUDGE FEDER: Can you just tap it to see if it's working?

THE WITNESS: I have the same problem.

BY MR. SCIBILIA:

Q. So you recall only one in-person meeting in 2012 that you were at where you negotiated directly with the Copyright Owners, correct?

A. That is correct.

Q. Okay. Do you recall any telephonic

conversations that you had where you directly negotiated with the Copyright Owners?

A. I remember one or two specific meetings where I negotiated with the Copyright Owners.

Q. Telephonic meetings, you mean?

A. Telephonic, yes.

Q. Okay. And when did those take place?

A. Roughly around that same time period after the in-person meeting.

Q. Okay. And who was on those telephonic conversations?

A. From what I could recall, I remember there were various -- a couple members of the DiMA member companies, largely led by our outside counsel that we had engaged. Certainly David. I don't remember all the other specific entities.

Q. Who were the --

JUDGE BARNETT: And when you say "certainly David," are you referring to Mr. Israelite.

THE WITNESS: I apologize, yes, David Israelite.

JUDGE BARNETT: Thank you.

BY MR. SCIBILIA:

Q. And what DiMA members companies were on

that call?

A. Rhapsody -- Rhapsody at the time. Let me think who else would have been involved. There might have been a representative of Amazon. Mostly outside counsel.

Q. Okay. And that was you said one call or two calls?

A. One or two.

Q. Okay. And it was the same attendees on both calls?

A. I can't remember -- recall.

Q. Okay. And who was your outside counsel that was on those calls?

A. That was Bobby Rosenbloum.

Q. Okay. And he represented DiMA?

A. DiMA and the member companies.

Q. Okay. And at the -- the in-person meeting that you described, who else was there besides members of the Copyright Owners?

A. There were members of DiMA.

Q. Okay. And who -- which members of DiMA were there?

A. I remember Lee Knife, the then executive director, specifically being there.

Q. Okay. And do you know where that meeting

took place?

A. There was one meeting, I recall, at the NMPA offices.

Q. In Washington, D.C.?

A. In Washington, D.C.

Q. Okay. And do you know how long that meeting took place?

A. I don't recall how long it took place.

Q. Now --

A. It wasn't a particularly long meeting.

Q. Now, you state that the settlement of Phonorecords I took place in late 2008 following the trial of Phonorecords I but before the CRB had issued its decision, correct? That's at paragraph 7 of your testimony.

A. I see that.

Q. Okay. And you're not an attorney, right?

A. I am not.

Q. Okay. And isn't it true that Michael King -- was Michael King -- King RealNetworks' managing attorney?

A. He was at the time, yes.

Q. And is it true that Michael King was the individual who directly negotiated the 2008 Phonorecords I settlement with the Copyright Owners

on behalf of RealNetworks?

A. He was the RealNetworks' employee who had direct contact with the Copyright Owners.

Q. Okay. And RealNetworks was also represented in those negotiations by DiMA's Jonathan Potter and Lee Knife, right?

A. That is correct.

Q. Okay. Now, I'd like to refer you to DiMA's written direct statement in Phonorecords I. It's Exhibit 3363. It should be in your binder.

A. 3363, you said?

Q. 3363.

A. Okay.

JUDGE STRICKLER: Would this be coming up on the screen as well?

MR. SCIBILIA: We can -- we can put it up on the screen. Thank you. And it would be at -- you're going to see a service list at the back. Do you have it?

BY MR. SCIBILIA:

Q. And I want to direct did your attention to the service list --

JUDGE STRICKLER: That's 3363?

MR. SCIBILIA: Oh, 3363. I'm sorry, Your Honors. And I hope the numbers are right today.

THE WITNESS: 3363, right?

BY MR. SCIBILIA:

Q. Yes. Do you have that?

A. Yeah, I do. Yes.

Q. Okay. And I want to direct your attention, Mr. Parness, to the certificate of service at the back.

A. Yes.

Q. Okay. And do you see that?

A. I do.

Q. And do you see there -- in the right-hand column, do you see David Israelite and Jacqueline Charlesworth on behalf of the NMPA?

A. Yes, I do.

Q. Okay. And do you see, on the first column, Jonathan Potter for DiMA?

A. On the bottom left, yes.

Q. Correct. And for RealNetworks, you see David Stewart and Michael King, right?

A. That is correct.

Q. Okay. You don't see your name there, right?

A. I do not.

Q. Okay. Now, you testified that RealNetworks initially proposed a rate of 4 percent

of applicable receipts for limited downloads in Phonorecords I, right?

A. Yes.

Q. You testified to that yesterday, right?

A. Um-hum.

Q. Okay. And that was a mechanical-only rate, right?

A. That is correct.

Q. Okay. It wasn't an all-in rate that includes performance, right?

A. It wasn't.

Q. Okay.

A. And it's specifically phono downloads, yes.

Q. Right. And DiMA didn't submit a rate for interactive streaming because it was taking the position that, at that time, that interactive streaming did not implicate a mechanical rate, right?

A. That is correct.

Q. Okay. And did RealNetworks later amend its rate proposal in Phonorecords I?

A. Yes.

Q. Do you know what the amended rate that RealNetworks and DiMA proposed in the Phonorecords I

proceeding was?

A. I don't recall the specifics offhand. It was higher than the initial proposal.

Q. Okay. It was higher. Do you know whether it was a mechanical-only rate?

A. I don't recall.

Q. Okay. Do you know who Dan Sheeran is?

A. I do, yes.

Q. Okay. Who is Dan Sheeran?

A. He was in a business strategy role at RealNetworks at the time.

Q. Okay. And do you know whether or not he submitted a -- submitted testimony in the Phonorecords I case?

A. I believe that he did.

Q. Okay. Are you familiar with that testimony? Have you seen it?

A. I read it at the time. I have not read it since that time.

Q. Okay. I'd like to -- to point your attention to Exhibit Amazon 322.

A. 322, you said?

Q. Yes.

A. Um-hum.

MR. MARKS: Objection.

JUDGE BARNETT: Mr. Marks?

MR. MARKS: Yes, so this -- this exhibit wasn't on the list of exhibits that was disclosed to us that it would be offered into evidence on cross. They don't have to disclose exhibits that they're using for impeachment, but it's not obvious to me how he can be impeached by a statement of somebody else. This isn't his statement.

MR. SCIBILIA: I can -- I can return to it later if that's -- I'll lay a foundation for it, but --

JUDGE BARNETT: Thank you. Sustained.

JUDGE STRICKLER: When you say you're going to lay a foundation, did you -- are you going to seek to have it admitted or are you just using it for impeachment or for some other purpose on cross?

MR. SCIBILIA: I will -- I will probably be using it for impeachment, and if not, I'll try to lay a foundation for it.

BY MR. SCIBILIA:

Q. So are you aware of whether DiMA's revised rate proposal was a mechanical-only rate or included a carveout for performance?

A. Which -- you're -- you were talking about their revised proposal during the proceeding?

Q. The revised proposal.

A. I don't recall that offhand.

Q. Did you have any access during the Phonorecords I proceeding to restricted material that didn't come from RealNetworks?

A. Not that it didn't come from RealNetworks, no.

Q. Okay. You only had access to RealNetworks' information, correct?

A. That is correct.

Q. I want to refer to your testimony from yesterday. And I want to refer you to a question and an answer. Mr. Marks asked you whether you were involved in the Phonorecords I proceeding. Do you recall that?

MR. MARKS: Could we get a page cite?

MR. SCIBILIA: Sure. I don't know if I have the page in the rough. It's a rough. All I have is the rough. So I -- we don't have a page cite for it yet.

JUDGE BARNETT: Can you count in or estimate how far into the transcript it is?

MR. SCIBILIA: Could somebody give me the transcript, and I'll estimate?

JUDGE BARNETT: First and last words on

the page? Anything just to identify the page.

MR. SCIBILIA: I don't have the page in front of me. That's why I'm --

JUDGE BARNETT: Oh. Oh, I see.

MR. SCIBILIA: I just cut and paste, used it in my outline. I'm sorry, Your Honors. It's a pretty short testimony, but I -- I'll -- I'll get it.

The question was: Were you involved in the Phonorecords I proceeding?

JUDGE BARNETT: Can you look for that question?

MR. MARKS: I don't object to him just asking that question. I'm not sure why he needs the transcript.

MR. SCIBILIA: Well --- well, I -- there's an answer that I want to get a clarification on. So I -- I really need to have it.

MR. HARRIS: I believe it's rough page 288, starting at line 14.

JUDGE BARNETT: Rough page 288, starting at line 14.

MR. SCIBILIA: Thank you, Your Honor.

JUDGE STRICKLER: Mr. Marks, do you have it?

MR. MARKS: I do, thank you.

MS. SCIBILIA: Thank you.

BY MR. SCIBILIA:

Q. And you answered: Yes, I was. Do you recall that?

A. I do, yes.

Q. Okay. And then Mr. Marks asked you: And in what capacity? And you said: I worked internally with my fellow colleagues at RealNetworks. You know, in working with DiMA as well, discussing the Phonorecords I proceeding, particularly in the settlement phase, assessing various offers and counteroffers around the settlement and analyzing them to discuss what rates and terms we would put forward and the viability of rates and terms that we received. I was also part of the DiMA member working group working with other DiMA members where we would receive updates from DiMA and from our counsel, we were jointly represented in that matter, on the status of the Phonorecords I proceeding and direct involvement as well in the settlement that ultimately resolved that proceeding.

Do you recall that?

A. I do recall that.

Q. Okay. Now, what did you mean by "I worked internally"?

A. Meaning I worked with my colleagues at RealNetworks, particularly during the settlement discussions.

Q. Okay. And the --

A. Michael King being one of them.

Q. I'm sorry?

A. Michael King being the primary.

Q. Okay. Thank you. And the testimony is a bit unclear so I'd like to get clarification. Were you testifying here that you had direct involvement in the Phonorecords I settlement?

A. Yes.

Q. Okay. And what was that direct involvement?

A. Working with the -- as you stated, internal colleagues at RealNetworks, particularly Michael King, on the crafting of the rates and terms, analyzing those rates and terms to assess our opinion on the viability and sustainability of potential outcome of a settlement, and working with other DiMA members and with DiMA during the settlement discussions.

Q. Right. But it wasn't directly

negotiating with the Copyright Owners, right?

A. It was not.

Q. Now, I want to refer you to another question. And this is a question that began with Judge Strickler's questioning about a quid pro quo.

MR. HARRIS: 294, line 12.

MR. SCIBILIA: And this starts at 294, line 12.

BY MR. SCIBILIA:

Q. Now, Judge Strickler asked you: And because was there a quid pro quo, was the rate reduced by the Copyright Owners in negotiation because they were able to get a mechanical rate, right rate, did they say in words or substance if we get mechanical rate, we will agree to a lower mechanical rate?

And you answered: Part of what informed that was the fact that we got an all-in rate, that included -- it was an all-in rate that encompassed mechanical plus performance. It was a headline rate of 10 and a half percent of revenue, but we were able to deduct out performance costs from that, so that was the reason from the Services' point of view about why we were willing to agree to a mechanical rate in interactive stream, because it specifically

encompassed an all-in rate where you get a credit for the public performance royalties that you paid.

Do you recall that?

A. I do, yes.

Q. Okay. And Judge Strickler followed up and asked you: Did the Copyright Owners say we will accede to this all-in rate where you carve out the public performance rate because you are giving us your -- you're conceding a mechanical rate does apply to interactive streaming?

Do you recall that question?

A. I do recall the question.

JUDGE BARNETT: Mr. Marks?

MR. MARKS: I just wanted to ask if I could provide the witness with a copy of the testimony.

MR. SCIBILIA: That's perfect. That's great. Thank you.

JUDGE BARNETT: Certainly. Thank you.

MR. MARKS: He's being asked to remember long answers.

MR. SCIBILIA: Yeah. No, I appreciate that. Thank you.

MR. MARKS: For the record, I'm handing him a copy of what I believe is the final

transcript, and it's in -- the -- the question he read starts on page 300.

MR. SCIBILIA: Thank you.

JUDGE BARNETT: Thank you.

MR. SCIBILIA: I appreciate it.

THE WITNESS: Do you mind if I reread the question with the transcript in front of me?

BY MR. SCIBILIA:

Q. Sure, yes.

A. Thank you. Okay. Thank you.

Q. Okay. And then -- and then Judge Strickler asked you: Did the Copyright Owners say we will accede to this all-in rate where you carve out the public performance rate because you are giving us your -- you're conceding a mechanical rate does apply to interactive streaming?

Do you see that?

A. I'm sorry, can you please repeat that?

Q. Sure. Judge Strickler asked you: Did the Copyright Owners say we will accede to this all-in rate where you carve out the public performance rate because you are giving us -- you're conceding a mechanical rate does apply to interactive streaming?

A. Which page is that on?

MR. MARKS: On page 301 of the transcript.

MR. SCIBILIA: Thank you, Ben.

THE WITNESS: 301. I see that, yes.

BY MR. SCIBILIA:

Q. Okay. And your answer was: I mean I don't want to overly speak to their mind, but that seemed to be a determining factor.

And then Judge Strickler asked: Yeah, I don't want you to speak to their mind. I want to -- mine is really rough, but I think he asked you to tell you what you actually heard from DiMA. And you said, the answer: Oh, I want to suspect he told you -- my testimony is rough here -- I want to suspect -- what you heard, what they said or what was told to you by someone from DiMA as to how -- what they said in the negotiations. And you said: Yeah, the answer is yes.

Do you see that?

A. Um-hum.

Q. Okay. And which Copyright Owner representatives, if any, said to you the Copyright Owners will accede to an all-in rate where you carve out public performance rate if the Services would concede that a mechanical rate does apply to

interactive streaming?

A. I did not speak to the Copyright Owners on that point.

Q. Okay. So you don't know whether any of them actually said that?

A. Not that I can independently verify.

Q. Okay. Now, later in your testimony -- page 296, line 22. Do you see that? There's a question from Mr. Marks that says: Mr. Parness, did you expect at the time of the Phonorecords I settlement that music services would pay under the percentage of revenue prong or under the minima or floor fees that were negotiated as part of the settlement? Do you see that?

A. I -- I recall the question, but I don't see it in mine.

MR. MARKS: It's going to be page 302 in the final transcript that's in front of the witness.

JUDGE BARNETT: Thank you, Mr. Marks.

MR. SCIBILIA: Thank you, Mr. Marks.

BY MR. SCIBILIA:

Q. And do you see that?

A. Yeah, let me just reread it, please.

Q. Sure.

A. Yes.

Q. Okay. And you testified: We expected to pay based upon the percentage of revenue prong. Do you see that?

A. Yes.

Q. Okay. And let me -- before I go to the next question there, RealNetworks operated the Rhapsody music service, right?

A. That is correct.

Q. Okay. And you testified that Rhapsody was subsequently spun off as a separate entity from RealNetworks and you continued to work at Rhapsody, right?

A. That is correct.

Q. Okay. So the next question in sequence is Mr. Marks asked you: Why, why is that? And you said: Again, we did extensive modeling and analysis that included all of the various financial inputs and metrics that are a part of that calculation, public performance costs, label costs, users, and we believed both retroactively, as well as going forward, we expected to pay on a percentage of revenue prong. Do you see that?

A. Yes.

Q. And when you said "we did extensive modeling," who were you referring to there?

A. I was referring to -- we're talking about Phonorecords II at this point?

Q. Yes.

A. Yeah, I'm referring to myself, Rhapsody, colleagues that I worked with in business, legal, and particularly financial functions, as well as feedback received from other members in the DiMA working group.

Q. Okay. So these analyses were analyses prepared by -- by DiMA or prepared -- this modeling, I mean, modeling and the analysis, were these prepared by DiMA or were they prepared by Rhapsody?

A. They were prepared by employees of Rhapsody, including myself.

Q. Okay. And none of those analysis have been produced in this proceeding, right, to your knowledge?

A. Not to my knowledge.

Q. Okay. And it's true, is it not, that Rhapsody was at one point a participant in this proceeding, right?

A. Rhapsody was a -- you're talking about in Phonorecords III, this current one?

Q. This current Phonorecords proceeding?

A. My understanding is they were initially a

participant.

Q. Okay. And they subsequently withdrew from this proceeding, right?

A. That's my understanding.

Q. Okay. Is it your understanding that DiMA was a participant in this proceeding?

A. Yes.

Q. And DiMA subsequently withdrew as well -- as well?

A. That's my understanding.

Q. Okay. And then further down on that page Mr. Marks asked you: Were you involved in the negotiations that led to the settlement of the Phonorecords II proceeding. Do you see that?

A. Yes, I see that.

Q. Okay. And you said yes?

A. Yes, I did.

Q. And then he asked you in what capacity. And you said: Again, I worked with internally my colleagues at Rhapsody to inform our viewpoints on what would be appropriate for the various rates and terms in Phonorecords II. I was also involved directly with DiMA including the work groups that worked specifically on Phonorecords II. We were jointly represented in those negotiations, and I was

1 involved with the selection and retention of counsel
2 as well. Right? Do you see that?
3 A. I do.
4 Q. And, again, what did you mean there by "I
5 worked internally"?
6 A. Meaning I worked with my colleagues at
7 Rhapsody on matters pertaining to Phonorecords II,
8 as well as with members of and employees of DiMA,
9 our outside counsel, and with other member companies
10 of DiMA at the time.
11 Q. Okay. And you weren't testifying there
12 that you had direct involvement in negotiating
13 Phonorecords II settlement, right?
14 A. Not in that particular statement --
15 Q. Okay.
16 A. -- but as I mentioned, I did have direct
17 content -- contact on a couple of occasions with
18 the Copyright Owners.
19 Q. Okay. And then further down in the
20 transcript on that page or the next page, Judge
21 Strickler asked you: If I may interrupt, when you
22 say the Copyright Owners did ask for higher rates,
23 did they generically say we want the rates to be
24 higher or did they propose specific higher rates?
25 Do you see that?

A. I do, yes.

Q. And then you testified: There was general, you know, dialogue, you know, we opened up by a kind of talking generally about the approach and it was mentioned that they did want to see higher percentage of revenue specifically for -- I don't recall them turning a formal offer on that, but I was aware of one conversation that I was in the room for in person when the Copyright Owners were saying that they were going to be seeking higher rates for Subpart B services.

Do you see that?

A. I do, yes.

Q. And who was involved in that general dialogue for the Copyright Owners?

A. I'm specifically referring to an in-person -- in-person meeting that took place. I recall myself being there. I recall the executive director of DiMA at the time being present for that meeting. And I recall David Israelite from NMPA being present.

Q. And that's the same meeting you were referring to earlier this morning?

A. I'm sorry.

Q. That's the same meeting you were

referring to earlier this morning?

A. Yes, it is.

JUDGE STRICKLER: Who was the executive director that of DiMA that you referred to; was that Mr. Knife?

THE WITNESS: That was Mr. Lee Knife.

JUDGE STRICKLER: Thank you.

BY MR. SCIBILIA:

Q. Now, in your written direct testimony, you assert that in the Phonorecords I and II settlements, the Copyright Owners agreed to an all-in rate structure. Correct?

A. Yes.

Q. And it's true, is it not, that the regulations do not provide for an all-in rate, isn't it?

A. There -- the headline -- there are multiple components of the regs that provide for the deduction of public performance royalties from the calculation. There is a mechanical-only minima in Subpart B.

Q. Okay. And a Service can't obtain both mechanical and performance rights by availing itself of the statutory license, right?

A. That is correct.

Q. Okay. And while the statute allows a Service to take a deduction for any performance royalty that's paid -- that it has paid pursuant to a separate license, it doesn't set a rate for those performance royalties, right?

A. It doesn't set the rate for public performance.

Q. Okay. And it's true, is it not, that if the -- if the mechanical-only floor you just referenced to were to kick in, the effective rate for both performance and mechanical rights could be greater than 10.5 percent, right?

A. That's true, if the mechanical and minima kicks in, it could be a higher imputed rate.

Q. Okay. In paragraph 21 -- oh, sorry, strike that.

Does Pandora's rate proposal modify the rates in Subpart B or C in any way?

A. Were you asking me to refer to a specific --

Q. I'm sorry. I just -- I'm just talking now about Pandora's rate proposal.

A. Okay. I'm sorry. Could you repeat the question, please?

Q. Sure. Does Pandora's rate proposal in

this case modify the rates in Subpart B or C in any way?

A. Yes.

Q. Okay. In what way?

A. We are asking for an elimination of the mechanical-only minima in Subpart B.

Q. Okay. And now you also state in the final sentence of your written direct testimony that: The music services would not have agreed to extend the floor fee provisions in Subpart B in the 2012 settlement if we had thought that Services charging subscribers $9.99 per month might pay an effective percentage revenue -- percentage of revenue higher than 10.5 percent. Correct?

A. I see that, yes.

Q. Okay. But you admit in paragraph 8 of your statement that the Copyright Owners were concerned that structuring a rate solely as a percentage of revenue could lead to a sharp decline in royalty payments in the event of lower retail pricing by the Services, right?

A. That was a concern expressed.

Q. Okay.

JUDGE BARNETT: Mr. Marks?

MR. MARKS: I just want to object that

he's -- one statement is talking about 2012 agreement, and the -- the first sentence talks about the Phonorecords I settlement from four years before.

JUDGE BARNETT: Thank you. Could we clarify?

MR. SCIBILIA: Okay.

JUDGE BARNETT: Thank you.

BY MR. SCIBILIA:

Q. Okay. So referring back to the last sentence of paragraph 21 of your testimony where you said, the music services would not have agreed to extend the floor fee provisions in Subpart B in the 2012 settlement if we had thought the Services charging subscribers 9.99 per month might pay an effective percentage of revenue higher than 10.5 percent. Do you see that?

A. I see that.

Q. Okay. And are you aware of whether the Copyright Owners were concerned in 2012 that the rate -- that structuring the rate solely as a percentage of revenue could lead to a sharp decline in royalty payments in the event of lower retail pricing by Services?

A. It was still a general concern, I would

say.

Q. Okay. And are you aware of whether it was a general concern in 2012 that the Copyright Owners wanted the mechanical-only floor fee provision to ensure that mechanical royalties could not fall below the 50 cent per subscriber per month after deducting performance royalties?

A. Can you repeat the question?

Q. Sure. In paragraph 9 of your statement, you say that in negotiations, the Copyright Owners also asked the music service participants to accept the floor fee for mechanical rights royalties below which payments could not fall after deducting performance rights payments. Do you see that?

A. I do, yes.

Q. And you're referring to 2008, right?

JUDGE STRICKLER: Which paragraph was that?

MR. SCIBILIA: Paragraph 9, the first sentence.

THE WITNESS: Right, and that's specific to the Phonorecords I proceeding.

BY MR. SCIBILIA:

Q. Phonorecords I, right. Are you aware of whether there was any change in the position of the

Copyright Owners between 2008 and 2012 with respect to their desire to have a floor fee below which payments could not fall after deducting performance rights payments?

A. I'm not aware if their position changed or not.

Q. Okay. Do you know who negotiated the 2012 settlement on behalf of the music service participants?

A. Yes, I do.

Q. Who were they?

A. Primarily Bobby Rosenbloum, our outside counsel, with Lee Knife, the executive director of DiMA at the time. I believe that Greg Barnes, the general counsel of DiMA at the time, was also involved and various -- so you're asking directly with the Copyright Owners?

Q. Yes.

A. It was primarily them. Primarily that -- Bobby Rosenbloum at Greenberg Traurig and other associates of his.

Q. Okay.

A. Of course, jointly representing DiMA and the member companies.

Q. Okay. Just going back for a second,

because I -- I forgot to ask a question, paragraph 9. When you said in negotiations the Copyright Owners also asked the music service participants to accept a floor fee below which payments could not fall after deducting go the performance rights payments, you were not personally involved in those conversations, right?

A. Directly with the Copyright Owners?

Q. Yes.

A. I was not.

Q. Okay. So in paragraph 9 of your statement, you also say that the floor fee for interactive streaming was set low enough, however, that it was viewed by the music service participants as extremely unlikely to be triggered and considered by us to be a negotiating concession without economic impact.

Do you see that?

A. I see that statement.

Q. Okay. Which music services said that?

A. RealNetworks, MusicNet, and Napster.

JUDGE STRICKLER: What -- the question was which music services said that? And that question is a little bit vague. Which music services said that to whom? Said it to you? Said

it to the Copyright Owners?

THE WITNESS: Specifically to one another in the context of our DiMA-led working group.

JUDGE STRICKLER: Are you aware if any of those music services representatives made such a statement to the Copyright Owners themselves in negotiations?

THE WITNESS: I wouldn't know the answer.

JUDGE STRICKLER: Thank you.

BY MR. SCIBILIA:

Q. Now -- now, you include in your written direct testimony a section entitled Changing Landscape of Music Performance Rights, correct?

A. Yes, I do.

Q. And you -- yesterday Mr. Marks showed you a document which was admitted into evidence as 876. And it was the Department of Justice's statement on the closing of the Antitrust Division's review of the ASCAP and BMI consent decrees. Do you recall that?

A. I do, yes.

Q. Okay. And -- and you're familiar with that document? You read it?

A. I have, yes.

Q. Okay. Now, you state in paragraph 17 of

your statement, that one of the ways in which the landscape of music performance rights has changed is that certain music publishers partially withdrew their digital performance rights from ASCAP and BMI between 2011 and 2013, right?

A. Yes, I see that.

Q. And it was in 2011, correct, that BMI partially withdrew its rights?

A. Right, that's when they started to attempt to withdraw.

Q. Okay. And it was in 2011 when ASCAP and BMI, as you state here, modified their practices to allow for such partial withdrawal, right?

A. Yes, that's when they attempted to modify their practices.

Q. Correct. And so the digital services were aware of the possibility of partial withdrawals at the time of the 2012 settlement, right?

A. It was an emerging issue.

Q. Okay. And you admit in your testimony that both ASCAP and BMI -- both the ASCAP and BMI rate courts concluded that the publishers could not withdraw partially their rights from the PROs to license the digital services?

A. Where in my statement are you referring

1 to?
2 Q. Sure. In 17 you say, they -- they, in
3 the -- in the last -- second to last sentence, they
4 were ultimately determined to be inconsistent with
5 ASCAP and BMI's consent decrees, although of course
6 music publishers are free to withdraw entirely from
7 the PROs. Do you see that?
8 A. I do.
9 Q. And the "they" you're referring to there
10 were the partial withdrawals, right?
11 A. Yes, that's correct.
12 Q. Okay. And those rulings by the ASCAP and
13 BMI rate courts were upheld on appeal by the Second
14 Circuit, right?
15 A. They were, yes, it's my understanding.
16 Q. Okay. And are you aware that -- you are
17 aware because you put a document into evidence.
18 You're aware that the Department of Justice
19 conducted a review of the consent decrees and was
20 considering whether to permit partial withdrawals,
21 right?
22 A. I am aware of that.
23 Q. Okay. And that the -- the Department of
24 Justice, after extensive investigation that took
25 over a year, refused to modify the consent decrees

to permit partial withdrawals?

A. I'm aware of the conclusion, yes.

JUDGE STRICKLER: When you say -- when you say -- are you making reference to the document that you just pointed out?

MR. SCIBILIA: Correct. That's the -- the closing statement of the Department of Justice on the issue of -- of fractional licensing.

JUDGE STRICKLER: That's why I asked because you -- you said fractional licensing. Maybe I'm wrong --

MR. SCIBILIA: Sure. No, no.

JUDGE STRICKLER: I haven't read it for a couple of days, but I thought that was only on fractional licensing, not partial withdrawal.

MR. SCIBILIA: It's a good question, Your Honor. And in -- on page 4 in the second paragraph, we can refer that -- refer Mr. Parness to that.

THE WITNESS: This is to document 876?

BY MR. SCIBILIA:

Q. Document 876.

A. You said page 4.

Q. And in the -- the second paragraph that begins with "the division," it says, "the Division has also decided that it will not at this time

support other proposed decree modifications."

Do you see that?

A. I do see that.

Q. And it says, "The most significant of the proposed modifications was a proposal supported by ASCAP, BMI, and music publishers to allow music publishers to partially withdraw from ASCAP and BMI, thereby prohibiting the PROs from licensing the withdrawing publishers' music to digital services such as Spotify or Pandora." Do you see that?

A. I see that.

Q. Okay. So you're aware that, absent any reconsideration by the Department of Justice or the Second Circuit Court of Appeals, that the publishers are not permitted to partially withdraw their rates from the PROs, right?

A. Right. I know there's one litigation in -- probably not the BMI one, but I'm aware of that, yes.

Q. Okay. And you have no reason to believe or basis to believe that the Department of Justice or the Second Circuit Court of Appeals is taking any action to reverse their decisions, correct?

A. I'm aware of a pending litigation between BMI and the Department of Justice.

Q. What's that litigation about?
A. BMI, to my understanding, disagrees with the Department of Justice's conclusion.
Q. On partial withdrawals?
A. I believe so.
Q. You state in paragraph 17 of your statement that music publishers are free to withdraw entirely from the PROs. Do you see that?
A. 17 of my statement, you said?
Q. Um-hum. Paragraph 17.
A. Yes, I see that.
Q. Okay. And are you aware that music publishers have licensed their performance rights through performing rights organizations for over 100 years?
A. I am, yes.
Q. Okay. And you're aware of the process required by ASCAP to completely withdraw rights from ASCAP?
A. In general, yes.
Q. And is it an extensive process?
A. It is an extensive process.
Q. Okay. And are you aware of the process required by BMI to complete -- completely withdraw from that society?

A. In general, yes.

Q. And is it an extensive process as well?

A. It is also an extensive process.

Q. Okay. And as someone who deals with music publishers, you're aware that PROs provide services that it would be extremely difficult for any individual music publisher to engage in, right?

A. Kind of a general statement. Can you repeat the question again?

Q. Sure. What about -- what about the licensing and monitoring of performances in bars and clubs across the country? Would that be difficult for an individual music publisher to undertake?

A. Potentially.

Q. Okay. And what about licensing and monitoring performances on disparate terrestrial radio stations across the country?

A. It's not an easy task by any means. I wouldn't necessarily, you know, speak to whether they can or can't do it.

Q. Okay. And you don't have any idea, if a music publisher wanted to completely withdraw from a PRO, how long it would take to develop the infrastructure to engage in such licensing activities, do you?

A. I do understand it would be an extensive undertaking.

Q. Okay. And you would have no idea how much it would cost them to do that, right?

A. I know it costs significantly, but I haven't delved deep into what those costs are.

Q. Now, you have no evidence that any publisher is currently seeking to withdraw entirely from any PRO, do you?

A. I've heard anecdotally some publishers are considering it.

Q. What have you heard anecdotally?

A. I don't know if I should speak to this in open court or not.

Q. Oh. Yes.

MR. MARKS: Can we clear the courtroom so the witness can give a complete answer?

MR. SCIBILIA: Thank you, counsel.

JUDGE BARNETT: We can, but do we have other matters that we can do in open court and then come back?

MR. SCIBILIA: We could go back to this, sure. Sure.

JUDGE BARNETT: Thank you.

BY MR. SCIBILIA:

Q. Now, you state in paragraph -- we'll have to go back to this too.

You point out that in 2014 a fourth U.S. PRO called Global Music Rights emerged, correct?

A. I'm familiar with the general statement but where are you --

Q. It's in paragraph 18 of your statement?

A. Yes, yes, I see that.

Q. And you admit that the size of the GMR repertoire is small in relation to ASCAP, BMI, and even SESAC, right?

A. Yes.

Q. Okay. Do you know what GMR's market share of the performing rights marketplace is?

A. Roughly, yes.

Q. What is it, roughly?

A. It's roughly in the 3, maybe 4 percent area.

JUDGE STRICKLER: When you say 3 to 4 percent area, are you referring to number of artists, publishers, revenue? What's the 3 or 4 percent?

THE WITNESS: So just to be clear, that's a rough characterization, because they haven't published that anywhere publicly, to my knowledge.

I would say that's like a rough demand-weighted -- weighted market share, meaning that though they represent a small number of writers, their writers happen to be very popular, and, you know, that's like the demand weight. So maybe like the percentage of, you know, spins that their repertoire would see on like a major music service relative to others, roughly 3 to 4 percent.

JUDGE STRICKLER: When you say spins on a major service, are you talking about just streaming services as opposed to downloads. Just zeroing in on your testimony, 3 to 4 percent of spins, spins means what on where?

THE WITNESS: I -- I could speak with -- you know, again, these are general, not scientific numbers. I could speak specifically with regard to the usage of their repertoire that I've seen on digital music services. I haven't studied that with regard to like download services or terrestrial radio.

JUDGE STRICKLER: So your 3 or 4 percent refers to streaming. Does it refer to interactive or non-interactive or you're not making a distinction.

THE WITNESS: It's probably about both.

Again, it's not scientific. But I would say it's the same for interactive and non-interactive.

JUDGE STRICKLER: Thank you.

THE WITNESS: Thank you.

BY MR. SCIBILIA:

Q. Okay. And GMR is a performing rights society so this -- the market share has nothing to do with mechanical rights, correct?

A. Yeah, they're a performing rights society.

Q. Okay. Do you know how many songwriters GMR represents?

A. Roughly about 100.

Q. Okay. Now, in paragraph 20, you refer to recent efforts by the PROs to limit the blanket licenses they offer to the fractional interests owned by the respective members, correct?

A. Yeah. I'm just trying to find that. That's in 20, you said, right?

Q. Yes.

A. Which statement specifically?

Q. That recent -- there has been recent efforts by PROs to limit the blanket licenses they offer to the fractional interests owned by the respective members.

A. Yes, I see that.

Q. Okay. And it's true, is it not, that the PROs have always licensed only the fractional interests that have been licensed to them by their member publishers and songwriters?

A. That's not my understanding.

Q. Okay. Well, you're aware, are you not, that it wasn't the PROs that took efforts to change the way PRO licensing had operated but, rather, it was the Department of Justice that took such efforts?

A. Can you repeat that statement?

Q. Sure. You're aware that it wasn't the PROs that took efforts to change the way PRO licensing had always operated but, rather, it was the Department of Justice that took such efforts?

A. I think my understanding was that ASCAP and BMI asked the Department of Justice for guidance on that question.

Q. Did -- did ASCAP and BMI ask the Department of Justice to change the way they license works from fractional licensing to full works licensing?

A. My recall is that they asked them to --

MR. MARKS: Objection.

JUDGE BARNETT: Mr. Marks?

MR. MARKS: Objection, lack of foundation. He hasn't even established that the factual predicate --

JUDGE BARNETT: Thank you.

MR. MARKS: -- was completely inaccurate to the facts of the case.

JUDGE BARNETT: I don't need a speaking objection, Mr. Marks. Thank you.

MR. MARKS: I apologize.

JUDGE BARNETT: Do you want to respond to the objection?

MR. SCIBILIA: Mr. -- Mr. Parness put in a document the Department of Justice's final closing argument on this issue, and he -- he's testifying that he knows about it, so I think I'm entitled to ask him what he knows and how he knows it.

MR. MARKS: I'm not objecting to his asking what he knows and how he knows it, but I was objecting to was the factual predicate the questions were assuming.

JUDGE BARNETT: Sustained.

MR. SCIBILIA: Okay.

BY MR. SCIBILIA:

Q. What efforts did the PROs take to limit

the blanket licenses they offer to the fractional interests owned by the -- by their respective members?

A. What -- can you repeat the question?

Q. What efforts did the PROs take to limit the blanket licenses they offered to the fractional interests owned by their respective members?

A. To my understanding, they asked the Department of Justice to essentially consider the effect of the consent decrees on that issue.

Q. But did they ask the Department of Justice to limit the blanket licenses they offered to the fractional interests owned by their respective members?

A. They did ask them to look at that issue.

Q. You say they asked them to look at that issue. I guess I'm asking you did they ask them specifically to limit the blanket licenses they offered for the fractional interests owned by their respective members?

A. I believe they did, yes.

Q. Okay. Now, the Department of Justice's Antitrust Division requested comments on the PRO licensing of jointly owned works in 2015, correct?

A. I believe they did, yes.

Q. Okay. And this request came after the Department of Justice solicited comments on consent decrees more generally, right?

A. I believe so.

Q. And according to the Department of Justice, in the course of that comment process, certain industry stakeholders recommended additional modifications regarding ASCAP's and BMI's licensing practice related to jointly owned works, correct?

A. Um-hum.

Q. Okay. And do you know whether -- do you know who any of those unnamed stakeholders who recommended modifications regarding ASCAP and BMI's licensing practices were?

A. I don't recall.

Q. Do you know whether one of those was Pandora?

A. I don't recall that.

Q. Do you know whether one of them was Amazon? When you were at Amazon.

A. At what time period?

Q. When you were at Amazon.

A. I don't recall that.

Q. Okay. And the request calls for public comment on the following issues, and the first issue

is have the licenses ASCAP and BMI historically sold to users provided the right to play all the works in each organization's respective repertory, whether wholly or partially owned, correct?

A. Say that again.

Q. Have the licenses ASCAP and BMI historically sold to users provided the right to play all the works in each organization's respective repertory, whether wholly or partially owned?

A. That's my understanding that they have.

Q. Okay. And isn't it true that it was the interpretation of ASCAP and BMI, who were also parties to the consent decrees, that the notion that ASCAP and BMI have always granted full work licenses to the works in their respective repertories was inconsistent with long-standing industry practice and was actually a new requirement?

A. That was their opinion, as I understand it.

Q. Okay. And isn't it true that the Copyright Office agreed with that interpretation, that fractional licensing is a long-standing industry practice?

A. I do remember reading that in the Copyright Office, one of their publications, yes.

Q. Okay. And you admit in your written direct testimony that the judge that supervises the interpretation of the BMI consent decree, Judge Stanton -- I'll go to your testimony. It says in paragraph 20, "The DOJ earlier this year announced that the ASCAP and BMI consent decrees do not permit those organizations to offer fractional licenses and declined requests for modification by ASCAP and BMI." Do you see that?

A. I see that.

Q. And then you say on September 16th, 2016, the federal judge who supervises the BMI consent decree disagreed as to BMI, correct?

A. Yes, I see that.

Q. Okay. And it's true, is it not, that songwriters, often through their publishers, register their respective interests in songs with their chosen PRO?

A. Yes, that's common practice.

Q. And in some cases, all of the writers to a song may belong to the same PRO, but in many cases they don't, right?

A. That is correct.

Q. And if a PRO were to issue a full works license for a musical work co-written by an ASCAP

writer and a BMI writer, even though it had only the licenses -- the share written by the ASCAP writer, it would have to account to the BMI writer, correct?

A. Technically, yes.

Q. Okay. And are you aware of ASCAP ever accounting to BMI with respect to shares of co-owned works?

A. I'm not privy to the specifics of ASCAP and BMI distributions.

Q. Okay. BMI and ASCAP rate courts sometimes set different rates for the same type of license, right?

A. That has happened.

Q. And that happened with Pandora, correct?

A. It did happen.

Q. Okay. And if ASCAP issued a full work license to Pandora for its interactive streaming service how would it account to a BMI writer?

MR. MARKS: Objection, lack of foundation.

JUDGE BARNETT: Asked and answered. So sustained.

BY MR. SCIBILIA:

Q. You don't know whether it would do so at the ASCAP or the BMI rate?

MR. MARKS: Same objection.

JUDGE BARNETT: Sustained.

BY MR. SCIBILIA:

Q. Did you try to -- when you were at -- well, at Pandora, have you tried to carve out of your ASCAP licenses works as to which ASCAP held only fractional shares by reason of the fact that you already had a license for BMI for a fractional interest in that same song?

A. That might be a question that's better answered not in open court.

Q. Okay. Can we maybe just -- I have a few -- a few more questions -- maybe just go into restricted now?

JUDGE BARNETT: A few more questions that are -- involve restricted material?

MR. SCIBILIA: Yes.

JUDGE BARNETT: Okay. If you are currently in the courtroom and are not permitted under the protective order to hear confidential information in this proceeding, please wait outside.

(Whereupon, the trial proceeded in confidential session.)

O P E N S E S S I O N

MR. STEINTHAL: Your Honor. Can I address a housekeeping issue?

JUDGE BARNETT: Yes.

MR. STEINTHAL: We -- we can withdraw our motion with respect to the witness who is no longer an employee of Google because we reached an agreement with the Copyright Owners whereby we are waiving cross-examination of certain of their witnesses, they're waiving cross-examination of certain of our witnesses, and Mr. Alyeshmerni's written direct testimony will come in without objection from the Copyright Owners. That's one less motion for you to have to resolve.

JUDGE BARNETT: Thank you, Mr. Steinthal. You really know how to curry favor.

JUDGE STRICKLER: Are you building up good momentum with regard to Dr. Gan's deposition?

MR. STEINTHAL: I can't speak to that, I'm afraid.

JUDGE BARNETT: Before you get started, raise your right hand, please.

Whereupon--

CHRISTOPHER PHILLIPS,

having been first duly sworn, was examined and

testified as follows:

JUDGE BARNETT: Please be seated.

DIRECT EXAMINATION

BY MR. SINGH:

Q. Good morning, Mr. Phillips. Can you please state your full name for the record?

A. Christopher Phillips.

Q. Where do you currently --

JUDGE BARNETT: I'm sorry, Mr. Phillips, Phillips can be spelled different ways. Can you spell your name for the record, please?

THE WITNESS: Yes. It's P-h-i-l-l-i-p-s.

JUDGE BARNETT: Thank you.

BY MR. SINGH:

Q. And where do you work, Mr. Phillips?

A. Pandora.

Q. What's your job title at Pandora?

A. Chief product officer.

Q. And what are your responsibilities as the chief product officer at Pandora?

A. So my responsibilities include defining our product strategy, our roadmap of what products we will bring to market, driving development and go-to-market -- so I'm responsible for defining the product strategy and our product roadmap, what we're

PUBLIC VERSION

Before the
UNITED STATES COPYRIGHT ROYALTY JUDGES
The 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 DIRECT TESTIMONY OF MICHAEL HERRING

(On behalf of Pandora Media, Inc.)

INTRODUCTION

1. My name is Michael Herring. I am the President and Chief Financial Officer of Pandora Media, Inc. ("Pandora" or the "Company"). I report directly to Pandora's Chief Executive Officer, Tim Westergren, and I am a member of the Company's executive committee.

2. Before joining Pandora in 2013, I served as Vice President of Operations at Adobe Systems Incorporated, the well-known computer software company. I joined Adobe in 2009 from Omniture Inc., a company specializing in website analytics and online marketing automation. Beginning in 2004, I was Omniture's Executive Vice President and Chief Financial Officer. Before Omniture, I served as Chief Financial Officer of MyFamily.com (now Ancestry.com), having joined that company in October 2000. I came to MyFamily.com from ThirdAge Media, an internet company where I served as Vice President, Finance, and before that Anergen Inc., a Silicon Valley biotech firm, where I served as Controller. I am a Certified Public Accountant, and I graduated with a Bachelor of Arts in Economics and Political Science from UCLA in 1991.

3. As President and Chief Financial Officer, I am responsible for the overall financial management of Pandora, including its financial reporting and transparency in accordance with U.S. Securities and Exchange Commission ("SEC") regulations and industry guidelines. I oversee a staff of over 1,300 people who are responsible for all aspects of the Company's finances and accounting, including reporting to SEC and investor relations. Operationally, I help to drive the Company's monetization strategy, and I am responsible for the Company's business strategy both generally and with respect to our music licensing cost structure in particular. Pandora's Content Licensing department—which executes our content licensing strategies, including our relationships with music publishers and record companies—reports directly to me. Additionally, the following departments also report to me: Sales, Facilities/Real Estate, Revenue Operations, Finance, Accounting, Internal Audit, Investor Relations, Enterprise Systems, IT Support, Legal, Tax & Treasury, and Technical Operations.

4. I present this testimony to the Copyright Royalty Judges to: (i) provide an overview of Pandora's history and evolution as a music service; (ii) describe Pandora's multi-billion dollar investments in developing innovative products for making music accessible to the public; (iii) explain the impact of music rights license fees on Pandora's finances and financial viability; and (iv) comment on certain aspects of Pandora's proposed rates and terms for this proceeding.

AN OVERVIEW OF PANDORA[1]

5. In 2000, Tim Westergren, Will Glaser, and Jon Kraft started Savage Beast Technologies ("Savage Beast"), the company that would later become Pandora. Savage Beast was founded based on a vision of using the internet as a platform to deliver a smart recommendation service that could help listeners discover music that they would love and would give artists the opportunity to have their music discovered by fans who might not otherwise have learned about it. This vision grew into what is now known as the Music Genome Project (the "MGP"), which is a method of making music recommendations that forms the core of Pandora's service. The MGP is not the typical "people who bought this also bought that" recommendation methodology used by other collaborative filtering-based services, which are essentially popularity contests that favor already-established artists. Rather, the recommendation methodology behind the MGP is based on musical similarity, without regard to popularity—a level playing field for all music. The MGP, as more fully described in Paragraphs 13-18 below, utilizes technology and human talent to map out a song's key musical characteristics (or "genes"), which are expressed as numerical values, and uses mathematical algorithms to identify other songs with similar musical "DNA" to those a user already knew and liked.

6. Savage Beast's original business plan was to license the MGP technology as a recommendation tool to other companies. This initial strategy led Savage Beast to market the MGP as a tool that music retailers and music websites could use to drive new music sales and

[1] In written direct testimony submitted in the *Web IV* Copyright Royalty Board proceeding, Tim Westergren described Pandora's origins and the Music Genome Project in detail. I have incorporated relevant portions of Mr. Westergren's testimony here and in my description of the Music Genome Project. I am personally knowledgeable about the events that predate my arrival at Pandora from conversations over time with Mr. Westergren and others and from my familiarity with the testimony Mr. Westergren provided in *Web IV*.

consumption, including web tools that allowed customers to integrate the MGP technology into their websites through application programming interfaces as well as software for internet enabled kiosks located in "brick-and-mortar" retailers (like Tower Records, Best Buy, and Borders) that allowed consumers to discover new music that shared characteristics of the songs they already enjoyed.

7. This strategy was not successful, and Savage Beast struggled financially. The CD market was on the decline, internet portals and retailers were struggling, and retail stores were increasingly unwilling or unable to invest in listening kiosks. Savage Beast soon exhausted its initial investment and resorted to salary deferral for its employees. Mr. Westergren and the other founders took on substantial personal debt to keep the business alive.

8. In 2004, Savage Beast determined that the MGP would be better employed outside the music retail business. The team recognized that radio remained a robust business, and that radio listening was increasingly shifting to the internet. Believing that it could leverage its core technology to develop a customized radio product that was significantly easier to use and far more compelling than the online radio options available at the time, Savage Beast made the decision to shift to a consumer-based internet radio model. It repurposed the MGP tool into a playlist engine, renamed the company Pandora Media, and set about creating a consumer-facing product and brand.

9. In transitioning to radio, Pandora preserved the Company's core goals of connecting listeners with new music and helping artists find audiences for and earn income from their music. Since its launch in 2005, Pandora has become the leading music streaming service of any kind in the United States.

10. The creation of Pandora, in a way, was the creation of a new market for radio-style music streaming. Indeed, Pandora has been not just a newer, better, and more modernized version of traditional radio, it has been a highly promotional form of music delivery that drives discovery, which has led to further paid consumption through concerts, record sales, and on-demand streaming on other music services, to the benefit of the entire music ecosystem. Pandora has brought invaluable exposure to talented, but otherwise lesser-known, artists. Pandora's listeners frequently send feedback that this is precisely their experience when they listen to Pandora.

11. Pandora currently has just under 78 million active monthly users,[2] which is down modestly from a peak of more than 81.5 million active users in 2014. Since Pandora's launch, our listeners have created over 10 billion music stations. Pandora's MGP includes approximately [redacted] uniquely analyzed songs from over 150,000 artists and spanning over 600 genres and sub-genres. We have 75 billion "thumbs up" or "thumbs down" data points of feedback from users on individual recordings, and we collect 1 billion data points a day from listener behavior to leverage for personalization and product improvements. In addition, third-party research shows that Pandora continues to be the most popular source in the United States for listening time across both internet radio and other internet streaming audio services.[3]

12. The next phase in Pandora's evolution is its transition from a noninteractive service subject to the statutory license in section 114 of the Copyright Act to a service with interactive product offerings, including a forthcoming on-demand tier of service. As I explained

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[2] Total monthly listeners are defined as the number of distinct registered users that have requested audio from our servers within the trailing 30 days to the end of the final calendar month of the period. Actual as of September 2016 is 77.9 million.

[3] *See* PAN Dir. Ex. 4, at 5.

in my April 20, 2016 declaration in support of Pandora's opposition to the motion filed by the National Music Publishers Association, Harry Fox Agency LLC, Nashville Songwriters Association International, Church Music Publishers Association, and Songwriters of North America (the "Copyright Owners")[4] to deny Pandora's petition to participate in this proceeding, Pandora has been developing interactive product offerings to attract users who prefer, or retain users who at times prefer, an on-demand or "lean-forward" listening experience. The new tiers of service that Pandora is launching, and the rationale for them, are described in detail in the accompanying Written Direct Testimony of Christopher Phillips, Pandora's Chief Product Officer. This initiative has involved a complete redesign of Pandora's service, although the key elements that differentiate Pandora in the marketplace and that are responsible for our success to date remain at the core of the redesigned service. Indeed, Pandora's particular interactive product offerings would not have been possible without the tools developed, and the knowledge of user listening preferences acquired, in connection with our years of operating the noninteractive service.

PANDORA'S INVESTMENTS IN INNOVATION AND PRODUCT DEVELOPMENT

The Music Genome Project

13. The MGP has been developed and refined over the past 16 years. Shortly after the Company was founded (when it was still known as Savage Beast), the Company hired Dr. Nolan Gasser, a musicologist from Stanford, to help develop the MGP. Dr. Gasser and Mr. Westergren initially developed the "pop/rock" genome. While further refining the pop/rock genome, Dr. Gasser and Mr. Westergren also developed genomes for Jazz, Hip-Hop/Electronica, World Music, and Classical Music. These genomes formed the taxonomical

[4] I understand that several of the Copyright Owners have withdrawn from this proceeding.

structure subsequently used to map additional genres of music for the MGP.

14. Mr. Westergren and Dr. Gasser also developed a standardized process of analyzing each recording (listening and assigning a score to each gene based on its role in the work) and trained a team of music analysts to begin building the MGP's musical catalog. Today, Pandora has over 600 different genres and subgenres. Each genome contains a set of hundreds of individual "genes" or traits typically present in that genre of music, including granular details on instrumentation, tempo, form, melody, harmonic structure and lyrical content of the works.

15. The MGP remains the heart of Pandora, and it is the key feature that differentiates our service from those of our competitors in the music streaming space. The MGP that exists today represents an enormous and continuing investment in software, data, infrastructure, and content management. While the MGP retains much of the fundamental architecture and algorithms that were developed back in 2000, Pandora has spent, and continues to spend, significant resources to continue to develop it. Unlike some of Pandora's competitors (whose customized products incorporate fully computer-driven song-selection models), the MGP coding process relies extensively on input from over 80 highly trained Pandora employees, including expert music analysts, curators and scientists.[5]

[5] The expertise of these individuals comes at significant cost to Pandora. To determine whether the value we get from the MGP was worth the significant cost, Pandora has experimented with using only computer-driven tools for music selection. We have not been satisfied with the results of these experiments. Although computer-driven tools continue to be useful to Pandora as part of our team's analysis, the automated tools that are currently available cannot grasp the same musical subtleties as a trained human ear, and they are equally unable to surface effectively all the lesser-known music to which popularity-based algorithms are inherently blind.

16. Pandora's music curation team selects the music to be incorporated into the MGP, spending significant time and resources searching for new music through exhaustive research, chart tracking, as well as comprehensive coverage of a wide range of music publications, blogs, and other forms of commentary and criticism.[6]

17. Once the curators have chosen the songs to be included in the MGP, they pass the tracks on to Pandora's team of more than thirty music analysts, all of whom are musicians with deep academic grounding in music theory. The music analysts then study the songs and analyze them according to their component characteristics, or "genetic" parts, and create musical DNA for each song. Depending on the genre, each song will be analyzed by examining up to 450 musicological traits. Each trait represents an identifying element of the song that must be aurally detected and understood by the analyst. Through multiple listens, analysts evaluate each track according to both audible traits (such as tempo, vocal range, and instrumentation) and more stylistic traits (such as blues influence and lyrical quality). Over the sixteen years since the MGP was invented, our music analysts have devoted, collectively, hundreds of thousands of hours listening to and cataloging the musicological traits of approximately [redacted] tracks in the MGP. Our team currently analyzes approximately [redacted] additional tracks each month.

18. All of Pandora's music analysts have the training and musicological expertise to be able to identify and describe these musical characteristics and to assess them according to a uniform system, so that songs can be compared to one another on an objective basis. Pandora has rigorous hiring and training requirements to ensure maximal integrity of the MGP. Each

[6] Today, Pandora receives virtually all of its content in the form of direct feeds from content owners pursuant to license agreements but only a portion of the recordings to which Pandora has access are incorporated into the MGP. If the music curation team identifies music it wants to incorporate that is not covered by an existing license, Pandora's Content Licensing team is asked to secure a license.

prospective analyst must pass an exam even to be considered for a music analyst position. Once hired, music analysts in training must review the same song and compare results, and repeat that process until the results are consistent. The consistency that results from Pandora's rigorous hiring criteria and training method ensures the kind of accurate data that can be input into the mathematical algorithm that underlies the MGP.

Investments in Algorithms Used to Create Playlists

19. The MGP is the cornerstone of Pandora's playlist system and forms the musicological basis for connecting recordings on the service. However, the intellectual property of this system has expanded substantially. Pandora now uses dozens of different algorithms to determine what to play as the next track on a station, including, but not limited to: (i) Pandora's proprietary content-based recommender, the MGP algorithm; (ii) algorithms that are based on collective intelligence; and (iii) algorithms that are based on collaborative filtering. Together, using all of these varied approaches in combination has allowed us to create the best possible playlists for our users when they are in a radio-like "lean back" listening experience. With the launch of our new product offerings, these proprietary algorithms also will allow us to offer the best recommendations for users when they want on-demand or "lean forward" listening and the most desirable selections for new features [redacted].[7]

20. **The Music Genome Project Algorithm.** The MGP algorithm uses the musical traits of recordings (discussed above) to find recordings with similar musical DNA. The DNA of analyzed tracks are compared using patented technology developed by Pandora to identify songs

[7] *See* Written Direct Testimony of Christopher Phillips, ¶¶ 30-31.

with the greatest similarity across the traits. In brief, if a listener selects an artist or genre to "seed" a station, the MGP's patented song-matching technology identifies songs that share similar characteristics with the source song, and will populate a channel of music for the listener based on those attributes. The same process will occur for completing playlists and for the auto-play function on our on-demand tier of service. This process requires an extremely high-performance algorithm that can perform complex calculations across a vast and constantly growing database, in a fraction of a second. Pandora has spent more than [redacted] developing and improving the MGP.

21. The MGP's song-matching technology is entirely blind to the popularity of a given song. In fact, a user may be presented with tracks sharing similar musical DNA that are from disparate time periods, relatively unknown artists, or even different genres or cultures. The objective nature of the matching process makes the MGP a uniquely effective tool in helping listeners discover artists with whom they were not familiar. As a result, the MGP helps expose artists to millions of new listeners.[8]

22. The MGP algorithm is also the best methodology available to address the "cold-start" problem—the issue that arises when either new songs are used to seed stations or when a new user begins listening to the service (when nothing is known about his or her personal listening preferences). Most systems will fail dramatically in either of these scenarios, but Pandora can use the MGP algorithm to identify appropriate songs, using only the seed. A music service without the MGP or something comparable has to guess what music the listener is likely

[8] For example, as a result of Pandora's music discovery platform, Odesza gained an additional 14 million new listeners on the service between July 2014 and July 2015 alone, and Fetty Wap, who had no Pandora listeners in December 1, 2014, had over 33 million new listeners by August 1, 2015.

to enjoy, guessing which often creates a complete mismatch that can do substantial damage to the listener experience and to the reputation of the service. Pandora's ability to address the "cold start" problem is a large part of what allowed the service to grow so quickly from the very beginning. Our playlists are strong from the start, without requiring time-consuming data input on the part of the listener.

23. **Collective Intelligence Algorithms.** Another important component of Pandora's playlist-generation process is the "collective intelligence" strategy, which uses numerous different algorithms to capture feedback provided by listeners to further refine their playlists and to identify musical trends. Over time, Pandora has collected billions of combined "thumbs up", "thumbs down," and track skips from users. Using this data on both a collective and individual basis, Pandora can help correct instances where the MGP matches two songs with similar traits that, for whatever reason, do not appeal to the same audience. For example, if Song A is the seed song for a station, and Song B is the closest "relative" identified by the MGP, Pandora will monitor listener responses to Song B. If listener responses are negative (*i.e.*, a "thumbs down" or skip), then Pandora may stop playing Song B on stations where Song A is the seed song, even though the MGP might have otherwise determined that Song A and Song B should appeal to the same users.

24. **Collaborative Filtering Algorithms.** Pandora also employs algorithms that look at the "thumbs up" and "thumbs down" feedback an individual listener has provided on each of his or her stations to create or improve playlists. These algorithms use this thumbing information to improve the playlists of not only that listener, but also other listeners who have similar preferences as expressed through their own thumbing behaviors. For example, assume Listener A has thumbed-up Song A, and Listener B has thumbed-up both Song A and Song B. This

suggests, absent contrary information, that Listener A is likely to enjoy hearing Song B simply because both Listener A and Listener B thumbed-up Song A. This strategy thus develops "cohorts" with shared listening patterns that can improve their collective experience. Pandora continues to refine these algorithms by conducting experiments to determine how and if factors such as age, gender, and location (zip code) may impact listening behavior on an individual and collective basis.

25. **Experimentation.** Pandora is constantly experimenting with ways to improve the mix of songs presented to listeners and creating new algorithms to assist in that process. In the ordinary course of business, when there is a new idea for improving playlist quality, that idea will be tested on a small but statistically significant group of listeners. The results are evaluated to test listener satisfaction, including whether the listener changed the amount of time he or she spent listening to Pandora, or whether the listener changed the rates at which he or she returned to Pandora to listen. If listeners respond positively to the test, then the improvement may be rolled out to all Pandora listeners. At any given time, dozens of such experiments are being run simultaneously, with input from Pandora's in-house, cross-functional team of scientists, engineers and product managers.

26. Each of these tools, and algorithmic intelligence strategies, although developed initially for use in connection with our noninteractive service, has direct application to our new interactive features. As explained in the Written Direct Testimony of Christopher Phillips, Pandora's new interactive tiers of service include Pandora Plus, which is a limited interactive tier, and Pandora Premium, which offers subscribers a full on-demand listening experience. The user experience on Pandora's limited interactive tier, Pandora Plus, will be quite similar to the ad-free noninteractive service that was available to Pandora One subscribers, but it will also

include replay functionality, more skips, and offline listening to cached stations. The Pandora Plus limited interactive tier is still fundamentally a radio product. Pandora's MGP technology and algorithms will still control what songs are played and listeners will not have access to information about what songs will be played next. Pandora's fully interactive tier, Pandora Premium, will also rely heavily on the tools that comprise Pandora's recommendation engine, even though users will have the ability to select particular songs and the order in which they hear them, when they are in the mood for that level of control. While users of on-demand services sometimes know exactly what they want to hear, at other times, on-demand listening can suffer from option paralysis. In addition, the music on other on-demand services often will stop playing because the user is not in a position to program a new selection when his or her existing selection has finished playing (for example, while driving). Our best-in-class tools for music discovery and playlist creation help to solve these problems through music recommendation, [redacted].

27. Even before incurring the incremental expenses associated with redesigning the service to include interactive features, which I discuss in the following section, Pandora had spent more than [redacted] creating and refining the MGP, its proprietary algorithms, and the necessary infrastructure, hardware, and software to offer a world-class radio product for our nearly 78 million active users.

28. Pandora now streams more than 5.4 billion listener hours each quarter and, as noted above, plays songs from more than 150,000 artists each month. The vast majority of these artists are independent working musicians whose recordings receive little airplay, if any, on terrestrial radio.

Pandora's Significant Role in Making Music More Accessible

29. When Pandora first launched in 2005, it was available only as a website accessible from personal computers. Since then, Pandora has experienced tremendous growth, due in large part to our "Pandora Everywhere" initiative that enables listeners to have access to their stations across the greatest number of devices such that music is made available to users anytime, anywhere. Although we no longer use the "Pandora Everywhere" name for it, this initiative remains a critical component of Pandora's efforts to improve the customer experience and encourage the consumption of music.

30. Pandora's listener base increased dramatically with the debut of its mobile platform in approximately July 2008. That release took a tremendous amount of time, effort, and investment to realize. At that time, existing wireless networks did not have the signal strength or coverage that exist today, and Pandora faced considerable technological challenges in adapting a continuous streaming radio service to function on a mobile device. Creating a product capable of continuously and seamlessly accessing the listener's stations from a handheld device, while continuing to deliver high audio quality, was a major milestone that required significant resources on the technology side. Pandora has invested tens of millions of dollars in developing its mobile delivery platform.

31. Another significant driver of Pandora's growth has been the development of the ability to deliver its service in cars, where attention has long been dominated by terrestrial and satellite radio. Pandora's pre-installed integrations in the car allow for in-dash control of the Pandora application on the listener's mobile device. This means, in short, that users can control Pandora through the same interface on their car's dashboard that is used to control their AM/FM or satellite radio. For the majority of these integrations, the smartphone is the conduit through

which the internet signal and music stream is delivered. This requires specialized application protocol interfaces ("APIs") to transfer data between Pandora, the smartphone, and the in-dashboard entertainment system—all of which Pandora has developed and maintained at great expense. To date, Pandora has invested heavily in developing in-car technology. We also have begun to focus on the next generation of "connected car," in which the vehicle will have a modem installed directly, which will make it unnecessary to use your smartphone to connect with Pandora and will make Pandora as ubiquitous as terrestrial radio for in-car listening.

32. Today, Pandora comes pre-installed in more than 190 car and truck models across dozens of brands. It also is being integrated into numerous car stereo receivers produced by aftermarket manufacturers such as Sony, JVC, Pioneer, and Kenwood. Through these various integrations, Pandora is currently available on tens of millions of cars, out of a total of approximately 250 million cars on the road. By year-end, we expect to have reached more than [redacted] activations through these various in-car integrations, and the number of in-car users will grow over time. We estimate that nearly one-half of all new cars sold this year will have Pandora integrated.

33. In addition to mobile and in-car listening, Pandora also integrates its service into various consumer electronics products, such as home entertainment devices, gaming consoles, and even refrigerators. Today, approximately 1,800 consumer electronic devices from third-party distribution partners such as Samsung, Roku, and Sonos make Pandora available in the home. For example, users can access Pandora through "smart" television screens and listen through their home theater system—essentially no different than listening to more traditional cable and satellite television music offerings from Music Choice and Sirius XM (via Dish Network).

34. Overall, Pandora has incurred tens of millions of dollars to date in costs associated with the development of mobile listening platforms, in-car listening technologies, and integration into consumer electronic devices. Today, less than 15% of listening to Pandora takes place on personal computers.

Pandora's Development of a Market for Internet Radio Advertising

35. As I explained in greater detail in my written testimony in *Web IV*, in order to grow its business, Pandora expended significant resources and effort to create, essentially from scratch, a new market for internet radio advertising. Developing an economically viable ad-supported music streaming service has been critical for Pandora to fulfill its goal of making music more accessible to everyone, including those consumers who like music but currently cannot afford or are otherwise not willing to pay a fee—a market segment that currently comprises the majority of consumers in the U.S. The success of our ad-supported tier of service is critical to the success of our subscription tiers because we expect a significant number of users to convert to a subscription tier after being introduced to Pandora through the ad-supported offering and because knowledge about user preferences on our ad-supported tier helps us to improve the service across all tiers.

36. At the time of Pandora's launch, most internet radio services relied primarily on visual display ads (*i.e.*, banner ads) as there was no meaningful market for in-stream audio ads for internet radio, like the market for advertising on traditional terrestrial radio stations. However, with the introduction of the Pandora mobile application in 2008 and the dramatic shift from desktop to mobile listening, it became evident that Pandora could not rely on visual display ads alone. Digital banner ads became less attractive for Pandora's advertisers, since mobile listeners tend not to look at their screens to see the ads as much as desktop listeners. Mobile

access also led to a massive increase in listening hours. Spending on mobile advertising, however, lagged behind, making it difficult for Pandora to effectively monetize this massive change in listener behavior and find buyers for all the advertising space it had to offer.

37. Thus, Pandora recognized that it needed to tap into the massive radio advertising market, first by selling "national" audio ads, and eventually local advertising, which represents the largest and most lucrative component of the advertising market. To do so, Pandora had to overcome several hurdles. First, Pandora needed to have a way to communicate to radio advertisers Pandora's reach to audiences as compared to terrestrial radio stations. To address this issue, Pandora partnered with Triton Digital, a digital audience measurement service, to provide listening metrics (in a manner comparable to terrestrial radio ratings) for Pandora streams based on listener-supplied zip codes, age and gender. Second, Pandora's ability to break into the traditional radio advertising market was impeded by the fact that Pandora was not integrated into the ad-buying software platforms used by media buyers and ad agencies, through which most spot (*i.e.*, regionally or locally targeted) purchases are made. To address this issue, Pandora worked to ensure that Triton's metrics for Pandora would be integrated into the two most popular audio ad-buying platforms to facilitate comparisons between different audio advertising options and also into the advertising industry's leading strategy and planning platform used in connection with the ad-buying platforms. Finally, to get a foothold in the massive market for local advertising, Pandora developed the ability to use listener zip codes to track and serve users local advertisements. After starting with the top ten local radio markets in

the first quarter of 2012, Pandora now uses that capability to sell local ads across virtually all major metropolitan survey areas in the U.S.[9]

38. In conjunction with the above-described innovations—which have required payments to Triton in excess of [redacted] to date—Pandora has had to invest heavily in growing its sales organization. Today, Pandora operates local sales teams in radio markets, large and small, across the country. We now have local sales forces in over 39 radio markets, with plans to continue to invest more deeply in our existing markets and to expand physical coverage. Since Pandora launched, we have spent tens of millions in building this sales force and a robust sales support organization to assist it. For 2016, the total budget for our sales organization has increased to [redacted], our marketing budget is another [redacted], and our sales and marketing staffs comprise approximately [redacted]% of our employees.

Other Investments in Sales and Marketing

39. When it comes to marketing, internet music services have some great advantages over broadcast and satellite radio, namely, that streaming offers a personalized and connected medium. As a result, streaming services can deliver messages to listeners in a far more relevant and efficient way. This direct connection can be quite valuable to artists. For example, an emerging rock band can send targeted alerts to their fans in a particular city announcing an upcoming club date. In addition, a singer-songwriter can solicit donations from listeners who have thumbed-up her music to fund a new album. The possibilities are endless, and Pandora

[9] Most recently, Pandora has invested significant time and resources to develop a proprietary technology, referred to as intelligent interruptions, for serving advertisements. As described in greater detail in the Written Direct Testimony of Christopher Phillips, this intelligent interruption technology optimizes the delivery of advertising and messaging on Pandora to improve monetization without eroding our user base.

continues to invest heavily in building a platform that allows for such direct, intelligently targeted connections between artists and fans, including developing promotional programs which are specifically aimed at helping artists promote their music with Pandora's assistance.

40. Since 2011, Pandora has been involved in producing and promoting custom sponsored events where artists perform live before an audience of fans that Pandora identifies and invites. Pandora essentially plays the role of a concert producer and promoter, choosing the artist or artists that will best speak to that sponsor's target audience. [redacted]. Indeed, these types of events generate promotional effects for artists because they promote artists to their existing fan base, while also exposing them to an audience that might not otherwise be familiar with their music. The live event format also helps strengthen the connection between the artist and fans. For Pandora, the events are a beneficial marketing platform and overall value-add for the service.[10]

41. In addition to producing and promoting live events, Pandora also partners with artists to help live-stream their shows to increase the reach and impact of those events to audiences beyond those that are able to attend the concert in person. For example, Pandora recently partnered with Metallica as the exclusive U.S. streaming partner to amplify their live performance at U.S. Bank Stadium in Minneapolis.[11] Pandora's efforts included creation of: (i)

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[10] Some examples of these events include "Metro PCS Powered by Pandora," "Pandora Holiday Live," and "Pandora Presents Women in Country." One of Pandora's most popular events is our annual "Summer Crush" concert. This year, Pandora invited teen and young adult listeners in downtown Los Angeles for a night of free performances from A-list pop talent. The event attracted over 4,000 attendees (more than three times last year's attendance) and 52,700 live-stream listeners.

[11] I understand that Metallica band members wrote most of the band's songs.

a custom-content station that contained a mixtape of songs curated by the band's members; (ii) a livestream station within the custom-content station on the day of the show that allowed listeners to listen to the live performance; (iii) a recurring loop of the livestream performance; and (iv) on-demand tracks of the live performances. Hundreds of thousands of Pandora users took advantage of these offerings for that one event alone.

42. In October 2014, Pandora also launched a program called the Artist Marketing Platform ("AMP"), which provides artists with certain Pandora usage metrics to understand how their music performs on Pandora. AMP is a free online service that gives artists and their managers a detailed view to understand and promote to their audience on our service.[12] Derived from tens of billions of hours of personalized listening, Pandora AMP offers data and insights to the more than 150,000 artists played on our service. The product is designed to help artists and their teams with critical decisions such as tour routing, single selection, set lists, audience targeting, and more. To promote singles, albums, shows or tours, artists can design and schedule integrated campaigns on AMP leveraging a combination of tools that drive listener engagement, including features such as (i) Artist Audio Messages, which let artists record a short audio message, customize the message with images or calls to action, set it to play before or after a specific track and geotarget fans in specific markets, and (ii) AMPcast, which allows artists to spontaneously communicate with fans, right from the Pandora application. In addition, our record label licensors have access to Featured Tracks, which gives them the ability to promote a new single widely across Pandora and receive real-time feedback such as the track's "thumb ratio" (the percentage of the track's total thumbs that were "thumbs up") and station creations to gauge listener affinity.

[12] *See* PAN Dir. Ex. 5; *see generally* www.amp.pandora.com and www.ampplaybook.com.

43. On October 17, 2016, Pandora launched a new version of AMP, which has been redesigned to make it even easier and faster for artists to grow an audience, track progress and connect with fans on Pandora. AMP now features a dynamic feed of an artist's campaign activity as well as performance metrics and suggestions for new campaigns. AMPcast, in limited release since it launched earlier this year, is now open to all artists. Its new features give artists the ability to geotarget Artist Audio Messages, share these messages via social networks or save draft messages to edit at a later time—all from the Pandora mobile app. The benefits of AMP to songwriters are direct and obvious for the many songwriters that perform their own songs. But songwriters, composers, and music publishers all benefit from AMP no matter who performs the songs, as they share in the benefits of increased album sales (in the form of mechanical royalties), increased concert attendance (in the form of performance royalties), and increased exposure generally.

44. In July 2015, as a complement to AMP, Pandora acquired Next Big Sound ("NBS"), an online music analytics and insights tracking program that tracks hundreds of thousands of artists around the world, including analyzing the popularity of musicians in social networks, streaming services, and radio. The NBS platform, which includes data from Facebook, Twitter and YouTube, combined with Pandora's data on music preferences, patterns and trends reflecting insights from Pandora's nearly 78 million active users, will allow Pandora AMP to deliver detailed analytics to the music industry and ultimately help artists, labels, and marketers better understand and reach their audiences to the benefit of the entire music ecosystem. Pandora's acquisition of NBS was a key element of our strategy to develop interactive features, and we will be able to use NBS data to satisfy certain reporting requirements contained in our direct licenses with sound recording and musical work copyright holders.

45. Recently, Pandora has increased its sales and marketing efforts on promoting live music events on the service to help bands sell out their shows. Indeed, while most artists earn a significant portion of their revenue through touring, an estimated 40% of concert tickets generally go unsold, mainly due to lack of awareness—fans find out too late (or not at all) that a favorite artist is playing a concert nearby. Pandora has perceived a significant opportunity to sell more tickets via targeted promotion on its service to the benefit of consumers, artists, music publishers, and songwriters alike. In October 2015, Pandora acquired Ticketfly, Inc., a leading live events technology company, to create a music platform for connecting fans, artists, and event promoters through the Pandora service. Ticketfly provides ticketing and marketing software for approximately 1,200 leading venues and event promoters across North America and makes it easy for fans to find and purchase tickets to events. The acquisition of Ticketfly was another step toward achieving Pandora's mission not only to help listeners find music they love but also to help artists connect with their fans and potential broader audience and drive greater artist income. Pandora spent more than $335 million to acquire Ticketfly, and we spent more than [redacted]o integrate Ticketfly's offerings into our platform.

<u>Pandora's Development of Interactive Product Offerings</u>

46. The development and launch of our new interactive features has been Pandora's most important strategic initiative over the past year. The product redesign has required massive investments. Including acquisitions, Pandora has spent over $100 million on this initiative to date before receiving any incremental revenue from the new product offerings and will have to spend more before the 2018-2022 license period even begins.

47. **Technology Acquisition, Product Engineering and Development Costs.** To facilitate the development of an on-demand listening experience, and as discussed in my April

20, 2016 Declaration previously submitted in connection with this proceeding, Pandora acquired certain intellectual property and technology assets from Rdio, an interactive music service that had operated, in part, pursuant to the license at issue in this proceeding. Pandora spent [redacted] on that transaction alone. To develop the Rdio assets for our use in our interactive product offerings, Pandora has spent many millions more on engineering and other development costs. Pandora incurred another [redacted] in acquiring NBS.

48. **Music Licensing and Royalty Administration Costs.** The transition from a noninteractive service that operated exclusively pursuant to the statutory license available under section 114 of the Copyright Act to a service with interactive features has required significant additional expense, not only in terms of the higher royalties that Pandora will pay to record labels and music publishers, but also in terms of the significant expenses associated with negotiating for and securing expanded grants of rights not available under a statutory license.

49. In the past year, Pandora negotiated for and secured expanded grants of rights from ASCAP, BMI, SESAC, and Global Music Rights, the four U.S. performing rights organizations (each, a "PRO"), as the mechanical rights at issue in this proceeding have no value to Pandora without the accompanying public performance rights to stream the compositions. These PRO licenses now authorize the public performance of the many millions of musical works in their collective repertories in connection with both our "lean back" offerings and as part of our forthcoming on-demand streaming tier. Since November 2015, Pandora has entered into direct licenses with thousands of music publishers that cover the mechanical rights that are at issue in this proceeding. Our direct licenses with many of the largest and most prominent music publishers, including Sony/ATV Music Publishing LLC, EMI Entertainment World, Inc., Warner-Chappell Music, Inc., Kobalt Music Publishing America, Inc., SONGS Music

Publishing, LLC, and Downtown Music Publishing LLC, also include performance rights.[13] Collectively, these direct licenses cover millions of musical works, and we would not have needed to acquire mechanical rights had Pandora continued to operate exclusively as a noninteractive service.

50. Pandora also has had to secure direct licenses from record labels to secure the rights necessary to operate outside the confines of the statutory license under section 114. In the past year, Pandora has reached agreements with [redacted] record labels, covering millions of sound recordings.

51. Pandora's music royalty expense will dramatically increase as a result of its interactive offerings, *see* Paragraph 53, but even the costs of negotiating and securing licenses for these additional rights have been significant. In order to negotiate licenses for the additional rights needed to operate the interactive features of the redesigned service, Pandora has needed to more than double the size of its Content Licensing team. In addition, because Pandora did not have the in-house capacity required to administer the royalty payments required of an interactive service, it has entered into an arrangement with Music Reports, Inc., a leading provider of royalty administration services, at an additional cost of approximately [redacted] per year (prorated for 2016).

52. **Incremental Marketing Costs.** To attract new subscribers and grow the market for on-demand streaming, Pandora is undertaking extensive marketing of its redesigned service. Marketing related specifically to the availability of new features cost approximately [redacted] in October alone, with significant additional expense expected with the forthcoming launch of Pandora Premium.

[13] *See, e.g.*, PAN Dir. Exs. 6-7.

THE IMPACT OF MUSIC RIGHTS LICENSE FEES ON PANDORA'S FINANCES AND ITS ABILITY TO GROW A VIABLE AND SUSTAINABLE BUSINESS

53. In addition to its massive investments across all aspects of its service to promote music discovery, greater access to music, and closer connections between artists and their fans, Pandora's commitment to supporting the broader music ecosystem is reflected in the more than two billion dollars it has paid to date in music rights royalties. As a noninteractive webcaster, Pandora paid over $588 million in 2015 (over half of its revenue) in the form of licensing fees to the music industry in connection with its noninteractive service. With the launch of its redesigned service, and the higher royalty rates Pandora will pay as a result, Pandora expects that its payment of licensing fees to the music industry will be [redacted] in 2017, an increase of [redacted] from royalties paid in 2015.

54. Music royalties have been and will continue to be the principal obstacle to Pandora's ability—or that of any interactive streaming service—to operate a sustainable, profitable business. Since it became a public company in 2011, Pandora has yet to have a profitable year according to generally accepted accounting principles ("GAAP"). Even though it earned more than $1.164 billion in 2015 alone, Pandora lost $169.7 million that year and had suffered cumulative losses of more than $366.7 million between 2005 and the end of 2015. Pandora expects to lose an additional [redacted] by the end of this year, for a cumulative loss of [redacted] through the end of 2016, according to GAAP.

55. Pandora's analyses and its decision to enter the market for on-demand streaming assumed no increase in the current statutory rates for the license at issue in this proceeding. Even at current rates, Pandora will not be profitable according to GAAP at the start of the 2018-2022 license period. If we meet our growth targets—which contemplate attracting millions of

new paid subscribers to on-demand streaming (not just new to Pandora)—we could become profitable during the license period if the Copyright Royalty Board were to adopt Pandora's Proposed Rates and Terms (submitted herewith). Given that Pandora is, and has been, one of the most successful music streaming services in the country, it is unlikely that other streaming services can be profitable if Pandora is unable to do so under the current rate structure.

56. With lower royalty rates, Pandora would be able to invest more heavily into sales, marketing, and product development, which would drive user growth and retention and attract more new users to subscription on-demand streaming, which would in turn drive greater royalty payments to music rightsholders.

PANDORA'S PROPOSED RATES AND TERMS

57. Pandora's Proposed Rates and Terms for the making and distributing of phonorecords pursuant to 17 U.S.C. § 115, during the period beginning January 1, 2018 and ending December 31, 2022, are being submitted herewith. As Pandora's President and Chief Financial Officer and a member of the executive team that decided that Pandora should undertake the significant investments necessary to develop interactive features, I offer the following observations in further support of Pandora's proposal.

58. First, in deciding to enter the market for on-demand streaming, we were and are well aware that no on-demand service has ever been able to operate profitably in the U.S. for any sustained period, if at all. Nonetheless, Pandora believes that—over time—it will be able to operate a sustainable and profitable music streaming business, if there is no increase in musical work royalty obligations from current statutory rates. We believe that we have some unique advantages that make the success of our redesigned service possible, but Pandora would not have been willing to make the investments to offer either the on-demand streaming of Pandora

Premium or the limited offering of Pandora Plus if the prevailing mechanical license rates were those proposed by the Copyright Owners in their Preliminary Disclosures. The historical lack of sustained profitability for interactive streaming services suggests to me that rates should be lower, not higher. Indeed, as noted above, I believe that lower royalty rates would lead to more investment, more innovation, more growth, and ultimately higher royalty payments.

59. Second, it is important to preserve an "all in" rate structure that takes into account fees paid for performance rights in determining fees payable for mechanical rights. The distinction between mechanical rights and performance rights is not a meaningful one to Pandora as a music service. The mechanical rights have no value to us unless we also have the performance rights, and for our redesigned service, the performance rights have no value unless we also have the mechanical rights. Moreover, the royalties are coming from the same place (Pandora) and ultimately going to the same places (music publishers, songwriters, and composers). The "all-in" rate structure is consistent with how our direct deals are structured for the majority of musical works we perform, as those deals include both mechanical and performance rights in exchange for a single payment stream. Relatedly, the per subscriber mechanical royalty floor in step three of 37 C.F.R. §385.12(b)(3)(ii) should be eliminated. It would undermine the careful balancing under section 801(b) if publishers could separately increase the effective percentage of revenue they receive by forcing music streaming services that need performance rights in order to operate lawfully to pay performance royalties that would trigger payment of a royalty floor for mechanical rights alone.

60. Third, given prevailing business models for on-demand music services, the "headline" royalty rate should remain a percentage of revenue. This rate structure aligns changes in royalty expenses to changes in revenues, given prevailing business models for on-demand

music services, in which subscribers pay a fixed monthly fee for unlimited access to on-demand music streaming. It is consistent, moreover, with the basis on which Pandora and, I understand, most other services pay record labels for the rights to offer interactive streaming of sound recordings. Accordingly, Pandora has proposed that the all-in rate should remain 10.5% of revenue for both stand-alone, portable, on-demand (such as Pandora Premium) and limited offerings (such as Pandora Plus).

61. Fourth, To the extent that per subscriber minima in the calculation of the all-in royalty pool under section 115 are preserved, these minima should reflect and encourage a variety of business models. For example, the minima should accommodate services such as Pandora that want to provide both "limited offerings" with less functionality and full-service, premium-price tiers in order to capture consumer demand for music most effectively. In addition, per subscriber minima should reasonably accommodate promotional efforts such as family plans, student discounts, and free trials without triggering an unwarranted increase in the effective percentage of revenue paid. Accordingly, Pandora has proposed to preserve the current per subscriber minima in 37 C.F.R. § 385.13(a)(3) and § 385.23(a)(3)(ii).

62. Fifth, the terms should make clear that for services that offer multiple product tiers, only some of which will rely on the statutory license, revenue from or subscribers to product tiers that do not utilize the statutory license are properly excluded from any royalty calculations. For example, Pandora will not be utilizing the statutory license at issue here for its ad-supported product tier, and revenues earned from that tier should have no bearing on royalties paid for the mechanical rights it is licensing for its other product tiers. Relatedly, Pandora proposes to clarify expressly that the terms of any direct licenses between copyright owners and statutory licensees that cover activity otherwise subject to the statutory license apply in lieu of

the statutory rates and terms to activity within the scope of the direct license.

63. Sixth, the definition of service revenue should be adjusted to exclude carrier billing, credit card transaction, and app-store fees, as these expenses for subscription services are analogous to the ad agency commissions that are permitted deductions for ad-supported services under the current regulations.

64. Pandora also has proposed certain technical and confirming changes to the current terms for clarity.

PUBLIC VERSION

Before the
UNITED STATES COPYRIGHT ROYALTY JUDGES
The 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)

DECLARATION OF MICHAEL HERRING

I, Michael Herring, 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 31st day of October 2016 in Oakland, California.

Michael Herring

UNITED STATES COPYRIGHT ROYALTY JUDGES

The Library of Congress

----------X

IN THE MATTER OF:)

)

DETERMINATION OF RATES) Docket No.

AND TERMS FOR MAKING AND) 16-CRB-0003-PR

DISTRIBUTING PHONORECORDS) (2018-2022)

(PHONORECORDS III),)

----------X

BEFORE: THE HONORABLE SUZANNE BARNETT

THE HONORABLE JESSE M. FEDER

THE HONORABLE DAVID R. STRICKLER

Copyright Royalty Judges

Library of Congress

Madison Building

101 Independence Avenue, S.E.

Washington, D.C.

March 14, 2017

12:07 p.m.

VOLUME IV

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1 P R O C E E D I N G S

2 (12:07 p.m.)

3 JUDGE BARNETT: Good morning. Please be

4 seated. Are we all present and accounted for? Yes,

5 we are.

6 Mr. Marks, we're calling your witness

7 this morning?

8 MR. MARKS: Pandora calls

9 Michael Herring.

10 JUDGE BARNETT: Please raise your right

11 hand.

12 Whereupon--

13 MICHAEL HERRING,

14 having been first duly sworn, was examined and

15 testified as follows:

16 JUDGE BARNETT: Please be seated.

17 DIRECT EXAMINATION

18 BY MR. MARKS:

19 Q. Good morning, Mr. Herring. Would you

20 please state your full name for the record?

21 A. Michael Herring.

22 Q. Where do you work?

23 A. Pandora Media.

24 Q. How long have you worked at Pandora?

25 A. A little more than four years.

Q. What is your current job title?
A. President.
Q. How long have you served as president of Pandora?
A. Just short of a year.
Q. Have you held any other positions at Pandora during your tenure at the company?
A. I was formerly chief financial officer.
Q. Did Pandora recently hire a new chief financial officer?
A. Yes.
Q. And when was that?
A. His first day was February 28th.
Q. Would you please explain what your job responsibilities have been during your time at Pandora and how, if at all, they are changing with a new CFO onboard?
A. Well, as CFO, I was responsible for overall financial management of the company, including financial controls and reporting, responsibility for investor relations, all our systems, information systems, technology systems. I, as president, took on more responsibility around revenue. So that has been a change.
I've been also running our content

licensing programs for the last couple of years, both related to statutory proceedings as -- as well as our direct deal efforts with the music industry. Lots of administrative responsibilities on top of that, facilities, et cetera, but, you know, as -- now with the CFO, I focus almost exclusively on our revenue businesses, so our advertising business, as well as the launch and growth of our subscription businesses, and then in conjunction with that, also the -- the licensing, content licensing, side of our cost structure.

Q. Did you prepare a written direct testimony in connection with this proceeding?

A. Yes.

Q. If you could turn to the tab of the witness binder in front of you marked as Pandora Exhibit 880. Do you recognize this document?

A. 880. Yes.

Q. What is it?

A. It's my written direct testimony.

Q. If you could turn to the last page of the document, please. Is that your signature?

A. It is.

MR. MARKS: I offer Pandora Exhibit 880 into evidence.

MS. BUCKLEY: No objection.

JUDGE BARNETT: 880 is admitted.

(Pandora Exhibit Number 880 was marked and received into evidence.)

BY MR. MARKS:

Q. Did you also prepare written rebuttal testimony in connection with this proceeding?

A. Yes.

Q. If you could turn to the tab that is marked as Pandora Exhibit 888. Do you recognize this document?

A. Yes.

Q. What is that?

A. It is my written rebuttal testimony.

Q. If you could please turn to the last page. Is that your signature?

A. Yes.

MR. MARKS: I offer Pandora Exhibit 888 into evidence.

MS. BUCKLEY: No objection.

JUDGE BARNETT: 888 is admitted.

(Pandora Exhibit Number 888 was marked and received into evidence.)

BY MR. MARKS:

Q. And, Mr. Herring, were both your direct

1 testimony and your -- your written direct testimony
2 and your written rebuttal testimony submitted before
3 Pandora hired a new chief financial officer?
4 A. That's correct.
5 Q. Have you prepared some slides to use in
6 connection with your live testimony today?
7 A. Yes.
8 Q. Could you go to the next slide, which is
9 titled Overview of Testimony. Broadly speaking, are
10 these the topics you're going to cover during your
11 testimony today?
12 A. Yes.
13 Q. Are all of these topics addressed in
14 additional detail in your written testimony?
15 A. Yes.
16 Q. The judges are generally familiar with
17 your -- excuse me, generally familiar with Pandora
18 from the Web IV proceeding and the testimony of your
19 colleagues, but could you just briefly walk the
20 judges through the history of the company?
21 A. Sure. So Pandora was founded by
22 Tim Westergren 17 years ago as Savage Beast. The
23 initial idea was to create the Music Genome Project
24 as a way of using technology to provide a music
25 recommendation engine. That initial incarnation was

1 focused on in-store applications. So inside a
2 BestBuy or a Tower Records, when people would go buy
3 CDs and -- and records in store, there would be a
4 kiosk where they could get recommendations for other
5 music, based on some music that they liked.
6 That business failed, and in 2004 Savage
7 Beast pivoted its business model to focus on
8 streaming radio and, specifically, personalized
9 radio, enabled by the Music Genome Project. And
10 Pandora was launched in 2005 and grew largely by
11 word of mouth. It was a very organic growth story
12 for a long time and -- and it -- you know, enabled,
13 by the rapid growth of connectivity. The
14 introduction of Smartphones, the introduction of the
15 iPhone in particular, was a major catalyst into the
16 adoption of Pandora as a -- as a music service.
17 And the company went public in 2011 and
18 grew to 80 million monthly active users, or MAUs, by
19 2014, where it has been relatively flat since then,
20 hovering around 80 million monthly active users.
21 In 2015, we started the development of
22 interactive product offerings, so kind of next
23 generation music services. Pandora has always been
24 a non-interactive radio service, both ad-supported
25 and subscription. And we started working on the

licensing side of it with the music industry, as well as the technology, including acquiring the assets of a bankrupt competitor called Rdio in the fall of 2015 to accelerate those efforts.

In 2016, we completed the licensing to launch the new -- new services. We, you know, redesigned the service. We launched a new brand. And we launched the first of two subscription products, the Pandora Plus, which replaced Pandora 1, which was the ad-free version of the non-interactive service and which added new functionality.

And we are launching tomorrow Pandora Premium, which is our full interactive on-demand service.

Q. Mr. Herring, how would you describe Pandora's mission?

A. Our mission is -- is, at a high level, twofold. One is -- is to connect users, listeners with the music that they love and help them discover new music, and on the other side of it, to help artists, musicians find the audiences they deserve by exposing their music to new audiences, by streaming their music to their fans and -- and providing revenue streams back to those artists.

Q. And has that been Pandora's mission throughout its existence?

A. It has.

Q. If you would please turn to the tab marked as Pandora 881 in your binder. Do you recognize this document?

A. I do.

Q. What is it?

A. This is a presentation we prepared in conjunction with an investor analyst day we did in the fall of last year. It walks through our strategy, our product strategy around the launch of new services, as well as the financial model underlying our business strategy.

Q. Did you personally participate in the preparation of this document?

A. Yes.

Q. Was this document appended to your written direct testimony as an exhibit?

A. Yes.

MR. MARKS: I offer Pandora Exhibit 881 into evidence.

MS. BUCKLEY: No objection.

JUDGE BARNETT: 881 is admitted.

(Pandora Exhibit Number 881 was marked

and received into evidence.)

BY MR. MARKS:

Q. I'd like to turn now to Pandora's investments in innovation and product development and ask you to describe a few examples.

A. So over the last 17 years, we've made a lot of investments in innovation and product, and it has come a long way. It's critical for our ability to grow our business and serve our listeners as well as possible.

You know, I've already mentioned the Music Genome Project. That's kind of the central original investment. The Music Genome Project is an effort where musicologists or musicians listen to millions of songs or have over the last 17 years and -- and scored those songs across as many as 450 attributes, everything from tone and tempo to genre, to, you know, the -- the instruments involved to the -- the voice and the style of the voice, et cetera, to create a number stream that represents sort of the music genomic equivalent of that song.

And then we can compare that to other streams for other songs in order to calculate a mathematical approximate, how close those songs are. And in order to then -- if one song is close to

1 another and you like one song, the chances that
2 you'll like that next song are higher. And so it's
3 something that -- an approach to music
4 recommendations that's unique to Pandora, something
5 that's -- we've spent a lot of time and money,
6 obviously, investing in.
7 Algorithms lay on top of that. These are
8 our data science team uses math to take data like
9 the Music Genome Project, like the massive amounts
10 of thumb data that Pandora has, over 80 billion
11 thumbs over the last ten years. That's interactions
12 with consumers telling us that they like a song or
13 don't like a song in the context of a station.
14 JUDGE BARNETT: By thumbs, you mean
15 thumbs up/thumbs down?
16 THE WITNESS: Thumbs up and thumbs down.
17 So, actually, in the interface of the project,
18 there's a little thumb up and a thumb down icon.
19 You don't have to touch anything, but if you give
20 that feedback, it will -- we will incorporate that
21 into -- into the play listing, how we program the --
22 the station for you.
23 That's something that is very core to our
24 IP as a company.
25 JUDGE STRICKLER: Is your thumbs

1 up/thumbs down feature going to be or is it part of
2 the interactive features?
3 THE WITNESS: Well, so in the interactive
4 products, there's the radio function, is absolutely
5 important to the overall music experience for a
6 bunch of reasons. Most of the listening will still
7 be non-interactive, even in those products.
8 And we estimate north of 70 percent of
9 listening, even in an interactive product, is
10 non-interactive listening or listening to radio
11 stations or playlists, but the way the thumbs work
12 is a lot of the interactive features are influenced
13 by the data that's in the thumbs.
14 And so, you know, for example, a playlist
15 builder, what we choose to build that playlist for
16 you, the songs we choose is -- is influenced heavily
17 by the thumbs that have been contributed to the
18 service.
19 JUDGE STRICKLER: So you're saying the --
20 the investment that was made in the technology that
21 allows for a thumbs up/thumbs down incorporation
22 into your algorithm, that investment is usable in
23 the interactive space as well?
24 THE WITNESS: It's actually -- it's very
25 usable. In fact, it's critical to our competitive

1 differentiation in the marketplace, actually. The
2 -- the interactive features that were -- might have
3 a similar feature set among competitors. Ours would
4 be unique in the sense that it would be personalized
5 to the listener because of the data we have around
6 thumb activity that comes from the radio service.
7 JUDGE STRICKLER: When the -- when the
8 investments were made in these thumbs up/thumbs down
9 algorithms or, even more broadly, in the -- in the
10 technology that developed the non-interactive
11 product, was there an intentional -- more
12 importantly, will the record reflect from your
13 testimony or the testimony of anyone else at Pandora
14 that the investments were made with the intention of
15 expanding them into the interactive space at some
16 future period of time?
17 THE WITNESS: Well, I can't speak to 17
18 years ago. I've been at the company four years.
19 JUDGE STRICKLER: Do you have any
20 institutional knowledge?
21 THE WITNESS: Yeah, well --
22 JUDGE STRICKLER: And, again, I'm really
23 asking about whether it's -- whether it's in your --
24 your testimony or the testimony of anyone else in
25 this proceeding, rather than asking you to go beyond

anything that -- the testimony.

THE WITNESS: Yeah. I mean, my testimony is that the investment we made in the non-interactive project and specifically the Music Genome Project, the algorithms that lay on top of that, the service that collects the 80 billion thumbs, the math that uses those thumbs to customize and personalize the experience are all critical to the development of the products that we're bringing to market.

So there's two subscriptions. The Plus subscription is -- is not an on-demand subscription. It's all radio. So it's absolutely critical to that product.

From a Premium -- the Premium product, which has on-demand, you can listen to an album or build your own playlist song by song, those features -- we are laying new features on top of that, that are enabled by the investments we made previously. So, you know, I would argue that whether it was contemplated that that specific product would be the outcome, I wouldn't say that that's true. I would say back when we were developing the strategy for entering the market, the -- the reason we decided to do so is because we

1 believed we could be competitive because we had this
2 data asset.
3 JUDGE STRICKLER: Is it your
4 understanding that the Pandora Plus, which is the --
5 the mid-range, if you will, if you'll allow me,
6 mid-range product.
7 THE WITNESS: Yep, mid-range is accurate.
8 JUDGE STRICKLER: That that will pay --
9 that recordings or -- there will trigger the payment
10 of a mechanical license? The playing of -- of songs
11 on Pandora Plus will trigger payments on -- under
12 the mechanical license or only Pandora Premium?
13 THE WITNESS: No, both Plus and Premium.
14 JUDGE STRICKLER: You described Plus as
15 basically a non-interactive radio. Is it because of
16 the replays of the other features that --
17 THE WITNESS: Replays, off-line
18 listening, et cetera, yes.
19 JUDGE STRICKLER: Thank you.
20 BY MR. MARKS:
21 Q. Mr. Herring, what are the qualifications
22 and expertise of the employees involved in the music
23 genome coding -- project coding process?
24 A. So employees that we hire for that
25 project are all musicians, musicologists. They've

1 studied music theory, music composition. They go
2 through a very rigorous testing program before even
3 being offered the job. So there's a very high bar
4 to get over. Once they've been -- they've passed
5 that, then they go through additional training to
6 learn the Pandora way of analyzing music.
7 If -- you know, if you think about 17
8 years and dozens and dozens of music analysts, in
9 order for an algorithm to work effectively, it has
10 to be a very consistent analysis, scoring across --
11 across millions of songs in order for a song that
12 was analyzed ten years ago to be comparable to a
13 song that was analyzed yesterday.
14 And so that -- there's not only a lot of
15 training about how we do it the Pandora way, but
16 quality assurance that goes both ways. So we -- you
17 know, we consider them as expert in their -- in
18 genres or in music theory and composition as -- as
19 anybody.
20 Q. What sort of investment of time has been
21 associated with creating and refining the Music
22 Genome Project over the years?
23 A. Well, each song takes 20 minutes to an
24 hour for a, you know, classical composition to -- to
25 analyze. We -- we've analyzed millions of songs at

1 this point. I would say the number of hours of
2 human time to do that is definitely hundreds of
3 thousands of hours.
4 Q. And are you able to quantify the expenses
5 associated with creating and refining the Music
6 Genome Project?
7 A. Well, you know, that part -- it's 17
8 years of not just the time and effort of those
9 people, but the -- the engineers who developed the
10 technology in order to enable that data to deliver a
11 service, you know, in -- in excess of 200 million
12 dollars over that time frame.
13 Q. And if you hadn't already built the music
14 -- hadn't already started building the Music Genome
15 Project in connection with the non-interactive
16 ad-supported tier service and wanted to just start
17 from scratch for Pandora Plus and Pandora Premium,
18 would you need to build something like the Music
19 Genome Project?
20 MS. BUCKLEY: Objection, calls for
21 speculation.
22 JUDGE BARNETT: Sustained.
23 BY MR. MARKS:
24 Q. Just so the record is clear, I'm not sure
25 if it came out; I apologize if I'm asking you

something that you've covered in part before. Do Pandora's interactive products rely on the Music Genome Project?

A. Yes.

Q. Do the algorithms that you mentioned a moment ago, do the algorithms that Pandora has developed allow Pandora to bring new features to the interactive marketplace that are not available from any other service?

A. Yes.

Q. How do they do that and what are some of those features?

A. Well, so I mentioned earlier the playlist builder. One of the big problems with interactive services or playlist building in general is most people -- and we know this from acquiring the assets in 100, nearly 100 people out of the -- the bankruptcy of Rdio, a failed service, beloved by its, unfortunately for them few users, but -- but a failed service that spent hundreds of millions of dollars and didn't survive -- was that people would start playlists with enthusiasm, get three or four songs in, and run out of steam.

And those were called orphaned playlists.

MS. BUCKLEY: Objection, beyond the scope

of written direct testimony.

JUDGE BARNETT: I don't think so.

MR. MARKS: I don't think it is. I can find the paragraph cite.

JUDGE STRICKLER: I don't know that he testified specifically, you'll check it out, about -- the general point, yes, but I don't know if it was related to Rdio per se. It might be just a little more detail, but I could be wrong, so if you could point to where he -- where he links up the behavior of Rdio customers.

MR. MARKS: Well, if you -- if you just look at, for instance, paragraph 22 and 23 and 24 of his -- his written direct testimony, there's extensive discussion of how the algorithms are used in connection with product features that would be part of the interactive services.

JUDGE STRICKLER: It was the extra detail about comparing Rdio's listeners to -- to listeners on Pandora that I think -- and, again, maybe I'm wrong. Maybe you can point to a section where -- because the objection is it's beyond the scope of his written direct. And I -- is that the -- is that the nature of your objection?

MS. BUCKLEY: That is one thing, but also

there is no discussion of playlists or orphaned playlists, as far as I can tell, in the written direct statement.

JUDGE STRICKLER: Well, I think it does talk about playlists. He just -- I don't know that he uses the phrase "orphaned playlists," but he describes something and he -- now he's just giving it a name. So I don't know that that necessarily goes beyond the scope of his direct by naming something that's already in there.

JUDGE BARNETT: I reviewed it this morning. I know "orphaned playlist" is in this paper. So overruled.

MR. MARKS: Thank you, Your Honor.

THE WITNESS: So the -- the context of using that example is that one of the challenges of -- of building playlists and engaging users in an interactive service is where do they go after their initial idea for a playlist, the first three or four songs?

What Pandora does extremely well is take a seed, a song, song titles in this case, and using the data underlying that user's musical preferences, suggests another song and another song and another song. And so the add -- add new similar songs

1 feature within the interactive feature, the playlist
2 builder, is driven by the Music Genome Project, the
3 thumb data from non-interactive services with
4 algorithms laid on top of it in order to enable that
5 feature.
6 And it's one of the -- the hallmarks of
7 the Premium product that's coming out tomorrow.
8 BY MR. MARKS:
9 Q. In addition to all of the work Pandora
10 has done to build its service, has Pandora made
11 investments to make it easier for consumers to
12 access the service?
13 A. Yes. We've made significant investments
14 in order to make sure that people can listen to
15 Pandora however they choose to do so. It started
16 out as a desktop app. We made significant
17 investments in order to have Pandora work
18 effectively on Smartphones. And a lot of our growth
19 early on was based upon the popularity of iPhone,
20 iOS and Android devices.
21 We've invested a lot of time, money, and
22 effort into integrating into automobiles. We've had
23 over 25 million integrations activated within cars
24 in the United States. Over half of all models that
25 will be sold in 2017 will have Pandora integrated

1 into the dash. That takes a lot of time and effort
2 from a technological perspective to work with dozens
3 of auto provides on that front.
4 And CE devices as well, so consumer
5 electronics devices, like everything from smart TVs
6 to home entertainment systems like Sonos, Roku,
7 Apple TV, xfinity cable boxes, Amazon Echo, Google
8 Home, are all -- we have invested a lot of money and
9 effort to make sure that Pandora is integrated into
10 those systems and works really easily and
11 effectively, so as people want to listen to Pandora,
12 they can listen to it on their phone. If they get
13 home, they can switch it onto their home
14 entertainment device. They can listen to it in the
15 car as they're driving to work. So that
16 accessibility to our service is a hallmark of -- of
17 our strategy.
18 JUDGE BARNETT: Mr. Herring, I don't
19 think my refrigerator has Pandora. You mentioned
20 refrigerators in your testimony.
21 THE WITNESS: There is a refrigerator and
22 hot tub that has Pandora integrated into the
23 control.
24 BY MR. MARKS:
25 Q. Switch to the cameras.

A. Microwaves, I have not seen -- I have not seen a microwave with Pandora in it. Yeah, that's -- you know, that speaks actually to the -- the reason we've been able -- we don't pay for any of these integrations. So there's no fees back to -- to have us integrated.

These are brands that come to Pandora to have Pandora integrated as a feature to market themselves. Even the Amazon Echo is a great example of that, where obviously they have their own music service, but on the box for the Echo, it advertises integrate seamlessly into your Pandora account. That's because having Pandora drives engagement, which is what the Echo is really trying to do with their customers.

JUDGE BARNETT: Does that include automobiles? You're not paying for integration?

THE WITNESS: We don't pay for any integration there. It's different model than Sirius has. They pay or have historically paid for integration.

JUDGE BARNETT: Thank you.

BY MR. MARKS:

Q. What is the order of magnitude of the investments Pandora has made to facilitate expanded

consumer access to its service?

A. Well, on the accessibility side, certainly tens of millions of dollars over the years.

Q. What role did Pandora play in building a market for Internet radio advertising?

A. Well, I mean, you know, I think we, because we were first, really created that market. We had to build it from scratch.

Q. And are the efforts and investments associated with building that market described in your written direct testimony?

A. Yes.

Q. And why was it important to Pandora to create a market for Internet radio advertising?

A. Well, our non-interactive service, which is free to the consumer, has significant royalty costs that we needed to cover. And so we needed to find ways to monetize it.

And advertising was the most readily available.

Q. Will -- will Pandora be offering an ad-supported interactive service or does it have plans to offer an ad-supported interactive service?

A. No.

Q. Why is the investment Pandora makes in growing the market for Internet advertising important to the development of Pandora's interactive subscription products?

A. So our approach to driving subscription products is to build an audience, the largest audience possible, in the free-to-the-consumer ad-supported business and then upsell and cross-sell those users by offering value propositions, like off-line listening for Plus or like on-demand features and functionality for Premium, into those services.

You know, there are other ways of aggregating users and converting them into subscription. You can just acquire -- you know, pay for them through search or through advertising. We choose to -- we think it's a better model to aggregate them by providing a high-quality ad-supported service and then upsell, cross-sell them from there, because the ad-supported business generates revenue and -- and contribution margins itself.

So the investment we've made to grow that business creates the pool of users that we will draw from in order to build our subscription business.

Q. If you could turn to the tab in your binder that's marked as Pandora Exhibit 891. Do you recognize that document?

A. I do.

Q. What is it?

A. This is a graph showing the progress over the last three years of the hours or -- the hours of music consumed by listeners on our service, as well as the revenue per thousand hours that we have been generating off of advertising on that service.

JUDGE FEDER: Excuse me, Mr. Herring. Is that what RPM stands for?

THE WITNESS: Yes, revenue per thousand hours.

JUDGE FEDER: Thank you.

BY MR. MARKS:

Q. Was this document appended to your written rebuttal testimony as an exhibit?

A. Yes.

MR. MARKS: I offer Pandora Exhibit 891 into evidence.

MS. BUCKLEY: No objection.

JUDGE BARNETT: 891 is admitted.

(Pandora Exhibit Number 891 was marked and received into evidence.)

BY MR. MARKS:

Q. Mr. Herring, what does Pandora's dynamic insertion technology do?

A. That technology was developed to, based upon listening behavior, determine the right moment to interrupt the music listening stream.

Q. And is that the same thing as what's referred to in some Pandora documents as intelligent interruptions?

A. It is, yes.

Q. Does Pandora use this technology for anything in addition to delivering advertising?

A. Well, it was developed primarily to drive advertising. It is used for anything that's going to interrupt the music experience. So, initially, that was advertising, when to -- when to play an ad in order to make it most effective, but also least disruptive to the music listening experience.

We use it as well for artist audio messages, live events, promotions, any -- any sort of interruption to the music that -- or any interruption to the playing of music that is a non-music use.

Q. What are the benefits of artist messaging on Pandora for artists and fans?

A. Well, start with fans. I mean, our research and experience now, having served millions of these messages, is that fans like the connection to the artist. They like to hear their -- the voice -- the artist. They like to find out about new releases and events coming up, so they look at it very much as a value add to the experience.

One of the fears was they would look at it as an advertisement, and so we did a lot of testing and actually the -- that -- by inserting artist audio messages, listeners on average listened longer and come back more. So it had an aura effect to the overall service. From an artist -- recording artist perspective, they've used it for all kinds of ways.

What we did is created a tool that let the creatives be creative. And so it's everything from thanking fans from listening to their station, to introducing a new song that's being released, to promoting an album, to promoting live events or concerts with links to the tickets. You know, we've seen a lot of very interesting ways of doing it.

That benefit has, you know, done everything from sell -- sell tickets to drive listening of new music, help -- help them chart,

help them get exposure to new music, spin their music more, and certainly has driven attendance to concerts.

Q. How do songwriters and music publishers benefit from artist messaging on Pandora?

A. Well, to the -- you know, to the extent that songwriters are also the -- the performing artist, they benefit from -- from that exposure as well, the songwriter. To the extent it drives more listening or exposes their music, they benefit from the royalties associated with that. To the -- both publishers and songwriters would benefit from those additional royalties.

To the extent it drives people to live events, the songwriters and publishers benefit from the royalties they receive through the performing -- performance rights that venues pay -- pay around live events.

Q. What is Pandora's artist marketing platform?

A. Artist marketing platform, or AMP, is -- it's a dashboard. It's a -- that artists can claim their identity and log in and view all their listening data on Pandora, as well as access marketing tools, one of which is the artist audio

1 message.
2 Q. What sort of decisions does the artist
3 marketing platform help artists to make?
4 A. Well, data is powerful. It's -- you
5 know, it's the new oil, right, as someone just said
6 recently. So for artists, performing artists, in
7 particular, they can look to see what songs are --
8 are trending, how they're trending up or down and by
9 location as well. So, you know, they can -- as
10 they're going to a city to perform, they can look
11 and see what songs are popular in that city and --
12 and adjust their set list accordingly.
13 They can look at what songs are
14 performing well, being thumbed up or thumbed down,
15 in order to put their own marketing efforts behind
16 those that are trending more positively than others.
17 They can look at demographics across the U.S. and
18 look for pockets of their audience where there's
19 concentrations and plan tours accordingly. So
20 there's lots of -- lots of benefits to recording
21 artists based upon the -- the data in AMP.
22 Q. And do songwriters and music publishers
23 benefit from AMP?
24 A. Well, once again, to the extent the
25 songwriter and the recording artist are the same,

they benefit in all those ways. But, you know, I think I already kind of highlighted what they benefitted from is -- is if they have exposure drive additional listening to their music, there's additional royalties associated with that. If it drives more activity in the -- in the touring aspect, they'll benefit from their music being played at live events, et cetera.

Q. If you could turn to the tab in your binder that's marked as Pandora Exhibit 882. Do you recognize this document?

A. Yes.

Q. What is it?

A. This is a description of AMPcast and artist audio messaging and AMP generally that is available on our web site for artists to go learn about the services.

Q. Was this document appended to your written direct testimony as an exhibit?

A. Yes.

MR. MARKS: I offer Pandora Exhibit 882 into evidence.

MS. BUCKLEY: No objection.

JUDGE BARNETT: 882 is admitted.

(Pandora Exhibit Number 882 was marked

1 and received into evidence.)
2 BY MR. MARKS:
3 Q. Mr. Herring, were additional investments
4 required to develop the interactive features of
5 Pandora Plus and Pandora Premium?
6 A. Yes.
7 Q. Are those investments described in -- in
8 detail in your written direct testimony?
9 A. Yes.
10 Q. Has Pandora invested over 100 million
11 dollars in this initial launch?
12 A. Yes.
13 JUDGE STRICKLER: Question for you,
14 Mr. Herring, with regard to these additional
15 investments. When the investments are made, are
16 they made out of -- by outside third-party
17 investors, are they done out of the internal capital
18 accumulated by Pandora, or some -- or a combination?
19 THE WITNESS: So, explicitly, they've
20 been made out of our internal capital. So the
21 capital that -- that we generate from our
22 non-interactive advertising business, for example,
23 has been reinvested aggressively and --
24 JUDGE STRICKLER: Retained earnings,
25 basically?

1 THE WITNESS: Yes. So that -- in 2016,
2 that happened, that was a pretty significant shift
3 in investment to -- to build the interactive
4 services and get the services Plus launched in the
5 fall and Premium launched tomorrow.
6 JUDGE STRICKLER: Does it also come out
7 of public and/or private placements or public
8 offerings or anything else?
9 THE WITNESS: Yeah, I'd -- we've -- we've
10 also drawn down significantly on the capital
11 accounts in our balance sheet, which we have raised
12 money, first in the IPO, and then we did a secondary
13 equity offering two and a half, three and a half
14 years ago, and then a convertible debt offering a
15 year and a half ago in order to add cash to the
16 balance sheet which we subsequently invested.
17 JUDGE STRICKLER: I was going to ask you
18 about debt financing. Is it only just convertible
19 debt financing or is there just straight financing
20 as well?
21 THE WITNESS: We also have an
22 asset-backed line that we use to manage cash flows.
23 JUDGE STRICKLER: An asset-backed line of
24 credit?
25 THE WITNESS: Line of credit, yes.

JUDGE STRICKLER: And when you -- when the investments are done internally out of retained earnings or out of the capital account of Pandora, do you make a decision as to whether or not the -- the investment is worthwhile given a range of potential royalties across the royalty board? Does that come into your -- your analysis; that is, do you say, well, this -- we will get -- we believe we'll have a net profitable return on this investment, given the royalty rate structure that exists, but if the royalties change, and you do some sort of a sensitivity analysis as to whether or not the investment is worth it based on different royalty structures?

THE WITNESS: So, yes, we do -- we do evaluate the stability of royalty structures, maybe is the best way of putting that. Certainly, that's a risk. These are not fixed inputs. You know, whether it's every five years here through this proceeding or other proceedings or it's every two or three years in direct deals, you know, those rates become negotiable.

So we look at things like industry trends and practice, you know, to get some sense of what we believe are sustainable royalty rates and then --

1 and base our ROI calculations on that.
2 JUDGE STRICKLER: Do you know if there's
3 any evidence in the record that -- that Pandora has
4 produced that sets forth a sort of a sensitivity
5 analysis as to what the rate of return might be with
6 regard to different investments given different rate
7 structures?
8 THE WITNESS: Well, I know we've done
9 direct comparisons between the proposals in front
10 today, and that's in the record. And -- but in
11 terms of overall sensitivities, I'm not sure that --
12 that that has been presented.
13 JUDGE STRICKLER: I know you've -- you've
14 included in your testimony something that I would
15 call sort of descriptive --
16 THE WITNESS: Yes.
17 JUDGE STRICKLER: -- of the ramifications
18 if the Copyright Owners' royalty structure were to
19 -- were to be adopted. Is there anything more
20 granular than that or is that what you're referring
21 to when you say you've already placed in the record
22 information, evidence with regard to the impact of
23 -- of different rate structures?
24 THE WITNESS: No, there's a -- there's an
25 analysis that I did for my Board that compares the

royalty structure of our proposal versus the NMPA proposal.

JUDGE STRICKLER: Is that attached as an exhibit or otherwise explained or described in the testimony of any of the Pandora witnesses?

THE WITNESS: Yes. I think it's --

MR. MARKS: I'm not sure.

THE WITNESS: I'm not sure, actually, yeah. I don't know.

MR. MARKS: He will be testifying about the analysis that was done in comparing the rate proposals later in today's examination.

THE WITNESS: Yeah.

BY MR. MARKS:

Q. Has Pandora achieved profitability in any year since becoming a public company?

A. No.

Q. What is the principal obstacle to Pandora's ability to achieving sustained profitability?

A. It has been high content royalty costs.

Q. In deciding to enter the market for interactive streaming, what assumptions did Pandora make about the music publishing royalties it would have to pay?

A. We made assumptions that they would stay stable at where they are today.

Q. Why did you make that assumption?

A. Well, when we looked at what historical precedent had been, they had stayed relatively stable for a long -- for a long time, and -- and we had done deals, direct deals, with our industry partners at those rates.

Q. If you could turn to the tab that's marked as Pandora Exhibit 890. Do you recognize this document?

A. Yes.

Q. What is it?

A. This is a forecast through 2022 of the -- both the Plus, which is the tier 2 subscription, and the Premium, which is the tier 3 subscription. You know, our forecast for those revenue lines and their relative profitability.

JUDGE STRICKLER: One of the lines there is, Mr. Herring, total cost of revenue. Does -- does that -- that a royalty cost or does it include royalty cost?

THE WITNESS: Well, total cost of royalty revenue is both.

JUDGE STRICKLER: Both what? I'm sorry.

1 THE WITNESS: Cost of revenue-content
2 acquisition is the royalty cost.
3 JUDGE STRICKLER: Right.
4 THE WITNESS: The other is the cost of
5 streaming the service, the bandwidth, that sort of
6 thing.
7 JUDGE STRICKLER: So let's go to the line
8 item cost of revenue content acquisition. That's
9 the royalty line, right?
10 THE WITNESS: That's correct.
11 JUDGE STRICKLER: And is that based on a
12 particular assumption as to royalties?
13 THE WITNESS: Yes, it's based on a series
14 of assumptions, yes.
15 JUDGE STRICKLER: And not just a
16 mechanical royalty but performance royalties and
17 sound recording royalties; that's everything?
18 THE WITNESS: That's correct. That's all
19 of it lumped together.
20 JUDGE STRICKLER: And it's the -- is it
21 the same going through from fiscal year '15
22 projected out to fiscal year 2022, the same rates --
23 same rates and same rate structures, if you know?
24 THE WITNESS: It's the rate structures
25 from a sound recording perspective as we've

negotiated in our direct deals, and it's a rate structure, a publishing rate structure based upon our proposals in this proceeding.

BY MR. MARKS:

Q. Is it based on Pandora's rate proposal or was this based on the current rates and terms?

A. This one is based on -- well, it's essentially the same rate. So I think this is based on the current rates and terms.

MR. MARKS: I offer Pandora Exhibit 890 into evidence.

MS. BUCKLEY: I object to the entry of this document as evidence. It lacks any evidentiary support attached to see what the assumptions are and how these numbers were derived.

JUDGE BARNETT: Yes, Mr. Marks, can you lay a little foundation on this document?

MR. MARKS: Sure.

BY MR. MARKS:

Q. Mr. Herring, was -- was this -- was this document prepared at your direction and under your supervision?

A. Yes.

Q. And what -- what were -- what assumptions, if any, changed over the period of time

1 reflected in Pandora Exhibit 890?
2 A. Well, so we moved into a direct licensing
3 environment, beginning in late 2016. So, hence,
4 there's a pretty dramatic change in our content cost
5 associated with -- obviously, going from '15 to '16,
6 there's also the impact of the CRB rate from a sound
7 recording perspective. In September of 2016, we
8 signed direct deals with the labels, which changed
9 our cost structure both for non-interactive -- both
10 for all three tiers, essentially, of service,
11 ad-supported, free-to-the-consumer tier, as well as
12 two subscription tiers.
13 And so those assumptions, while -- those
14 deals don't cover this entire time period. Those
15 assumptions are assumed to stay the same from a rate
16 perspective through this time period.
17 Q. And is this the type of analysis that
18 would -- that's typical of the analysis that Pandora
19 does in making business decisions?
20 A. Yes.
21 MR. MARKS: I offer Pandora Exhibit 890.
22 MS. BUCKLEY: I maintain my objection.
23 JUDGE BARNETT: Overruled.
24 MS. BUCKLEY: I still don't see any
25 underlying data that would support any of these

numbers.

JUDGE BARNETT: We'll allow it.

(Pandora Exhibit Number 890 was marked and received into evidence.)

JUDGE STRICKLER: I have a question about it, especially since now that it's in evidence. Towards the bottom of -- of Exhibit -- Pandora Exhibit 890, the fifth line from the bottom, there's a line that says less INCR, which I'll -- which I guess means increase. Is that right? Do you see all the way to the left?

THE WITNESS: Yes.

JUDGE STRICKLER: Is that less increase NMPA cost?

THE WITNESS: Yes.

JUDGE STRICKLER: And does NMPA in this context stand for National Music Publishers Association?

THE WITNESS: Yes.

JUDGE STRICKLER: What is that line telling us?

THE WITNESS: It's telling us the difference between the existing model and if it was under the NMPA proposal.

JUDGE STRICKLER: Okay. So this actually

is sort of an elaboration on the answer you gave to counsel's question before. The assumption throughout this document is not your existing rate structure and the -- the existing rate structure, your proposed structure. This one line then builds in an alternative, which is the NMPA structure?

THE WITNESS: Yes.

JUDGE STRICKLER: If that was to be adopted by the judges?

THE WITNESS: Yes. We've done a full analysis of it, but that's -- it is to summarize it on a page, yes.

BY MR. MARKS:

Q. Mr. Herring, are you familiar with Pandora's rate proposal in this proceeding?

A. Yes.

Q. Let me show you the slide summarizing Pandora's rate proposal that we showed to the judges during opening arguments. Why is Pandora proposing to preserve the all-in rate structure with a headline rate that covers both mechanical rights and performance rights?

A. Well, for us, mechanical rights aren't -- aren't usable without the performance rights. We look at it as a publishing rate. And so an all-in

rate allows us to operate the business with certainty and -- and predictability.

Q. Why does Pandora favor a headline royalty rate based on a percentage of revenues for its interactive products?

A. In the context of subscription products, in particular, where there's a fixed revenue per user per month, a percentage of revenue is by far the most rational way to structure a royalty payment in the context that it allows for a connection between our largest expense, which is royalty expense, and the -- and the revenue associated with it. So they move together.

If they didn't move together, that would add uncertainty and volatility to our ability to run the business.

Q. Why is Pandora proposing to preserve the current headline rate of 10 and a half percent of revenues?

A. Well, I mean, in all honesty, a lower rate would be better for us and probably better for the industry generally. It would allow us to have more cash to reinvest in the business and grow the business. Subscription business, in particular, are all about, you know, growing to the maximum size

that the profits allow you to grow to.

The -- the less profitable a subscription, the -- the smaller the subscription business is going to be. That said, 10 and a half percent is a rate that in our models, as you can see, we believe we can build a business over time. It's one that has, you know, been adopted broadly in the industry and one that I feel has -- has worked so far.

So, rather than fight for a lower rate, we figured keeping the status quo in a rate that we could at least model out a profitable business over time, it hasn't been proven yet by anybody that I'm aware of, but over time, we believe we could model out a profitable business here based on that rate.

BY MR. MARKS:

Q. Has Pandora proposed any change to the royalty minimums in step 2 of the current regulations?

A. No.

Q. Why has Pandora proposed to preserve the variety of different rate categories from the current regulations?

A. Well, I actually think that's really important for the industry and for all parties

1 considered. I mean, having a diverse set of
2 offerings so that you can address multiple consumer
3 preferences is how we optimize a marketplace here.
4 You know, having one -- one price, one
5 price is going to suboptimize the environment.
6 There are people who would pay $4.99 but wouldn't
7 pay $9.99. If you don't have an offering at the
8 $4.99 level, those -- it's not, those people don't
9 pay $9.99. They choose other offerings. Whether
10 it's free offerings or piracy or whatever, it would
11 -- has been historically.
12 So I think having multiple tiers allows
13 for innovation. It allows for diversity from a
14 product perspective. And it grows the overall pie,
15 both from a revenue perspective for Pandora, as well
16 as royalties to the copyright holders.
17 Q. Why has Pandora proposed to eliminate the
18 mechanical -- I'm sorry.
19 JUDGE FEDER: Excuse me.
20 THE WITNESS: The judge had a question.
21 JUDGE FEDER: This rate is going to be
22 about five years. Our next proceeding will be five
23 years from now.
24 What is the -- in your estimation being
25 in this business, are the offerings that are laid

1 out in the current rate structure likely to be the
2 same offerings that are out there in the marketplace
3 five years from now?
4 THE WITNESS: I hope -- I hope not
5 exclusively. I -- I think it lays good foundation
6 to grow the ecosystem of consumers paying for music
7 again. Having multiple price points is really
8 important for that, I -- I believe personally as a
9 businessman, running -- working in this industry.
10 What I would like to see over the next
11 five years is more diversity around offerings like
12 on this run, and we have those conversations with
13 our music industry partners constantly.
14 You know, in my -- this is my fourth
15 subscription business that I've launched. The other
16 three are very different industries, not
17 music-related. In every one, they were optimized by
18 creating multiple price points, multiple product
19 configurations, in order to meet different demands,
20 whether it was consumer or enterprise.
21 I think music has -- has been forced into
22 this one price, one product, all -- you know,
23 all-you-can-eat bucket for too long. The more we
24 can diversify that, the better it is for the
25 industry. I think the industry has started to

1 recognize that.
2 And if that continues, this is one step
3 in that direction, having two products at Pandora,
4 three. You know, I would foresee that we would have
5 multiple products in addition to those three by five
6 years from now.
7 JUDGE BARNETT: Would you foresee them
8 petitioning for another rate proceeding to set rates
9 for something that's totally different and outside
10 the categories in Subparts B and C?
11 THE WITNESS: I'm not sure how we would
12 pursue licensing, to be honest. You know, we -- we
13 would likely go and try and do direct deals
14 initially, for sure, in order to experiment. That
15 is really difficult because of the fractured nature
16 of the royalty structures, you know, and the
17 ownership, uncertainty, and all the issues that we
18 have, especially in the publishing world.
19 But, you know, that's one of the reasons
20 we've been working hard on identifying rights,
21 creating those databases, not just us, other
22 distributors in the marketplace, because having that
23 allows us to have the right conversations to -- to
24 bring different products to market. But whether
25 that turns into -- whether that can be enabled

1 through a rate proceeding or not is not my
2 expertise.
3 JUDGE BARNETT: For your non-interactive
4 and your custom and ad-supported prospective
5 Premium, all of those services rely on the Music
6 Genome Project, correct?
7 THE WITNESS: Correct.
8 JUDGE BARNETT: So if somebody is
9 listening for free, asks to listen to Imagine,
10 they're going to get the same song as they would if
11 they were in -- in the Premium pool and asked to
12 listened to Imagine? They're going to hear the same
13 song, correct?
14 THE WITNESS: Well, except that in the
15 free service, there is no on-demand functionality.
16 So you could seed a station with Imagine, but under
17 the DMCA restrictions, we couldn't just play
18 Imagine.
19 Now, if Imagine is played on that station
20 or a Beatles station or a cover of it is played by
21 -- Pentatonix just did an amazing version of it --
22 then, you know, you -- it would be the same song
23 that you would hear on the two services. So the --
24 the actual musical work that's played is the same
25 musical work, but what's different as you -- if you

1 were listening to it on Plus, you could listen to it
2 off-line in a subway when you had no connection,
3 where you couldn't in the free product.
4 If you're listening on Premium, you could
5 say I want to listen to Imagine and I want John
6 Lennon's version, not Pentatonix, and you could
7 choose a specific version besides what the genome
8 decided to play for you.
9 So the idea is you give that value
10 proposition of additional control, features, and
11 functionality to move people up that value chain in
12 order to drive higher ARPU for us, but also in
13 exchange for the features and functionality to be
14 licensed in those contexts, you know, it's a -- it
15 pays a higher royalty to the -- to copyright holders
16 as well.
17 JUDGE BARNETT: Okay. So -- but if a
18 subscriber pays $4.99 --
19 THE WITNESS: Yes.
20 JUDGE BARNETT: -- or $9.99 and they
21 request to listen to Imagine, they're going to hear
22 the same -- they want John Lennon's Imagine; they're
23 going to hear the same song?
24 THE WITNESS: They are, but the $4.99
25 product is still radio. It's still -- they can't

1 put in Imagine and then hear the song. It's the
2 same concept of they could see the station or they
3 could put a Beatles station in and they could hear
4 Imagine if it's served, but they can't choose to --
5 to listen to that song.
6 JUDGE BARNETT: Okay.
7 THE WITNESS: So only by paying $9.99 can
8 they actually do that piece.
9 JUDGE FEDER: To change the hypothetical
10 a little bit --
11 THE WITNESS: Sorry.
12 JUDGE FEDER: -- if the $4.99 customer
13 were to seed a station with Imagine and the $9.99
14 customer were to start a playlist with Imagine, are
15 they going to end up with the same list of songs
16 either on the radio side -- not necessarily in the
17 same order, but on the radio side and on the
18 generated playlist using the music genome?
19 THE WITNESS: It's the same user, if it's
20 you?
21 JUDGE FEDER: Um-hum.
22 THE WITNESS: Yeah, it likely would be
23 the same or very, very similar playlist because we
24 would use your musical preferences as determined by
25 your demographics, your geographics, the music you'd

1 be listening to, what you've thumbed up. So -- so
2 for you, yes.
3 But for Ben, you know, he likes the
4 Beatles, but he likes a different -- he's a Sergeant
5 Pepper guy where you're a Rubber Soul guy, right?
6 So you could -- he'll hear a different mix in both
7 cases, but from a between products, it would be the
8 same sort of data that's used to create that
9 playlist, whether it's a radio station in Plus or a
10 -- or adding similar songs feature within Premium.
11 The difference in Premium now is you can
12 -- you see all the songs that are going to play. In
13 Plus, you don't get to know. It just plays for you.
14 And you can say, yeah, not that one, not that one,
15 not that one, and reorder them. So functionality
16 that's very specific to on-demand listening, that
17 will exist in Premium; none of that exists in Plus.
18 BY MR. MARKS:
19 Q. Just so the record is clear, you used the
20 interpret ARPU. What is ARPU a reference to?
21 A. ARPU is average revenue per user.
22 Usually referred to as average annual revenue per
23 user, although you can get a month. Sometimes it's
24 monthly; sometimes it's less. So if we talk about
25 the ARPU of a Premium user, at 9.99, it's

approximately $120 per year.

Q. Why has Pandora proposed to eliminate the mechanical-only floor in Subpart B?

A. Well, this goes back to, you know, what I -- you know, the difference -- the distinction between mechanical and performance from a business perspective is not -- is not a meaningful one. So, you know, there might be a purpose for that that I don't -- you know, that I'm not aware of or that doesn't matter to me, but from my purposes, it adds complexity into a system that's not needed. I'd rather just have a single rate and a single calculation.

Q. Why has Pandora proposed to adjust the terms of the current regulations to accommodate promotional efforts such as family plans and student discounts?

A. Yeah, so this actually goes back a little bit to the price diversity conversation we were having earlier about $4.99 to $9.99. By creating different price points, you access users that wouldn't otherwise subscribe.

So students who have a smaller budget, as long as they are still students, having a student plan that is at a discount, it allows them to be a

1 paying customer, teaches them about paying for
2 music, builds that habit, and then when they
3 graduate and enter the workforce or, you know,
4 society generally, then they upgrade, you know, more
5 -- more naturally into being -- paying a standard
6 price.
7 Similar with family plans, you know, you
8 have children in the -- in the home that are not
9 necessarily going to have their own subscription, we
10 can get -- add to the overall revenue pie, also
11 engage with listeners at a younger age or an older
12 age. We actually see family plans used for
13 grandparents and such as much as we see it used for
14 kids. People who we can add to the subscription
15 roles who wouldn't necessarily do their own
16 subscription.
17 Now, the -- a side benefit of that is
18 we're monetizing an audience that's extremely hard
19 to monetize in an ad environment. So, you know,
20 from a business perspective, you get two benefits.
21 You get the benefit of -- of monetizing in a
22 subscription environment an audience that would
23 otherwise not subscribe. So you're adding
24 incremental subscribers to the pool. That's good.
25 Second is you're targeting those

1 incremental subscribers out of pools that are hard
2 to monetize anyway, 13- to 17-year-olds, really hard
3 to monetize with advertising; 55 and older, really
4 hard to monetize from advertising. So those are two
5 pools that, if we can convert as many of them as we
6 can in subscription, that's good for both us as a
7 business, but also for copyright holders as it
8 increases their overall royalty payments.
9 Q. Have you reviewed the Copyright Owners'
10 rate proposal in this proceeding?
11 A. Yes.
12 Q. Let me show you a slide with a few
13 aspects of the Copyright Owners' rate proposal
14 depicted and ask you to comment on some of them.
15 Why is Pandora opposed to the imposition
16 of a per-play minimum rate in this proceeding?
17 A. Well, you know, it's connected to why I
18 think percentage of revenue makes sense. A per-play
19 consumption-based model where the revenue is fixed
20 per user creates a lot of -- of uncertainty and
21 volatility around what margins are going to be for
22 that product. That's a business problem. And, you
23 know, from a business perspective, that uncertainty
24 means that I'll less invest less in that business,
25 you know, that I -- I don't know how much I'm going

1 to make over time. So there's that aspect of it.
2 Second is it's a perverse incentive for
3 me to limit listening in a subscription --
4 subscriber environment. And that's not -- that's
5 not in anybody's interest who is getting paid out of
6 a subscription basis, whether it's us or the
7 copyright holders. So engagement, or the number of
8 hours -- we measure engagement by hours per user per
9 month -- is the Number 1 indicator as to whether
10 someone will convert from a trial into subscription
11 or continue to subscribe, retain over time or churn
12 out.
13 And if -- if we're paying on a per-play
14 basis, we have an incentive to reduce listening as
15 much as possible in order to be profitable. By
16 reducing engagement, we increase the propensity to
17 churn or likelihood to cancel.
18 And that -- that is -- now I've got two
19 incentives that fight against each other. Of
20 course, I don't want them to cancel, but I also
21 can't afford them if the per-play rate is -- it
22 doesn't work in the -- in the context of what
23 revenue I can charge.
24 JUDGE STRICKLER: Why would the per-play
25 rate cause an increase in churn?

THE WITNESS: Because it's -- there's a step in the middle. So if there's a per-play rate, my incentive is to reduce the hours people consume of music. So if I do that, it lowers engagement. Engagement is the Number 1 indicator as to retention over time or the -- which is the opposite of churn.

So there's a direct correlation between engagement or hours per use, hours per user, and -- and churn. So the higher hour per user, the lower churn. If I'm incentivized to hold hours per user down, churn is going to go up. That is a -- that is a truism among subscription businesses. All four that I've run, that's been the truth.

To be honest, one of the reasons why we focused on percent of revenue in all our sound recording deals, the direct deals, is that, you know, that argument was completely adopted by the labels in the context of what they want is build subscribers who stay subscribers for a long time, right?

And we've aligned -- when we say win/win, it's we're aligned to the royalty structure to the business objective of Pandora and the -- and the long-term royalty streams of the copyright holders in that environment.

1 That's what we're trying to accomplish
2 by percent of revenue in this case. A per-play
3 structure blows that up.
4 JUDGE BARNETT: Mr. Herring, if you have
5 a subscription service and if the royalty rate is a
6 per-play rate and it's low enough that it would
7 essentially equal what you're paying on a percent of
8 revenue, then why would you discourage listening
9 and, therefore, discourage engagement and,
10 therefore, you know, encourage churn?
11 THE WITNESS: Well, low enough is a very
12 important --
13 JUDGE BARNETT: Okay. I got that.
14 THE WITNESS: -- qualifier there. So, I
15 mean --
16 JUDGE BARNETT: What --
17 THE WITNESS: If you remember, in the --
18 in the last time I was in front of you, there was a
19 per-play rate under subscription in that
20 environment. And it was about 70 hours, was the
21 break-even. If you listen to more than 70 hours a
22 month at that rate, I have now lost money on every
23 subscriber. And so we -- we, you know, would find
24 ways to hold back listening.
25 So if that rate was really, really,

1 really minuscule so that it never broke through a
2 percentage of revenue number, then it becomes
3 irrelevant, but that's -- the risk is that that rate
4 is too high, and that it creates problem --
5 unintended consequences based on engagement.
6 And Pandora has -- you know, maybe we're
7 more sensitive because our engagement is much higher
8 than anybody else in the industry.
9 JUDGE BARNETT: Just in what ways would
10 you discourage listening, if it were a per-play
11 rate? And wouldn't you be doing that -- that's
12 cutting off your nose to spite your face because
13 you're going to lose a subscriber if you do that?
14 THE WITNESS: Can we go into restricted
15 session? This -- I mean, this is kind of --
16 MR. MARKS: Can we go in restricted
17 session?
18 JUDGE BARNETT: Were you planning to do
19 that later?
20 MR. MARKS: We are.
21 JUDGE BARNETT: Okay. Well --
22 THE WITNESS: Could I answer that
23 question --
24 JUDGE BARNETT: Yes, please.
25 THE WITNESS: -- without my competitors

in the room?

JUDGE BARNETT: You may.

THE WITNESS: Thank you.

JUDGE STRICKLER: I think they're getting up now.

JUDGE BARNETT: No, we're not -- we're not going into restricted yet.

THE WITNESS: We're not yet. Sorry.

BY MR. MARKS:

Q. We'll go into restricted fairly shortly so we can come back to it.

What is your view of the Copyright Owners' proposal to charge a per-play rate to all streams that are made in connection with a product that offers both interactive features and non-interactive listening within the same product?

A. Yeah, I -- I mentioned earlier, we expect non-interactive listening to be 70 percent or more of listening in the interactive product, in the product that offers interactive listening. So, I mean, applying a per-play rate across is meaning paying a much higher rate on streams that aren't -- you know, aren't enabled by that licensing.

Q. Is the Copyright Owners' proposal to apply a single rate to the entire marketplace for

1 services with interactive features a good idea?
2 A. No.
3 Q. Why not?
4 A. It essentially eliminates the ability to
5 price differentiate a $4.99 versus a $9.99 product.
6 So I think it's really important to keep that
7 structure that allows us to have some diversity in
8 product.
9 JUDGE STRICKLER: I don't know if you can
10 answer this without going into restricted session,
11 but building on Judge Barnett's question from
12 before, has Pandora considered a hybrid approach or
13 what economists would say is a two-part tariff,
14 where you have a certain monthly subscription fee
15 but then there's a small per-play rate as well
16 because you just testified before about the essence
17 of the problem is getting a per-play -- a per-play
18 rate that's low enough --
19 THE WITNESS: Yeah.
20 JUDGE STRICKLER: -- that it makes sense.
21 And -- and that's the risk that you take. If you
22 get it wrong, then you might have to have listener
23 caps or other ways to dissuade listening.
24 THE WITNESS: Yeah.
25 JUDGE STRICKLER: But can you sort of

have your cake and eat it too with the two-part tariff, setting a low -- a very -- well, a given subscription rate lower than the $9.99 or lower than the $4.99 and then have usage rates, per-play rates, that are sufficient --

THE WITNESS: Yeah.

JUDGE STRICKLER: -- to be able to make a profit?

THE WITNESS: So, yes. That's been something that has been debated pretty intently. You know, we're trying to learn from mistakes of the past. So if you think about cell phone plans have made that migration already.

JUDGE STRICKLER: Right.

THE WITNESS: The issue is twofold. The one is that type of structure is -- is complex to -- it does comes out of the complexity. So complex to manage from our perspective in terms of managing 80 million individual accounts and what they're paying us and what they're not.

On a per-song basis, we're talking about fractions of pennies, so until Bitcoin is really widely adopted, that's going to be difficult.

But even if you did buckets and you based it on hours, that would get -- it just gets

complicated really quickly. So, administratively, that's really hard.

Now, more importantly -- not impossible, but hard. More importantly, it's consumer confusion, and -- and adoption is really the problem. And the perception in value.

And the reality is the focus on this for a few users ignores the fact that most -- most users are -- you know, in that example I gave you where the break-even is at 70, that was 1.2 percent of our subscribers were unprofitable, you know. So we do deal with it in the context of a -- because the rate was low enough, to use your -- your term.

But that, as a -- as a consumer value proposition, is really hard to do. There's this -- there's this view that even if people never are going to hit that sort of threshold, the threat that they're going to have to write a variable check every month is enough for people not to subscribe. And when we did our own analysis as to how big -- you know, how we can market this, how it can be competitive against other services and such, adding complexity into the consumer experience is a big red flag.

So there's both administratively and

incredibly difficult. You know, a couple more tens of millions of dollars in development costs, but, you know, which we don't have. And then the other side of it is and for a lower return. So you're -- you're kind of killing me on both ends.

BY MR. MARKS:

Q. Do you think the Copyright Owners' proposal to impose a late fee on mechanical rights payments is reasonable?

A. No.

Q. Why not?

A. Well, I mentioned earlier the fractured nature of ownership here is really difficult. We pay everybody we can figure out to pay and we pay them on time. We don't play games on that front at all. Ownership can be complex on a down-to-the-song level. It's certainly complex on an industry level in terms of it changes a lot.

There's no single repository. The metadata is incomplete and something that we will work very hard internally to get right. We've spent substantial sums to a third party to help us solve these problems. So we -- we make every effort to do this the right way, but -- and we pay every dollar we can -- we can pay. And always have.

1 So I don't -- I think it's a solution in
2 search of a problem that doesn't exist. The real
3 problem is the data issues, and incentive to get
4 that data right is important, i.e., incentive to get
5 paid.
6 And if you add a license fee or, sorry, a
7 late fee and, God forbid, a user's late fee on top
8 of that, the incentive to get that data right soon
9 lessens significantly. And already we -- I think we
10 have a hard time getting data accurate to make the
11 payments that we want to make.
12 I think adding a late fee just creates
13 the wrong environment between us and our publishing
14 partners.
15 Q. For works for which Pandora does not have
16 reliable ownership information at the end of a
17 royalty accounting period, would Pandora be opposed
18 to putting royalty payments in an interest-bearing
19 escrow account until publishers or the NMPA could
20 provide reliable ownership information?
21 A. No.
22 JUDGE STRICKLER: No, you would not be
23 averse?
24 THE WITNESS: No, I would not be averse
25 to that.

MR. MARKS: At this point, Your Honors, if we could clear the courtroom, we're going to go into restricted session.

JUDGE BARNETT: Okay. Now we're closing the hearing room. If you are in the hearing room and do not have privilege to hear or see restricted materials, if you would please wait outside.

(Whereupon, the trial proceeded in confidential session.)

O P E N S E S S I O N

BY MR. MARKS:

Q. I should say, in the interest of full disclosure, a few short topics, not just a few questions.

THE WITNESS: Break out my long answers. Use up the time. We're ready.

JUDGE BARNETT: Yes.

BY MR. MARKS:

Q. Mr. Herring, what is Ticketfly?

A. It is a software and service ticketing platform that -- that venues use to sell advanced tickets.

Q. Could you turn to the tab in your binder that's marked Pandora Exhibit 892?

A. Yes.

Q. What is it?

A. This is a description of the company from their web site.

Q. When you say "company," you're referring to --

A. Ticketfly.

Q. Was this document appended to your written rebuttal testimony as an exhibit?

A. Yes.

1 MR. MARKS: I offer Pandora Exhibit 892
2 into evidence.
3 MS. BUCKLEY: No objection.
4 JUDGE BARNETT: 892 is admitted.
5 (Pandora Exhibit Number 892 was marked
6 and received into evidence.)
7 BY MR. MARKS:
8 Q. Does Ticketfly utilize mechanical rights
9 to musical works?
10 A. No.
11 Q. How does Ticketfly generate revenue?
12 A. It takes a fee on a per-ticket basis for
13 every ticket sold through its platform.
14 Q. Can a Pandora user purchase a concert
15 ticket through Ticketfly on Pandora's web site or
16 app?
17 A. No.
18 Q. Do you need to be a Pandora user in order
19 to buy tickets to a concert through Ticketfly?
20 A. No.
21 Q. Does Pandora offer alerts about upcoming
22 concerts held at venues other than the ones that use
23 Ticketfly to sell tickets?
24 A. Yes.
25 JUDGE STRICKLER: Question for you. On

1 Exhibit 892, it says Ticketfly is a subsidiary of
2 Pandora. Is it a wholly-owned subsidiary?
3 THE WITNESS: It is.
4 BY MR. MARKS:
5 Q. Does Pandora receive any commission fee
6 if a Pandora user buys a -- buys concert tickets
7 through the link provided in Pandora's streaming
8 service?
9 A. No.
10 Q. Is Ticketfly operated as a separate
11 business from Pandora?
12 A. Yes.
13 Q. Does it have separate P&L statement?
14 A. It does.
15 Q. Does it have any overlap in management
16 teams?
17 A. No, it has its own management team.
18 Q. What percentage of Pandora's consolidated
19 revenues come from Ticketfly?
20 A. About 6 percent.
21 Q. And has Pandora done projections of what
22 percentage of consolidated revenues Ticketfly will
23 represent going into the future?
24 A. Approximately the same, maybe growing a
25 little bit to 7 percent.

Q. Can Pandora operate as an unprofitable music service because of its ownership of Ticketfly?

A. No.

Q. Has Pandora ever offered its music streaming service at a discount or for free to drive customers to Ticketfly?

A. No.

Q. Does Pandora have any incentive to operate its music streaming products at a loss?

A. No.

Q. Do any of Pandora's licenses with record labels, performing rights organizations, or music publishers include, for purposes of calculating a fee, Ticketfly revenues within the definition of Pandora's revenue?

A. No.

Q. Do songwriters and music publishers benefit financially if Pandora drives incremental concert ticket sales by alerting its users about concerts?

A. Yes.

Q. How?

A. The venues that Ticketfly sells tickets for and -- and the venues that we don't sell tickets for that we drive tickets for pay performance fees

to ASCAP, BMI, SESAC, et cetera, so that songwriters and publishers receive royalties in that way.

Q. If you could turn to the tabs that are marked as Pandora Exhibits 893, 894, and 895.

A. Yes.

Q. Do you recognize these documents?

A. Yes.

Q. What are they?

A. These are performance agreements for ASCAP, BMI, for live events venues.

Q. Are you personally familiar with these documents?

A. Yes.

MR. MARKS: I offer Pandora Exhibits 893, 894, and 895 into evidence.

MS. BUCKLEY: I -- I object. The mere fact that Mr. Herring may be familiar with this document is not the same thing as saying that he uses it in Pandora's business or that he licenses anything pursuant to these agreements.

BY MR. MARKS:

Q. Mr. Herring, have you -- have you ever entered into a -- an agreement of this nature?

A. Well, we do put on live events where we have licenses like of this nature. I also own a

1 live event venue that is licensed with ASCAP, BMI,
2 and SESAC using these agreements.
3 MS. BUCKLEY: I don't think agreements of
4 this nature is the same thing as saying that Pandora
5 has entered into any of these agreements.
6 MR. MARKS: We're not representing
7 Pandora has entered into these specific agreements.
8 We're representing that these are the form
9 agreements that ASCAP and BMI use to license concert
10 venues and concert promoters to provide further
11 evidence that additional ticket sales drives
12 additional revenues to rightsholders.
13 JUDGE BARNETT: Sustained. 894, 895, 897
14 -- are those the numbers?
15 MR. MARKS: I think it's 893, 894, and
16 895.
17 JUDGE BARNETT: That's right. Thank you.
18 Are rejected.
19 (Pandora Exhibits 893, 894, 895 were
20 rejected from evidence.)
21 BY MR. MARKS:
22 Q. Does Pandora have any concerns that there
23 will be less musical works available in the future
24 for Pandora to stream and make available to
25 consumers if Pandora's rate proposal is adopted?

A. No.

Q. Why not?

A. There has been no shortage of music available over the last few years under these rates. ASCAP, BMI continue to grow and add works to their repertoire, which we're licensed with.

We have done multiple direct deals in that same time frame.

Q. What is your familiarity with the growth of repertory of ASCAP and BMI?

A. Well --

MS. BUCKLEY: Objection. Unless it's based on personal knowledge, I don't think that this is appropriate testimony for this witness. If all he has done is read ASCAP's annual report, which is pure hearsay, I really don't think he can talk about what is happening at ASCAP in terms of how many writers there are.

JUDGE BARNETT: I got -- I got the objection.

MS. BUCKLEY: Thank you.

JUDGE BARNETT: Do you want to try and --

MR. MARKS: Yeah, but the question I asked him was what is his familiarity with the growth, and I think he should be allowed to answer

1 and explain so I can lay a foundation.
2 JUDGE BARNETT: Okay.
3 THE WITNESS: You know, we are partners.
4 We have deals, and have for years, with ASCAP and
5 BMI, and I read their annual reports and their own
6 statements about their repertoire.
7 BY MR. MARKS:
8 Q. And do you consider the size of the
9 repertoire, the growth of the repertoire as you --
10 in evaluating performance rights licenses?
11 A. Yes, they are directly connected to our
12 negotiations for licensing.
13 Q. If I could turn your attention to Pandora
14 Exhibits 897 through 902. I'll ask you if you
15 recognize these documents?
16 A. Yes, these are the --
17 MS. BUCKLEY: I object to these exhibits
18 on the same basis.
19 JUDGE BARNETT: They haven't been offered
20 yet.
21 MS. BUCKLEY: Okay.
22 BY MR. MARKS:
23 Q. What are the -- what are the documents
24 that have been included in your binder as Pandora
25 Exhibits 897 to 902?

A. They are the annual reports for ASCAP, for 2013, '14, and '15, and then for BMI, 2013, 2014, and 2015.

Q. And did you receive these documents in the ordinary course of business?

A. Yes.

Q. Did you also review these documents in preparation for your -- in preparing your written rebuttal testimony?

A. Yes.

Q. Were they attached as exhibits to your written rebuttal testimony?

A. Yes.

Q. Are these available to the public on ASCAP and BMI's web site?

A. Yes.

MR. MARKS: Your Honors, I'd like to offer Pandora Exhibits 897, 898, 899, 900, 901, and 902.

MS. BUCKLEY: Objection, there's no foundation for these hearsay documents.

JUDGE BARNETT: Are you offering these for the truth of the matter?

MR. MARKS: No, I'm offering them as -- as informing Pandora's testimony, Mr. Herring's

1 testimony, about whether or not there's any concern
2 from the Service perspective about whether or not
3 there won't be enough musical works available to
4 operate his service.
5 MS. BUCKLEY: Objection. It sounds like
6 what he just said is that Mr. Herring is going to be
7 relying on these documents for which -- which are
8 hearsay for which there's no foundation, to support
9 his claim that there's no shortage of writers.
10 MR. MARKS: I'd also like to respond that
11 ASCAP and BMI are organizations that represent music
12 publishers and songwriters. I think it's an
13 admission against interest. They're owned by the
14 same people that the Copyright Owners here purport
15 to represent. So these are the annual reports that
16 are publicly available, widely distributed to
17 licensees and other content partners. Frankly, I'm
18 surprised that they want to deny what the numbers
19 say.
20 JUDGE BARNETT: The objection is
21 overruled. These are being admitted not to support
22 the truth of what ASCAP and BMI say their financials
23 are or their -- whatever. They're just being
24 offered as -- as materials upon which Mr. Herring
25 relies in his business decision making. Whether

they're --

MS. BUCKLEY: As long as they're not being relied on for the truth of the contents. Thank you.

JUDGE BARNETT: I don't see how we could do that. So --

MR. MARKS: Thank you, Your Honors. No further questions.

JUDGE BARNETT: Yes. Oh, I'm sorry.

MR. MARKS: I'm sorry. Before I yield the microphone --

JUDGE BARNETT: Did we start with 897? 897 through 902 inclusive are admitted.

(Pandora Exhibit Numbers 897, 898, 899, 900, 901, and 902 were marked and received into evidence.)

MR. MARKS: Thank you, Your Honors. No further questions.

JUDGE BARNETT: Let's have a 20-minute recess. I'm not sure where everyone stands on having missed their lunch or eaten their lunch or taken an early lunch or if you want a snack. So we'll take 20 minutes, which will get us to about 8 -- or, sorry, 2 -- let's just say 2:10 and call it good.

(A recess was taken at 1:48 p.m., after which the hearing resumed at 2:18 p.m.)

JUDGE BARNETT: I anticipate some cross-examination of Mr. Herring, but he chose not to come.

(Laughter)

JUDGE BARNETT: Thank you, Mr. Herring. You may remain under oath. Are we in open session?

MS. BUCKLEY: I think very briefly, and even then it's simply based on the fact that there were certain material in Mr. Phillips' testimony that was not designated as restricted, and I'm going to go over some of that, but if counsel believes otherwise, I'm happy to treat it as restricted.

JUDGE BARNETT: Okay. All right. Thank you.

CROSS-EXAMINATION

BY MS. BUCKLEY:

Q. Good afternoon, Mr. Herring.

A. Hi.

JUDGE BARNETT: Ms. Buckley, could you identify yourself for the record and lower that mike just a little bit so it picks up your voice? Thanks.

MS. BUCKLEY: My name is Lisa Buckley.

I'm from Pryor Cashman and represent the Copyright Owners.

BY MS. BUCKLEY:

Q. Mr. Herring, you spend a significant portion of your written direct testimony and also your testimony this morning talking about the Music Genome Project. Do you recall that?

A. Yes.

Q. And you talked about the expense associated with creating it and the time and effort that it took to create it. These are all expenses and time that would have been spent and incurred regardless of whether Pandora expanded its service into Plus and Premium; isn't that correct?

A. Yes.

Q. And just to be clear, the Music Genome Project was not something that Pandora created in connection with its decision to expand its service offerings to Plus and Premium, correct?

A. Yes.

Q. And Pandora would continue to update the Music Genome Project regardless of whether it had made the decision to expand its service offerings from purely a non-interactive service, correct?

A. Not at the same level, but that activity

1 would probably -- the breadth of coverage necessary
2 under interactive service is dramatically more than
3 a radio service.
4 Q. Does that -- when you refer to that, are
5 you referring to breaking down additional songs
6 through the Music Genome Project?
7 A. Yes.
8 Q. And what -- what would be the difference,
9 if you will, between what you would do if you just
10 maintained your non-interactive service as opposed
11 to what you would do in connection with your
12 additional service offerings?
13 A. So in a non-interactive service, we
14 choose the song that we play for you. And
15 99 percent of the songs that people want to hear in
16 that environment are contained within a catalogue of
17 maybe a couple million.
18 In an on-demand environment, the value
19 proposition is different. Although as I stated
20 earlier today we believe north of 70 percent of
21 listening will still be in a non-interactive
22 environment, the remaining piece, which is a big
23 part of why people are paying for the subscription,
24 the value proposition, is that they can hear a
25 specific song when they enter it. And so the need

for a much broader catalogue is important because the value proposition is if you want to hear a specific song, you enter it.

And so instead of a couple million songs being sufficient to power the service, you know, it is tens of millions of songs.

Q. And in addition to the Music Genome Project, Pandora also breaks songs down by algorithm, correct?

A. Not -- we use machine learning to evaluate songs, yes, in connection with human analysis through the genome project.

Q. The Premium service, I believe you said, is launching tomorrow?

A. In limited release, yes.

Q. Congratulations.

A. Thank you.

Q. Has Pandora analyzed through the Music Genome Project the number of songs in its on-demand library?

A. Not every song in the on-demand library. That's not the way it works.

Q. How many songs are in the on-demand library?

A. Can we go into restricted session?

1 Q. Yes.
2 A. You're now asking me questions that are
3 not public.
4 JUDGE BARNETT: Thank you.
5 (Whereupon, the trial proceeded in
6 confidential session.)
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C O N T E N T S

WITNESS	DIRECT	CROSS	REDIRECT	RECROSS
MICHAEL HERRING				
	842	936	1037	1052

CONFIDENTIAL SESSIONS: 906-924, 941-end

E X H I B I T S

EXHIBIT NO:	MARKED/RECEIVED	REJECTED
PANDORA		
880	845	
881	850	
882	873	
888	845	
889	910	
891	866	
892	926	
893		930
894		930
895		930
897	935	
898	935	
899	935	
900	935	
901	935	

EXHIBIT NO:	MARKED/RECEIVED	REJECTED
PANDORA		
902	935	
905	979	
974	908	
COPYRIGHT OWNERS		
2694	958	
2746	973	
3214	965	

CERTIFICATE

I certify that the foregoing is a true and accurate transcript, to the best of my skill and ability, from my stenographic notes of this proceeding.

3/15/17 Karen Brynteson

Date Signature of the Court Reporter

PUBLIC VERSION

Before the
UNITED STATES COPYRIGHT ROYALTY JUDGES
The 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 DIRECT TESTIMONY OF CHRISTOPHER PHILLIPS

(On behalf of Pandora Media, Inc.)

INTRODUCTION

1. My name is Christopher Phillips. I am the Chief Product Officer of Pandora Media, Inc. ("Pandora" or "the Company"). I have served in that role since I joined the Company in October 2014.

2. Before joining Pandora in October 2014, I was the Director of Product Management and User Experience for Amazon Digital Music. I was responsible for the product roadmap and delivery of customer experiences across device platforms and international expansion. During my time at Amazon Digital Music, I was also responsible for the introduction of Amazon Prime Music. Prior to joining Amazon, I worked for Intuit as a Director of Offering Strategy and Product Management. Earlier in my career, I worked for Workspeed and Accenture. I graduated with a Bachelor of Science, Business Administration degree in Finance from The Ohio State University, Max M. Fisher College of Business in 1997.

3. As Pandora's Chief Product Officer, I am responsible for defining and leading the Company's overarching strategy and roadmap for product, engineering, and marketing. I

supervise a team of over 700 people to develop, deliver, and drive adoption of products that connect fans and artists in new ways and that help advertisers reach their audiences. My team has been responsible for the redesign of Pandora's service and the development of its new product offerings, including its forthcoming on-demand streaming service.

4. I present this testimony to the Copyright Royalty Judges: (i) to provide an overview of Pandora's service and evolving features, including a description of the new tiers of service; (ii) to explain the consumer research and feedback that led Pandora to redesign its service to include interactive features on its Pandora Plus and forthcoming Pandora Premium tiers of service; (iii) to describe Pandora's proprietary technology for optimizing the delivery of advertising and messaging to listeners, which is an important part of Pandora's strategy to grow its service and attract new listeners to interactive streaming; and (iv) to describe the product development team needed for these efforts.

PANDORA'S PREVIOUS NONINTERACTIVE PRODUCT OFFERINGS

5. Pandora is, and for some time has been, the leading internet radio service in the United States. Pandora is best known for its personalized, noninteractive radio stations that provide a "lean-back" or radio-style listening experience. Pandora's noninteractive, statutorily licensed service—the service at issue in the *Web IV* proceeding—included two tiers: an ad-supported tier, which was free to consumers, and the subscription-based Pandora One, which was ad-free. The primary competition for listeners for this type of radio-style listening experience has been from other radio providers such as terrestrial radio broadcasters, Sirius XM, and other noninteractive webcasters like iHeartRadio. Listeners could access the ad-supported Pandora and subscription Pandora One products on a wide variety of platforms, including desktop

computers or laptops via a web browser, smart phones and other mobile devices, and, increasingly, automobile and consumer electronic platforms.

6. Using Pandora for radio-style listening always has been, and after our redesign is fully implemented will remain, simple: after creating an account, a listener need only "seed" a station or select a "genre" station and then music will begin to play. To create a seeded station, the listener simply types in the name of an artist, composer (for classical music), or song title to serve as the starting point or "seed" for the station. Pandora then automatically creates a station centered around that seed, which—through use of our patented Music Genome Project technology and a combination of proprietary playlist algorithms—will play tracks whose musicological characteristics our Music Genome Project reveals as resembling those of the seed.[1] As an alternative, a user can select one of Pandora's genre stations, which begin as pre-programmed collections of tracks that reflect a certain musical style or preference. Pandora's genre stations range from hit-driven stations such as "Today's Hits" or "Today's Country" to highly specialized genres such as "Rockabilly" and "Classic Ska." Each genre station is initially populated with tracks that are hand-selected by Pandora's music curation team to reflect that musical genre or style.

7. When a user starts his or her experience by seeding a station, he or she can then influence the music played by adding information that we refer to as "variety," such as a favorite artist or song, or by "thumbing up" a song (indicating that he or she likes it) or "thumbing down" a song (indicating dislike of that song, or that he or she does not want that song to play on that station in the future). The user also has the ability to skip a track. Users typically have the

[1] The Music Genome Project and Pandora's proprietary playlist algorithms are described in more detail in the Written Direct Testimony of Michael Herring, Pandora's President and Chief Financial Officer.

option to view lyrics and an artist's biography for each track they hear. Prior to the product developments described below, users did not get to choose the tracks they listened to on their chosen station, did not have the ability to replay selections, and playlists comported with the sound recording performance complement in section 114(j)(13) of the Copyright Act, which limits the frequency with which an artist or album can be played by a statutory webcaster. This type of radio-style listening offers a very different user experience than that offered by on-demand products in which listeners select the tracks or albums they wish to hear and the order in which they will hear them.

8. In addition to music, Pandora users can also listen to comedy routines and other "spoken word" content, such as podcasts. In providing comedy content, Pandora leverages technology similar to the Music Genome Project referred to as the Comedy Genome Project and allows users to seed a comedian or select a comedy genre station and personalize the station with thumbs or by adding variety.[2]

CONSUMER DESIRE FOR INTERACTIVE FEATURES

9. In my experience, there is a broad spectrum of consumer desires for music consumption, ranging from consumers with little or no interest in music consumption to music "aficionados" who consume a great deal of music, care deeply about specifically what music they listen to, and are willing to spend more money on music than casual listeners. Most people fall somewhere in between, and their interest in control over music selection will fluctuate over the course of a given day, month, or year. To date, most consumers have been unwilling to

[2] Comedy and spoken word content represent a small but growing component of Pandora's service. Though comedy and podcasts currently constitute approximately [redacted]% of Pandora listener hours, millions of users listen to non-music offerings on the service in any given month. To date, 11 million listeners have streamed "Serial" and "This American Life" podcasts through Pandora.

spend money on subscribing to a music streaming service and prefer to utilize a "free" platform, including broadcast radio, Pandora's ad-supported tier, or other ad-supported options. In some instances, and particularly when legal options have not offered desired functionality or a sufficiently attractive value proposition, significant numbers of listeners have resorted to music piracy or the use of unlicensed, infringing services. At a minimum, however, millions of consumers have proven willing to spend $9.99 per month for on-demand listening, as Pandora has observed in the marketplace by watching the reported subscriber counts of popular subscription on-demand services.

10. Research commissioned by Pandora has shown that: (i) time spent listening to noninteractive webcasting typically has replaced other forms of noninteractive listening, such as broadcast radio, or is new listening time that would not have been spent consuming music at all, and (ii) most subscribers to on-demand music service also use noninteractive services. *See* Written Rebuttal Testimony of Larry Rosin, In re Determination of Royalty Rates and Terms for Ephemeral Recording and Digital Performance of Sound Recordings (*Web IV*), Docket No. 14-CRB-0001-WR (2016-2020), at 12-13. In addition, we observed that a significant portion of our user base has been using Pandora's service in conjunction with other services offering features such as replays, offline listening, and on-demand streaming that Pandora, as a statutory webcaster, could not offer. In many cases, users have been continuing to rely on Pandora as their primary source for music consumption; in others, users have been migrating away from Pandora in favor of other options.[3] When I joined Pandora just over two years ago, it quickly became

[3] Pandora's monthly user count—after many years of strong growth—had been eroding since mid-2014. [redacted]

apparent to me that, in either case, Pandora was losing an opportunity to provide a meaningful segment of its customer base with products and features users wanted and could obtain elsewhere.

11. As part of Pandora's continuous efforts to maintain a market-leading position and to foster new opportunities for growth, we began to study this issue more intensely, including reviewing market research and analyzing our consumer feedback. We also commissioned surveys and studies by outside vendors at additional expense. Pandora's decision to redesign its service and develop interactive features evolved out of that process.

12. We learned that a significant number of our users wanted functionality beyond what a statutory webcasting service is allowed to provide, but users were not always motivated by the same feature or set of features. Desired options included:

- the ability to replay tracks they want to hear again;
- the ability to skip as many tracks as they want;
- the ability to save music for later listening, including offline use;
- the ability to hear a specific track on-demand;
- the ability to create playlists of their own choosing; and
- the ability to share music with other people.

13. In most cases, migration to other services for these other features has been temporary and to supplement, rather than replace, the Pandora experience. Through consumer feedback and our research, we have learned that listeners are more likely to leave Pandora at the moments when they experience a particular feature limitation—which we refer to as "pain

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[redacted] *See* PAN Dir. Ex. 3 at 56.

points." For example, we learned that one of the pain points for Pandora users was hitting our self-imposed skip limit. Once certain users hit the skip limit, they would jump to another service in order to continue listening to music they wanted to hear, rather than remain on Pandora and listen to a track they would prefer to skip. Another pain point was the inability to replay a particular track. After discovering a new song they liked, or re-discovering an old one, users would leave Pandora and go to an on-demand service such as YouTube or Spotify in order to hear a recording again before returning to Pandora for more "lean back" listening.

14. We concluded that the absence of these additional features on Pandora's service was hurting our product and our ability to maximize our appeal to our listener base. This lack of functionality was inhibiting growth in listener hours, contributing to a decline in monthly users, and limiting our ability to attract new customers who wanted this additional functionality.

PANDORA'S NEW SERVICE OFFERINGS

15. In order to maintain our market-leading position and to fuel future growth, we recognized that Pandora could not rely solely on its noninteractive, statutorily compliant service, but rather would need to develop some of the features that were causing listeners to spend time on other services. However, it was important to us to preserve what has made Pandora the industry leader in music streaming to date: an interface that is simple to use with expert curation that makes Pandora an engine of highly personalized music discovery and enjoyment. To that end, a guiding principle in our product redesign was to introduce options for interactive features that consumers increasingly expect in their music listening experience without sacrificing the product attributes that have fueled Pandora's appeal to date.

16. Based on these parameters, we redesigned our service to offer a range of products, with price points and feature sets that vary to accommodate the range of consumer preferences

and willingness to pay for music. The redesigned Pandora offers three tiers: an ad-supported free tier just called "Pandora," a subscription-based mid-tier option called "Pandora Plus," and a forthcoming, fully on-demand, subscription-based option called "Pandora Premium."[4] The first two tiers launched in September of this year. We will be introducing Pandora Premium to subscribers in the next few months.

Tier One: Pandora (ad-supported radio)

17. The first part of Pandora's redesign was to update its market-leading, ad-supported radio product. The redesigned product, which keeps the same "Pandora" name under which it has been marketed to date, continues to offer listeners the same great "lean back" radio product for which Pandora is known, fueled by our Music Genome Project and our other proprietary algorithms, and supported by advertising. New features, including replays, additional skips, and improved delivery of advertising, have been incorporated in order to improve monetization and to help manage some of the pain points that have been causing consumers to migrate to other services to satisfy part of their music listening needs.

18. Just as before, Pandora allows users to start seeded stations (based on an artist or song) or to select genre stations. Pandora will then begin to play tracks from that station, as determined by the Music Genome Project and our proprietary algorithms. As with the prior ad-supported product, Pandora users will be able to pause or continue to play tracks, thumb tracks up or down, and input additional variety to influence what sorts of music is played on a station. Users also will still be able to view song lyrics and artist biographies. These features help further Pandora's desire to promote music discovery and a healthy music ecosystem.

[4] The features of the redesigned service are reflected in PAN Dir. Exs. 2, 4.

19. The most significant changes to Pandora's ad-supported tier concern skips and replay functionality. Pandora users have access to a limited number of skips, just as before, but now have the opportunity to obtain additional skips and, for the first time, limited replay functionality[5] if they choose to view a video ad. These advertisements vary in length, but typically will last approximately [redacted] seconds. Skip and replay rewards expire after a limited amount of time, if left unused.

20. Options to unlock additional skips or replays are offered throughout the time a user is listening to Pandora, such that if a user runs out of skips or replays, they will be presented with the option to engage with another video ad. This new feature aims to relieve some of the pain points for our listeners which historically have caused many listeners to leave our service, even if only temporarily, for another streaming service. At the same time, this function allows Pandora to improve its monetization by offering advertisers an effective and highly targeted new way to reach consumers.

21. Pandora intersperses these advertisements with targeted messages to upsell users of the ad-supported tier to the subscription-based Pandora Plus (and, when launched, also to Pandora Premium) to gain new subscribers from the pool of listeners that are exhibiting a desire for more control over at least some aspects of their music listening experience. Such efforts are already driving Pandora Plus subscriptions and additional engagement across the service.

Tier Two: Pandora Plus

22. The second tier of Pandora's redesigned product offering is marketed as Pandora Plus. Pandora Plus is a subscription-based product available to users at $4.99 per month that

[5] A "replay" on Pandora refers to the ability to play again, or replay, one of the sound recordings that the user has recently listened to on the Pandora service. [redacted]

replaces Pandora One.[6] The core functionality and listener experience of Pandora Plus is the same as the ad-supported Pandora product, including the ability to use thumbs, and view lyrics and artist biographies, except that the service is ad-free.[7] Unlike consumers of the ad-supported Pandora tier, however, Pandora Plus subscribers receive:

- access to Pandora's replay functionality (without engaging with advertising);
- more skips; and
- offline or "cached" listening to a limited number of stations.

23. The addition of offline listening to the Pandora Plus tier addresses another pain point identified by many of our Pandora users: the inability to listen to Pandora while not connected to the internet. This inability has been particularly problematic for users that have spotty or non-existent connections to the internet during the some of the most popular times for listening to our service: while commuting, traveling or exercising outdoors and during work. With Pandora Plus, users will have access to a limited number of cached radio stations, which they can listen to without an internet connection. The cached stations are chosen by Pandora, rather than the user, but generally influenced by the user's most frequently used stations during their recent listening history. The cache of stations will be refreshed multiple times a day by Pandora when the user's device is connected to the internet or, if the user is offline (without

[6] While we expect the typical subscriber for Pandora Plus will pay $4.99 per month, there may be some modest variation as a result of discounts we may decide to provide for annual subscriptions, grandfathering for long-time subscribers to Pandora One at their original subscription price, and the like.

[7] As described below, subscribers will receive Artist Audio Messages and promotional messaging from Pandora itself including efforts to upsell Pandora Plus subscribers to Pandora Premium after it launches.

internet access), stations will refresh when the user is next reconnected to the internet.[8] For Pandora Plus subscribers, offline listening will be the same "lean back" listening experience, with the songs and their sequence of play determined by the Music Genome Project and Pandora's proprietary algorithms, except that each cached station will contain approximately [redacted] worth of unique content.

24. As with users of the ad-supported Pandora tier, Pandora Plus subscribers do not know which track will be played next or which tracks are upcoming. Except for the potential to replay a recently heard track, Pandora Plus subscribers cannot select particular recordings to stream, and stations on Pandora Plus will otherwise abide by the sound recording performance complement of the statutory license under section 114, whether or not they are cached for offline listening.

25. The decision to include certain control features within Pandora Plus while withholding others was deliberate and strategic. We believe that a meaningful number of consumers are not currently, and may never be, willing to pay $9.99 per month for access to music—even if they would enjoy on-demand functionality—but are willing to pay for a lower-priced subscription. Offering a lower-priced product helps Pandora to grow its subscriber and revenue base by reaching these consumers, which in turn increases the royalty payments Pandora makes to sound recording and musical work rightsholders. We also believe that while a meaningful number of consumers are not currently willing to pay the prevailing market rate for access to full on-demand streaming today, they may transition to such a service over time. By adding some of the features that consumers find desirable to Pandora Plus, but withholding other

[8] [redacted]

significant features, we believe we are optimizing subscriber revenue by offering a sustainable and attractive mid-tier product which is not otherwise currently available in the market, while creating opportunities to upsell subscribers over time to our premium product offering.

Tier Three: Pandora Premium

26. With Pandora Premium, Pandora will be offering subscribers a full on-demand listening experience, although one that will be a uniquely Pandora experience. Pandora Premium, which will be available to subscribers at $9.99 per month, will offer its users an ad-free platform that provides both fully interactive and "lean back" radio listening experiences.

27. Pandora Premium subscribers will have access to all of the same features as Pandora Plus subscribers: the ability to start seeded stations and to select genre stations, the ability to thumb tracks up or down, unlimited skips, replay functionality, and access to cached stations for offline listening. But Pandora Premium will also offer a number of features that are not available on Pandora Plus, including:

- the ability to play any song, artist, or album in the Pandora library on demand;
- the ability to create and manage playlists and share them with other Pandora Premium subscribers; and
- enhanced offline listening that will enable subscribers to listen to selected songs, albums, stations and playlists of their own devising, in addition to the cached stations that are available with Pandora Plus.

28. The added functionality available on Pandora Premium will be competitive with the feature set of other on-demand music streaming services available in the marketplace, but the inclusion of our existing radio features, and the wealth of data about listener preferences we have built over time, will make our product unique. While users will have the ability to select

particular songs, they will do so in an environment curated by Pandora in which our incomparable knowledge of their music tastes, and the tastes of other users like them, will enable us to provide a much richer experience and to continue to serve as an engine of music discovery.

29. What will be distinctive about Pandora's new on-demand product is Pandora's signature ease of use. Pandora Premium will have a suite of features designed to make listening as easy and enjoyable as possible by leveraging Pandora's database of musical preferences (both personal to the user and collective across our entire user base) and its proprietary algorithms. These features will allow Pandora Premium subscribers to immediately start listening to music that they already love (*e.g.*, stations they already have listened to either on Pandora or Pandora Plus, and an on-demand library based on those stations and users' thumb preferences), introduce subscribers to music they have not heard before, and make recommendations of additional music they may want to add to a playlist. Pandora Premium also will allow users to move effortlessly between user-selected listening and Pandora-programmed listening as their activities change throughout the day, and as their listening habits change throughout their lives. The enhanced search function on Pandora Premium will enable users to easily search for a particular song, artist, or album. [redacted]

30. As part of the added value Pandora is bringing to the existing marketplace for on-demand music streaming, [redacted]

[redacted]

31. [redacted]

32. We expect that, by offering a unique combination of features that has not been available before and by leveraging the Music Genome Project, Pandora's proprietary algorithms,

and our extensive knowledge about listener preferences and behavior,[9] the redesigned service will attract a considerable number of subscribers who do not currently utilize on-demand streaming at all. To the extent that some of our users have been using Pandora for radio listening and music discovery in combination with an on-demand subscription service for those times during the day or week when they want to pick exactly what songs they want to hear, to listen to entire albums, or to hear only the music of a particular performing artist, we will be able to offer one-stop shopping and satisfy all of their music streaming needs in one place. Indeed, for the reasons stated above, we believe Pandora is positioned to provide an even better on-demand service than exists in the marketplace today. To the extent that some consumers are currently using other services but not using Pandora at all because we have not previously been able to offer the level of control those consumers want, the combination of on-demand streaming with our market-leading radio offering will help us attract additional new customers. And for the tens of millions of listeners that Pandora already has that currently rely exclusively on ad-supported or other free options, we believe that Pandora will be in a much better position than any other service to convert those users into paying subscribers.

PANDORA'S INNOVATIONS IN DELIVERING ADVERTISING AND PROMOTIONAL MESSAGING

33. Pandora has invested heavily to determine the best time to deliver an advertisement to a user. One of the most attractive features about Pandora to advertisers is the ability to deliver extremely targeted advertising to particular audiences. [redacted]

[9] Pandora collects approximately 1 billion data points a day from listeners to leverage for personalization.

[redacted]

34. [redacted]

35. [redacted]

PANDORA'S PRODUCT DEVELOPMENT TEAM

36. The redesign of Pandora's service and its development of interactive features have required a massive investment of time and effort from my team (as well as significant contributions from other parts of the organization). Since the project began, hundreds of employees have spent the majority of their time working on the product development aspects of this initiative, including members of our product development, product insight, product management, project management, product marketing, engineering, design, and programming departments. This team has included, by way of example, data scientists, software engineers,

quality assurance engineers, project managers, product analysts, lead product designers, and researchers.

37. Moreover, the product development work is far from over. Our team is still completing the development and engineering work necessary to launch the Pandora Premium tier. And, of course, the efforts will not stop there, as Pandora is continuously engaged in efforts to improve its service and promote a healthy music ecosystem.

PUBLIC VERSION

Before the
UNITED STATES COPYRIGHT ROYALTY JUDGES
The 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)

DECLARATION OF CHRISTOPHER PHILLIPS

I, Christopher Phillips, 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 31st day of October 2016 in Oakland, California.

Christopher Phillips

LIBRARY OF CONGRESS

UNITED STATES COPYRIGHT ROYALTY JUDGES

The Library of Congress

IN THE MATTER OF:	)
	)
DETERMINATION OF RATES	) Docket No.
AND TERMS FOR MAKING AND	) 16-CRB-0003-PR
DISTRIBUTING PHONORECORDS	) (2018-2022)
(PHONORECORDS III),	)

OPEN SESSIONS

Pages: 317 through 527 (with excerpts)

Place: Washington, D.C.

Date: March 9, 2017

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2 The Library of Congress
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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 March 9, 2017
22 9:00 a.m.
23 VOLUME II
24 Reported by:
25 Karen Brynteson, RMR, CRR, FAPR

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testified as follows:

JUDGE BARNETT: Please be seated.

DIRECT EXAMINATION

BY MR. SINGH:

Q. Good morning, Mr. Phillips. Can you please state your full name for the record?

A. Christopher Phillips.

Q. Where do you currently --

JUDGE BARNETT: I'm sorry, Mr. Phillips, Phillips can be spelled different ways. Can you spell your name for the record, please?

THE WITNESS: Yes. It's P-h-i-l-l-i-p-s.

JUDGE BARNETT: Thank you.

BY MR. SINGH:

Q. And where do you work, Mr. Phillips?

A. Pandora.

Q. What's your job title at Pandora?

A. Chief product officer.

Q. And what are your responsibilities as the chief product officer at Pandora?

A. So my responsibilities include defining our product strategy, our roadmap of what products we will bring to market, driving development and go-to-market -- so I'm responsible for defining the product strategy and our product roadmap, what we're

1 going to build, making sure it's built and then
2 brought to market.
3 So I look after our product management
4 team design, curation, and have oversight of our
5 engineering and marketing teams.
6 Q. For how long have you been the chief
7 product officer at Pandora?
8 A. October 2014.
9 Q. Mr. Phillips, did you prepare a written
10 direct testimony in this proceeding?
11 A. Yes, I did.
12 Q. Take a look at tab 1 of the exhibit
13 binder, which is marked as Exhibit 877.
14 JUDGE BARNETT: I promise to stop
15 interrupting. Counsel, will you identify yourself
16 for the record, please?
17 MR. SINGH: Sure. My name is David
18 Singh, Weil, Gotshal & Manges, on behalf of Pandora.
19 JUDGE BARNETT: Thank you.
20 BY MR. SINGH:
21 Q. Is Exhibit 1 -- is tab 1, Exhibit 877 --
22 is that your written direct testimony in this
23 proceeding?
24 A. Yes.
25 Q. And if you take a look at the last page

of that exhibit, is that your signature?

A. Yes.

MR. SINGH: We offer Exhibit 877 into evidence.

JUDGE BARNETT: 877 is admitted.

(Pandora Exhibit Number 877 was marked and received into evidence.)

BY MR. SINGH:

Q. I want to take you back in time to when you started as -- as chief product officer at Pandora in October of 2014. Can you tell me what products that Pandora then offered to its users?

A. Yes. Pandora was operating a personalized non-interactive radio service, and there was two flavors of that. The first tier service was personalized radio, supported by ads. So free to the end consumer, ad-supported. And a paid subscription at $4.99 which was effectively the same non-interactive radio service without advertisement.

Q. Could users listen to music on demand on either of these services?

A. No.

Q. How did Pandora determine what songs to serve up to a user?

A. So the way Pandora works is the user, the listener, can actually see the station by typing in an artist, a song, a genre, and then our technology, powered by Music Genome, would actually then put together a -- a sequence of songs to go after that, other songs that work well with that seed.

Q. And as the chief product officer, did you do anything to evaluate or to analyze whether the product offerings were meeting your users' needs?

A. Absolutely. Big part of my job is to be connected to the insights around what's happening with the market and our users. So we look at, first and foremost, the data we collect on the users that are using our product, our own platform data, billions of data points around the behavior, what they use, what they don't use.

We also get feedback from our listeners, so we carefully look at what they were telling us through what they wish the product did, what it was missing from their perspective, app reviews and so forth.

We also commissioned our own studies where we'd go out and look at our listeners and new listeners and what they were wishing for in the product. And we would look at third-party studies,

outside organizations that would look at the overall music landscape, what other companies are doing, competitors. So all of these serve as insights that we use to help shape what we want to do.

Q. Take a look at the third tab in your witness binder, which is Exhibit 879. Do you recognize this document?

A. Yes.

Q. What is it?

A. So this is one of those example of a third-party study done around the different music services in the industry.

Q. We offer Exhibit 879 into evidence.

MS. BUCKLEY: I object. It is hearsay.

MR. SINGH: Your Honor, we're offering it because it's something that Pandora considered, and not offering it for the truth of the matter considered.

JUDGE BARNETT: You're offering it -- you're offering it as an example of the sort of materials that Pandora considered?

MR. SINGH: Exactly. It's something that Pandora factored into its analysis.

MS. BUCKLEY: Well, then if they factored it into their analysis, then they are relying on

hearsay, and I still object to this document as hearsay.

JUDGE BARNETT: Overruled.

MR. SINGH: Your Honor, just so the record is clear, did you admit Exhibit 879?

JUDGE BARNETT: Yes, I'm sorry, 879 is admitted.

(Pandora Exhibit Number 879 was marked and received into evidence.)

BY MR. SINGH:

Q. Based on Pandora's analysis of all the types of information that you just described, did you reach any conclusions?

A. Yes. It was apparent to us and clear through the different research insights, that our listeners and consumers were missing and having pain points around features that we didn't have in the product. So, very clearly, there were features that were not in our non-interactive radio service such as replaying a song, having access to off-line music, building your own playlist, skipping more, sharing music their friends could actually directly listen to. So there was many different features that came up as being painful and causing folks to start to go and use other services.

1 So if they were hearing a song on Pandora
2 they liked, and they wanted to simply replay it,
3 they would log into YouTube to replay the song or
4 build a playlist on Spotify. And so those were the
5 pain points that we were seeing on features that we
6 were -- we didn't have in our -- in our service.
7 JUDGE FEDER: Mr. Phillips, could you
8 define for us what a pain point is?
9 THE WITNESS: Yes. The pain point is a
10 way to describe something that someone wants to do
11 in a product, so I want to take a certain action, I
12 wish for that action, and I'm unable to take that
13 action.
14 So an example would be I want to listen
15 to Pandora on my flight out here from California,
16 and unfortunately at the time, Pandora did not work
17 in off-line mode. So it was a pain point for me to
18 not be able to use the service on my flight. So I
19 had to use something else or not listen at all.
20 JUDGE FEDER: Thank you.
21 JUDGE BARNETT: I'm sorry. I think of
22 something like a gallstone as a pain point.
23 (Laughter.)
24 JUDGE BARNETT: Not being able to play
25 the song you want to hear, calling it a pain is a

little bit much, but I understand the terminology.

BY MR. SINGH:

Q. Did Pandora reach any conclusions about the impact of not having -- having interactive features of its service?

A. Yes, we did. So what we looked at is the fact that we didn't have these features, that we were actually causing our existing users to -- erosion of our user base. So listeners were jumping to other music services to fulfill these needs and slowly starting to use our service less.

And so while we found listeners using our service in conjunction with other products, we found that we were eroding listening hours and time spent. And it was also causing us to struggle to attract growth in new users.

JUDGE STRICKLER: Excuse me one second, counsel.

Mr. Phillips, did you consider advertising on the ad-supported service to be a pain point every time someone would have to listen to an advertisement.

THE WITNESS: So advertisement was just part of the tradeoff for the listener to be able to consume the music, the radio service, without a

charge.

JUDGE STRICKLER: Was it a no pain, no gain? It was a pain point but --

THE WITNESS: I would say that there -- there is kind of pain and being interrupted by an advertisement, but a pain that was part of what the service offered in order to exchange for listening to the music.

JUDGE STRICKLER: So does that mean it was a pain point but one you were willing to live with?

THE WITNESS: Yes.

JUDGE STRICKLER: Thank you.

THE WITNESS: Yes.

BY MR. SINGH:

Q. Has Pandora redesigned its service to incorporate interactive features?

A. Yes. So in response to the insights and our learning, we've actually introduced quite a few changes to our -- to our overall lineup. So, historically, we had our ad-supported tier, our $4.99 bid tier. And we continued to have those and we made improvements, and we will recently or very soon will be launching a third tier we call our premium offering at $9.99.

Q. Is the new ad-supported tier similar to the old ad-supported tier?

A. It is very similar. We have made improvements to that in the design for how you can discover new stations. We've actually made quite a few enhancements to our advertising, our ad serving technology to catch people with an advertisement at a better moment in time. And so there has been a number of improvements we've made there.

And -- and we've also improved -- obviously changed the second tier, the mid-tier, the 4.99 plus offering quite a bit.

Q. Can you please describe that mid-tier Pandora Plus product to the judges?

A. Yes. So in September last year, we introduced the changes where it still operates as a radio service where we're the DJ, we serve the music to the consumer, and it still allows them at that price point to not be interrupted with ads. So that's kind of one of the main benefits that continues to be true.

We also added three additional features. We added the ability to replay a song that Pandora served to you, we added the ability to skip more, and we offered a limited off-line experience. So

1 those were three of the things that we learned from
2 research and that insights that we baked into the
3 $4.99.
4 Q. How does that off-line experience work?
5 A. Yeah, the off-line experience is -- is
6 quite innovative in that what we do is we actually
7 select the off-line stations on the behalf of the
8 consumer. So they can't choose directly which
9 stations they want to take off-line and download
10 them. We do it for them. And then we keep the
11 music refreshed for them as well. So the stations
12 don't get stale.
13 And then we have a predictive feature
14 where if you actually are -- you lose connectivity
15 when you're driving or if you happen to be running
16 in the woods, well, we'll automatically switch from
17 your connected listening on Pandora into your
18 off-line stations on your behalf and then even bring
19 you back.
20 So it -- it's serving this promise of us
21 doing the work for you in the service.
22 Q. How much does it cost to subscribe to
23 this Pandora Plus mid-tier?
24 A. So the Pandora Plus mid-tier is $4.99 per
25 month.

Q. You also mentioned a forthcoming premium tier called Pandora Premium. What is Pandora Premium and when is its initial launch?

A. Yes, so Pandora Premium will be the introduction -- the first introduction for Pandora at a $9.99 per month price point to offer on-demand features. So with Premium, you'll get all the benefits of Plus, and we'll include on-demand features that let you search and play any song, album that you want, build your own playlist, choose what you want to have off-line, share your music more easily. So all of those features will now be part of our Pandora Premium offering.

And it's coming out very soon. Literally weeks away, it will be available in the market.

Q. Has Pandora prepared a video that highlights some of the features of Pandora Premium?

A. Yes.

Q. Okay. And would that video be helpful for you in illustrating some of those features?

A. Yes.

(Video played.)

BY MR. SINGH:

Q. Can you walk us through some of the features we just saw?

A. YES. One of the first features you saw there was the ability to build a playlist in a totally different way where you can put a few songs into the service, and based on your personal listening history and our music science, you can hit that add similar songs button and we finish the playlist for you. So that's an example of kind of an effortless way to build playlists.

Or when you're searching for music, we've curated the catalogue in order to make it easier to find and faster to find the music you're looking for. Picking the music you want to take off-line versus just letting us pick for you like in Plus, you can have more control over the different areas of the music.

Q. How much will it cost to subscribe to Pandora Premium?

A. $9.99 per month.

Q. How will Pandora's interactive services, the Pandora Plus and the Pandora Premium products that you've described, how will they differ from other interactive services in the market?

A. Yes. So our differentiating factors are a lot of what has kind of been true about our service forever, which is ease of use. So we

1 believe our opportunities to be the simplest,
2 easiest music product, period. And take advantage
3 of all the music science that we have on our large
4 user base and the understanding of the music.
5 By actually applying that algorithmic
6 music knowledge, we can build playlists on behalf of
7 our listeners and make it really easy. We believe
8 that a lot of the music services that are available
9 in the market are cumbersome, complicated to use.
10 And our opportunity is to bring a much larger user
11 base into the world of subscription because of that
12 ease and the music science.
13 Q. Now, there are three tiers to the
14 redesigned service. From Pandora's perspective why
15 is it important to offer different products?
16 A. Yes. So the idea behind our three tiers
17 of service is to appeal to the largest group of
18 consumers possible. We still believe the majority,
19 the bulk of the market will prefer and enjoy an
20 ad-supported listening experience where we are the
21 DJ for them. It's a radio service first and
22 foremost.
23 We also believe that if it's mid-tier
24 price point with just the right select features,
25 where it can still behave like a radio service but

with these -- not having advertisement, having these extra features, that we can capture a large market of people who are willing to pay $4.99. And then, of course, the market has shown that a $9.99 service has appeal to a subset of the market, and they want more control. Their behavior is to have -- build collections on their own and so forth, and we want to be able to offer something for a much larger base.

Q. Has Pandora done anything to try to incentivize its non-paying users to subscribe to Pandora Plus?

A. Yeah, there's two things that we've been doing. One is while people are using the product, their behaviors are triggering up-sells. So on the platform itself, we take your activity, so if you thumbed up a song, we -- you might want to replay the song. Or if you lose connectivity with your phone, you might want off-line. So we use their actual behaviors on our product to trigger an up-sell. And so we use our advertising technology to help us sell subscriptions.

We also -- the second thing we're doing is we're educating. A lot of consumers are not aware of the benefits of a subscription product or

willing to pay. And so while we think many still won't pay, we actually think we can do a service of educating consumers and by taking their natural behaviors and introduce the benefits of going to a paid service. And so that education path is part of what we're doing.

JUDGE STRICKLER: Excuse me, counsel. Is there anything in your written testimony where you discuss the results of these attempts to up-sell?

THE WITNESS: Yes. So in my written testimony, we had just launched our Plus offering. So it was still very early days. But what I can tell you is that --

JUDGE STRICKLER: Well, before you tell me, is it in your written testimony?

THE WITNESS: There's no results from that in the written testimony.

JUDGE STRICKLER: I'm not asking you to go beyond that.

THE WITNESS: Okay.

JUDGE STRICKLER: I just wanted you to point to anything that might be in the written testimony.

THE WITNESS: Yeah, I apologize for that. We do express our intent to build that.

MS. BUCKLEY: May I just object on that basis? I would object to the testimony that is beyond the written direct and move to strike it.

JUDGE STRICKLER: I don't know that he gave any testimony up until I asked him the question.

MS. BUCKLEY: Right.

JUDGE STRICKLER: And then he said he was going to be beyond it. So I said don't give it. So I don't know that there's anything to object to.

JUDGE BARNETT: The objection is overruled.

MS. BUCKLEY: He did start to respond, so --

JUDGE BARNETT: Well, we didn't get the complete response. So objection is overruled.

BY MR. SINGH:

Q. Does Pandora intend on doing anything to up-sell users of Pandora Plus to Pandora Premium?

A. Yes. So we intend to use the --

MS. BUCKLEY: The same objection. I mean, it's not in the written direct, what they plan to do to up-sell.

MR. SINGH: I'm happy to respond.

JUDGE BARNETT: Yes, please.

MR. SINGH: There have been obviously events that have occurred since his written direct testimony, including the launch of Pandora Plus. The fact that -- that those events have occurred, I think it's fair game to be able to testify about events that have occurred since the written direct testimony.

JUDGE STRICKLER: You didn't -- you didn't make any request to supplement his written direct testimony, did you?

MR. SINGH: We did not.

JUDGE STRICKLER: And he has no rebuttal testimony which you might argue includes this?

MR. SINGH: No.

JUDGE BARNETT: There is discussion in the written direct testimony of the Pandora Plus and Pandora Premium. So could you repeat your question?

MR. SINGH: Yeah. The question was whether Pandora intends on doing anything to up-sell users from Pandora Plus to Pandora Premium?

MS. BUCKLEY: I object to testimony --

JUDGE BARNETT: Sustained.

MS. BUCKLEY: Thank you.

MR. SINGH: No further questions.

JUDGE BARNETT: Thank you, Mr. Singh.

1 CROSS-EXAMINATION
2 BY MS. BUCKLEY:
3 Q. Good morning, Mr. Phillips. My name is
4 Lisa Buckley. I'm from Pryor Cashman, and I
5 represent the Copyright Owners in this proceeding.
6 I only have a couple of questions for you
7 today. First, I'm going to ask you if -- are you an
8 expert in music piracy?
9 A. I'm sorry, music privacy?
10 Q. Piracy.
11 A. Piracy. I wouldn't call myself an
12 expert.
13 Q. Have you conducted any research on your
14 own regarding the causes of music piracy?
15 A. Not -- no.
16 Q. Thank you. There is --
17 MS. BUCKLEY: And for this, I also need
18 to address Your Honors, in paragraph 10 of
19 Mr. Phillips written direct, he cites written
20 rebuttal testimony of Larry Rosen in the Web IV
21 case. And that is a 50-page report that contains
22 many conclusions and that, you know, I cannot adopt
23 or agree that the methodology is appropriate, there
24 aren't flaws in the study. So --
25 JUDGE BARNETT: Could you tell us again

where this study is?

MS. BUCKLEY: It's paragraph 10 of Mr. Phillips' written direct.

JUDGE BARNETT: Okay. Paragraph 10. I was at page 10.

MS. BUCKLEY: No, paragraph 10.

JUDGE BARNETT: So what's your objection?

MS. BUCKLEY: My objection is to the reference to a 50-page report, that being written rebuttal testimony of Larry Rosen in the Web IV case that was not subject to cross-examination by the Copyright Owners.

JUDGE STRICKLER: Mr. Marks -- I'm sorry, counsel, you can handle this. Was this designated as prior testimony for use in this proceeding? By this, I mean Mr. Rosen's testimony?

MR. SINGH: We're not seeking admission of the Rosen --

JUDGE STRICKLER: I'm not asking -- that wasn't my question, whether you're asking to seek to admit it. Just was it designated?

MR. SINGH: I don't believe so.

MR. MARKS: Yeah, I just wanted to clarify this wasn't formally designated for incorporation into this. This was just a citation

in support of his --

MS. BUCKLEY: Well, but citing it is, you know, in effect citing the whole report. And so if the reference is limited to exactly what is in paragraph 10, without conceding that the methodology was appropriate, that there are other conclusions in the report, that we may not agree with, I'd like to strike the reference to that report.

JUDGE BARNETT: Okay. I think that goes to the weight that we give this particular reference rather than to its admissibility. He's saying what he read in the report. We get -- we get what that means.

MS. BUCKLEY: Thank you.

BY MS. BUCKLEY:

Q. Mr. Phillips, in your report, in your written testimony, you indicate that it was a very conscious decision by Pandora to create two tiers of subscription service, one being Pandora Plus and the other being Pandora Premium.

Did I understand that correctly?

A. Yes.

Q. So does the difference in the price reflect anything other than the additional value of having an on-demand service with basically unlimited

access to 30, 40 million-song library?

A. Yes. The difference in price is indicative of the difference in feature sets and control for the user.

Q. And is it also the full access to a library that is of the size of 30, 40 million songs?

A. So we are not -- your access to music, we have a lot of the same music that we serve across all three tiers. It's primarily the feature control of what you can do with the music that is the big differentiator.

JUDGE STRICKLER: I just want to get a clarification on that because she asked you if the difference was the library size, and your answer was that's not a big differentiator. But is there a bigger library size for Pandora Premium than there is in the tier 2 product?

THE WITNESS: So our -- the music -- no. The answer is no. The music that we're going to be ingesting to support an on-demand service, we're bringing more music into our service.

JUDGE STRICKLER: Into the Premium service.

THE WITNESS: Into the Premium service. But that same music is available to spin in our

ad-supported radio service and in the Plus service. It's what you are able to do with the music that is different.

JUDGE STRICKLER: Thank you.

THE WITNESS: Yes.

BY MS. BUCKLEY:

Q. I'd like to direct your attention to paragraph 35 of your written direct, if I may. In the second sentence of paragraph 35, you state: "We will be using the same technology to upsell subscription tiers with our own messaging, to sell concert tickets and to deliver artist messages to fans."

What is -- how does Pandora plan to sell concert tickets on its service?

A. We -- our -- what we currently implemented to sell concert tickets is we are basically a referral source. So we take your music listening, the fact that you like a certain artist, and we know they are playing nearby -- if you live in Berkeley and they are playing nearby -- and we will give you a notification in the app that says your favorite band is playing nearby. And you can tap a button to actually go onto a different site to purchase.

And we support the purchase -- we get that ticket inventory from multiple sources in order to get a broad array of concert inventory.

Q. Is one of those sources Ticketfly?

A. Yes.

Q. Is Ticketfly owned by Pandora?

A. Yes.

Q. So if I understand you correctly, Pandora is providing concert notifications to listeners based on data that it has collected; is that right?

A. Yes.

Q. And one of the services from which a customer who receives a notification on the music site can purchase from Pandora -- from Ticketfly, correct?

A. Can you repeat your question?

Q. Yes. Let me try to rephrase it.

One of the services from which a Pandora listener can purchase concert tickets on the music service is Ticketfly, correct?

A. Not exactly. You can't purchase the ticket in our music service. We are an affiliate, so we surface the opportunity, like an ad, and you click out to the Ticketfly or other source of the ticket to actually buy.

Q. And so you do use those, in effect, advertisements to buy tickets from Ticketfly on Pandora's music service, correct?

A. The -- we surface the inventory. And when you say "buy," I'm sorry, I want to make sure I answer your question.

Q. Okay. Pandora provides notifications to certain listeners --

A. Yes.

Q. -- regarding upcoming concerts that they may be interested in, correct?

A. Yes.

Q. And the way that Pandora serves the notifications in order to direct them to listeners who might be interested in them is to use the billions of data points that it collects from its music service, correct?

A. Yes.

JUDGE STRICKLER: A question.

MS. BUCKLEY: Yes.

JUDGE STRICKLER: The notification of concerts that you -- you provide on the service, is that only through concerts that you can get tickets for through Ticketfly or through any other ticket service?

THE WITNESS: It's through any other ticket service. We use another third-party that actually has the bulk of the tickets. Ticketfly is only 10 percent of the U.S. market, approximately.

So we have a broad array of all the shows that your favorite band is playing. We use another third-party that actually has access to the much larger pool for coverage.

JUDGE STRICKLER: So there's nothing in your algorithms or anywhere else that favors Ticketfly, which is owned by Pandora, as opposed to any other ticket service?

THE WITNESS: We actually service -- if the ticket is available in the area, the answer is no. We service the tickets that are available for that band if you would like if they're in the area.

JUDGE STRICKLER: Thank you.

BY MS. BUCKLEY:

Q. Does Pandora get any share of revenue from Ticketfly for referrals to Ticketfly?

A. So I probably would defer that answer to Mike Herring, our chief financial officer and his knowledge of the financial equation there.

Q. Do you know whether Ticketfly pays Pandora to advertise on the music service?

A. I don't have access to the commercial arrangement between our -- the Ticketfly business and the Pandora business. My responsibilities are to build the offering, the product for the users.

JUDGE STRICKLER: So the answer to that question you think, that would be better directed to Mr. Herring as well?

THE WITNESS: Yes, that would be a much better question for Mike.

MS. BUCKLEY: I have no further questions. Thank you.

JUDGE BARNETT: Thank you, Ms. Buckley. Mr. Singh, redirect?

MR. SINGH: Yes, just a couple questions.

JUDGE BARNETT: I will not ask each -- after or during the testimony of each witness if any of the other Services have questions, but if you do, please just let me know. Mr. Singh?

REDIRECT EXAMINATION

BY MR. SINGH:

Q. Just a couple of questions, follow-up questions, to the questioning by counsel for the Copyright Owners.

Ms. Buckley asked you whether you had personally conducted any studies related to piracy.

Do you recall that?

A. Yes.

Q. And to your knowledge, has Pandora conducted any studies related to piracy?

A. Pandora itself? I believe -- I don't know of any direct studies that were done just for the purposes of piracy.

Q. Okay. And are you aware of any analyses that Pandora has considered with respect to the impact of digital music streaming services on piracy?

A. Yes. So I think the -- not think. The studies that we have looked at, provided by many third parties, typically include the downside of access to music being -- one of them being piracy. It's typically a conclusion that is in the third-party studies related to music services and -- and how consumers behave.

JUDGE STRICKLER: The third-party studies that you're referring to, are these just third-party studies that are available in the literature, in the public literature, or are these third-party studies commissioned by Pandora from outside sources, from contractors?

A. I don't want to speculate. I --

JUDGE STRICKLER: Don't speculate.

THE WITNESS: I don't want to speculate. I don't know how they're available.

JUDGE STRICKLER: Thank you.

BY MR. SINGH:

Q. Take a look at paragraph 21 of your written direct testimony. Do you see you talk about, in that paragraph, efforts to up-sell users from one tier of Pandora service to another?

A. Yes.

Q. Okay. And do you see in the parentheses, it says that Pandora will also do this when launched on the Pandora Premium service?

A. Yes.

Q. Okay. Can you explain what you meant by that?

MS. BUCKLEY: Objection. Now we're going, again, back to a territory that I believe we covered earlier. If -- if Mr. Phillips or Mr. Singh would like to limit the testimony that is being solicited to what is in the direct report, I don't object to that. But if, again, we're going beyond the direct report, I think that's an issue. In addition, it is beyond the scope of my cross.

JUDGE BARNETT: Sustained.

MR. SINGH: No further questions.

JUDGE BARNETT: Thank you.

Thank you, Mr. Phillips.

THE WITNESS: Thank you.

JUDGE BARNETT: At this point, we will take our morning recess. It will be 15 minutes. And I believe Mr. Johnson will be presenting his evidence after the break.

JUDGE STRICKLER: Are there no other witnesses after Mr. Johnson today; is that correct?

MR. MARKS: That -- that is correct, Your Honor. Based on the time estimates people had, we believed that Mr. Johnson would fill the day.

JUDGE BARNETT: Thank you.

MR. SEMEL: Actually, we were going to address this. Following up on what Mr. Steinthal said earlier, he mentioned that a number of witnesses -- there had been an agreement. We are going to get Your Honors a new amended witness list. There are actually, you will be happy to hear, seven witnesses that, between the parties, have been agreed can be done on papers.

So seven witnesses that you currently have on your list will be taken off that list. You'll receive an amended list with amended and

updated times of examinations. None of them are ones that would have happened right away, but -- so we'll get it to you as soon as we can.

JUDGE STRICKLER: So both direct and cross for those witnesses is off the table?

MR. SEMEL: Correct. They would not come as live witnesses. Their testimony, as I understand, will still be presented to Your Honor for admission at the hearing but without a live appearance by the witness.

JUDGE STRICKLER: And without any cross?

MR. SEMEL: Correct. Live. Yes, there may be objections made on the papers but no live cross. Correct.

JUDGE BARNETT: Took a leaf from Mr. Steinthal's page, I see.

MR. SEMEL: We're all working together for the same goals.

JUDGE STRICKLER: Really? Same goals. That's interesting.

(Laughter.)

MR. SEMEL: With regard to efficiency.

MS. RAY: I was just piggybacking on that.

JUDGE BARNETT: Okay. Thank you so much.

15 minutes will be -- let's call it 10:55.

(A recess was taken at 10:44 a.m., after which the hearing resumed at 11:03 a.m.)

JUDGE BARNETT: Mr. Johnson, would you please stand and raise your right hand.

Whereupon--

GEORGE JOHNSON,

having been first duly sworn, was examined and testified as follows:

JUDGE BARNETT: Please be seated.

Mr. Marks?

MR. MARKS: Yes, Your Honor. I just wanted to address briefly and make a suggestion about how to handle objections to Mr. Johnson's testimony in light of the fact that he is appearing pro se. I've conferred with my colleagues at the other Services and with counsel for the Copyright Owners, and what we would propose is that we be permitted to preserve objections so that we don't interrupt Mr. Johnson's testimony, and then we will submit those in writing to the -- to the judges and to Mr. Johnson so he has an opportunity to respond.

JUDGE BARNETT: Thank you. You stole my thunder.

Generally, in order to avoid the artifice

of a pro se witness having to ask himself questions, I permit them, him, in this case Mr. Johnson, I will permit him to simply make the statement he wishes to make to present the evidence he wishes to permit -- or to present.

And then I will accept objections from counsel as you have suggested. It seems it works better that way because legal objections, when you have a non-lawyer witness, tend to just hinder the progress. So thank you very much for that agreement.

And, Mr. Johnson, will you begin by stating your name, please, for the record?

THE WITNESS: Yes. George D. Johnson.

JUDGE BARNETT: And I'm going to ask you to put that microphone down.

THE WITNESS: Actually, that's the microphone right there -- I'm sorry. I got it. George D. Johnson.

JUDGE BARNETT: Thank you. And how are you employed, Mr. Johnson?

THE WITNESS: I am self-employed.

JUDGE BARNETT: Okay. In what area?

THE WITNESS: I am in real estate in West Virginia, but I'm still a songwriter. But I'm not a

1 famous or successful songwriter, but I still write
2 songs. But not for a living.
3 JUDGE BARNETT: Okay. All right. Thank
4 you. And you may present your evidence at this
5 time.
6 EVIDENCE PRESENTED BY GEORGE JOHNSON
7 THE WITNESS: Thank you, Your Honor. I
8 think -- excuse me -- what I'm going to try to do is
9 go through my evidence, and I'd like to enter my
10 evidence, if I could. I don't know if I enter it on
11 a single basis. I have GEO Exhibits 4001 to 4086.
12 And I'd like to enter those in the record if I could
13 or do them on an individual basis. I'm not sure
14 which is best.
15 JUDGE BARNETT: We will mark all of those
16 as provisionally admitted until we review the
17 objections by the parties.
18 THE WITNESS: Yes, Your Honor.
19 (GEO Exhibit Numbers 4001-4086 were
20 marked and received into evidence.)
21 JUDGE BARNETT: Thank you.
22 THE WITNESS: I guess I'd also like to,
23 under Federal Rule 702, to ask the Court that I be
24 granted an expert witness as an opinion witness and
25 maybe a fact witness in the areas of songwriting, of

PUBLIC VERSION

Before the
UNITED STATES COPYRIGHT ROYALTY JUDGES
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 TESTIMONY OF
MICHAEL L. KATZ
(On behalf of Pandora Media, Inc.)

Submitted November 1, 2016

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I. INTRODUCTION

1. My name is Michael L. Katz. I begin my testimony by reviewing my qualifications, stating my assignment, and summarizing my principal conclusions.

A. QUALIFICATIONS

2. I hold the Sarin Chair in Strategy and Leadership at the University of California at Berkeley. I hold a joint appointment in the Haas School of Business Administration and in the Department of Economics. I have also served on the faculties of the Department of Economics at Princeton University and the Stern School of Business at New York University. I have twice served in government, once as Chief Economist at the Federal Communications Commission and once as Deputy Assistant Attorney General for Economic Analysis with the Antitrust Division of the U.S. Department of Justice. My title as Deputy Assistant Attorney General notwithstanding, I am not an attorney. I received my A.B. from Harvard University *summa cum laude* and my doctorate from Oxford University. Both degrees are in Economics.

3. I specialize in the economics of industrial organization, which includes the study of competition and pricing, as well as antitrust and regulatory policies. I am the co-author of a microeconomics textbook, and I have published numerous articles in academic journals and books. I have written academic articles on issues regarding the economic analysis of intellectual property law, the relationship between intellectual property law and antitrust policy, the economics of intellectual property licensing, and the economics of network industries and two-sided platforms. A more detailed description of my qualifications is provided in my curriculum vitae, which is attached to my testimony as Appendix A.

4. I have consulted on the application of economic analysis to public policy for a wide variety of clients, including the U.S. Department of Justice, the U.S. Federal Trade Commission, and the U.S. Federal Communications Commission on issues of antitrust and regulatory policy. I have served as an expert witness before state and federal courts, and I have provided testimony before state regulatory commissions and the U.S. Congress. In addition, I was commissioned by the Congressional Research Service to write a report on the economic effects of home copying on the markets for recorded music and for electronically recorded visual images.[1] I also submitted testimony before the Copyright Royalty Board ("CRB") in the recent *Web IV* proceeding.[2] A list of all matters in which I have provided testimony during the past four years is provided in Appendix B. Lastly, I have advised private clients on software licensing fees and product pricing.

B. OVERVIEW OF ASSIGNMENT

5. The Copyright Royalty Judges ("Judges") have commenced a proceeding to determine reasonable rates and terms for making and distributing phonorecords, under Section 115 of the Copyright Act, for the period beginning January 1, 2018, and ending

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[1] Michael L. Katz, Home Copying and Its Economic Effects: An Approach for Analyzing the Home Copying Survey, Mar. 9, 1989, report commissioned by Congressional Research Service for Copyright and Home Copying: Technology Challenges the Law, October 1989.

[2] Written Direct Testimony of Michael L. Katz, October 7, 2014, and Written Rebuttal Testimony of Michael L. Katz, February 23, 2015, amended April 21, 2015. I also gave live direct and rebuttal testimony in that proceeding.

December 31, 2022.[3] It is my understanding that the Judges are tasked with establishing reasonable royalty rates to be paid by interactive streaming services that are calculated to achieve the following objectives:[4]

(A) To maximize the availability of creative works to the public.

(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.

(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.

6. At the request of counsel for Pandora Media, Inc. ("Pandora"), I have interpreted these statutory objectives from the perspective of economics and conducted an assessment of their implications for the appropriate structure and level of the statutory royalty rates for interactive music streaming services. I have also examined several potential "benchmark" agreements and assessed whether these benchmarks are informative to the rate-setting task at hand, and, if so, whether adjustments to these benchmarks are necessary to arrive at "reasonable" royalty rates and terms that best achieve the four statutory objectives.[5]

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[3] Determination of Rates and Terms for Making and Distributing Phonorecords (Phonorecords III), 81 FR 255 (January 5, 2016) (hereinafter, *Phonorecords III Commencement*).

[4] 17 U.S.C. §801(b)(1).

[5] I have focused my economic analysis on the principal financial provisions of these benchmarks. It is my understanding that the Judges will also make a determination with respect to other aspects of the statutory royalty scheme (*e.g.*, the treatment of the cost of obtaining sponsorship revenue in the calculation of the revenue base on which royalties

7. In undertaking this analysis, I have read prior decisions by the Judges (and their predecessors), as well as the testimony provided by various economists in some of those proceedings. I have also reviewed the written direct testimony of Michael Herring, Adam Parness, and Christopher Phillips filed in this proceeding, along with internal Pandora documents, documents produced in discovery, a variety of public materials, and economic literature relevant to my analysis. In addition, I have interviewed Pandora personnel. A list of materials that I have considered in preparing my testimony is provided in Appendix C.

8. I am being compensated for my work on this case at a rate of $1,300 per hour. My compensation is not dependent in any way on the opinions I express or the outcome of this matter.

C. SUMMARY OF CONCLUSIONS

9. My central finding is that the industry-wide, negotiated settlement that underlies the statutory license currently in effect (the "2012 Settlement") is an economically sound benchmark for setting statutory rates for the 2018-2022 license period, and that only minimal adjustments to this benchmark are required to arrive at reasonable rates that achieve the statutory objectives stated in Section 801(b)(1) of the Copyright Act.

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are assessed), and that various parties to this proceeding may propose that the statutory royalty scheme being determined in the present proceeding differ from the current statutory royalty in some of these respects. I reserve the right to analyze and testify regarding these other aspects of the royalty scheme if requested to do so by counsel for Pandora at a future date.

I also reserve the right to supplement or amend this testimony if my opinions change as the result of analyzing evidence that newly becomes available to me. Lastly, I anticipate responding to the testimony of other witnesses in this proceeding at a later date.

10. Turning to specific findings, drawing on my training and experience as an economist and my review of the materials discussed above, I find that:

- *Economics offers the following insights with respect to the interpretation and application of the 801(b)(1) objectives:*
  - **Maximize Availability:** The availability of creative works to the public depends on both the creation and distribution of such works.[6] Hence, the objective of maximizing the availability of creative works to the public will be achieved only if the royalty structure and rates are set to create the proper incentives for: (a) copyright owners to continue to create and publish new musical works, and (b) statutory licensees to invest in streaming services and offer them at prices and qualities that consumers find attractive. In other words, the statutory royalties should give both copyright owners and statutory licensees opportunities to earn adequate financial returns if they are able to create offerings that are attractive relative to those of their competitors.
  - **Afford Fair Return/Fair Income:** Although economics does not prescribe a specific notion of fairness, many economic policies are predicated on the idea that an outcome is fair if it corresponds to what would have happened in an

[6] Throughout my testimony, I use the term "distribution" as an economic rather than legal term to refer to any means of making the relevant content available to ultimate consumers. Thus, for example, record labels distribute music by producing and selling CDs, while permanent download services and music streaming services distribute music digitally. I also use the term "distributor" as an economic, rather than legal, concept.

effectively competitive market.[7] Under this conception of fairness, a fair return to a copyright owner and a fair income to a copyright user are the return and income that would arise in an effectively competitive market in the absence of a mandatory licensing requirement.[8] As with the availability objective, in applying the fairness objective, it is important to give appropriate consideration to costs that the copyright owner and copyright user have already incurred. Although certain costs may be considered "sunk" in the short run, most costs are variable over long time horizons and will be important determinants of a competitive outcome.

— **Reflect Relative Roles:** To a large extent, the objective of reflecting copyright owners' and users' relative roles in making contributions and incurring costs raises considerations similar to those raised by the first two statutory objectives. First, as with maximizing availability, a failure to reflect relative benefits contributed or costs incurred (including capital investments and risk) can lead either to owners failing to create and publish new works and/or to copyright users curtailing their investments in streaming distribution. Second, effective competition or bargaining by parties with comparable bargaining power would reflect relative contributions and costs. Thus, an

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[7] As I will discuss below, certain bargaining outcomes can also be considered to be fair when the parties have comparable bargaining positions.

[8] To the extent that the parties to a negotiation anticipate that, in the absence of a settlement, the Judges would determine a royalty rate that would reflect this standard, the presence of the compulsory licensing requirement will not distort the negotiated settlement. A similar point holds with respect to the relative-contribution objective.

outcome that does not reflect relative contributions and costs does not satisfy the competitive standard of fairness.

— **Minimize Disruptive Impact:** Maintaining the status quo with respect to licensing terms and conditions is the least disruptive action unless the industry is in a financial condition such that business as usual—at least with respect to the licensed activities—is unsustainable. Absent such a showing, maintaining the status quo—conditions to which the industry has already adapted—is the least disruptive path forward.

- *Mechanical rights and public performance rights are perfect complements, which implies that the sum of these rates is the relevant quantum for economic incentives and welfare.* Mechanical rights and public performance rights have value to interactive streaming services only when used together; a streaming service that had one type of right to a composition but not the other would be unable to offer the song to its customers without violating the law. Hence, a license to either type of right is worthless alone, but together the rights are valuable. As a result, there is no rigorous economic basis for allocating the total value that they create between the two types of rights. This fact is reflected in the 2012 Settlement, a key provision of which sets the *sum* of mechanical and public performance royalties equal to a percentage of service revenues (10.5 percent for many services).

- *The 2012 Settlement is an excellent benchmark for rate-setting here.* The 2012 Settlement is the result of a relatively recent negotiation that involved similar (and in some cases the same) parties negotiating over an identical set of rights. Moreover, the settlement was negotiated with all parties knowing that the alternative was a CRB proceeding governed by the same 801(b)(1) standard that applies here. The economics of bargaining indicates that, so long as there are not significant asymmetries in their ability to pursue litigation, private parties negotiating a settlement in the shadow of an 801(b)(1) proceeding will agree to terms and conditions that meet the 801(b)(1) objectives. I am unaware of any evidence that suggests that there were such asymmetries at the time of the negotiations that distorted the outcome. Nor am I aware of any evidence that suggests the settlement is the result of the exertion of excessive market power by one side over the other.

- *With one exception, the overall royalty structure of the 2012 Settlement remains economically sound and promotes achievement of the four statutory objectives.* For a service to which the statutory royalty scheme applies, the 2012 Settlement royalty structure contains: (a) a revenue-based prong equal to a percentage of service revenue less the royalties paid for performance rights (*i.e.*, there is an "all-in" or *headline rate* for the sum of mechanical and public performance royalties); (b) a *per-subscriber minimum* that applies to the sum of mechanical and public performance royalties; and, for certain types of services, (c) a *per-subscriber floor* on mechanical royalty payments (a "mechanical-only floor"). The specific

numerical values of all three components vary by service characteristic (*e.g.*, whether the service is limited to non-portable devices). Examination of changes in industry conditions since the 2012 Settlement was reached does not identify any reason to change the overall structure, but does identify one important modification:

— *Collecting total royalties for mechanical plus public performance rights on a percentage-of-revenue basis remains economically sound.* The two types of rights remain perfect economic complements for interactive streaming services, and I am unaware of any change in industry conditions since the 2012 Settlement was reached indicating that abandoning this approach is warranted. Indeed, imposing a new rate structure would run counter to the 801(b)(1) objective of minimizing disruption.

— *Having service-specific, per-subscriber floors for combined mechanical and public performance royalties remains sound.* Indeed, as the streaming industry continues to introduce innovative new types of services (*e.g.*, hybrid interactive/noninteractive services) and as streaming services are increasingly offered by companies as part of broader strategies of competitive ecosystems (*e.g.*, Amazon), allowing for minimums to address revenue-measurement issues while allowing flexibility for innovative, differentiated services remains appropriate.

— *As a result of past and potential future fragmentation of the licensing of musical compositions' public performance rights, per-subscriber floors applying only to mechanical royalties are no longer economically sound.* It is my understanding that, at the time the 2012 Settlement was negotiated, the marketplace in which licenses to musical works' public performance rights were negotiated was considered by rights users to be relatively stable and was expected to remain stable for the foreseeable future. As it turns out, these expectations were not met. Instead, the marketplace for negotiating musical works public performance rights licenses has become fragmented—and, importantly, threatens to become more so—with: the rise of Global Music Rights, a new Performing Rights Organization ("PRO"); recent efforts by at least some PROs to grant only "fractional" rights; and the threat of withdrawals by publishers from PROs. Based on well-accepted economic principles, the resulting fragmentation can be expected to lead to higher total royalties for performance rights. These higher performance rights royalties would interact with the current mechanical-only royalty floor to boost the effective "all-in" royalty rate above the rates contemplated by the 2012 Settlement. Royalty increases due to fragmentation represent the increased exercise of market power (and distortions arising from the so-called Cournot-complements problem), rather than an increase in the value of the underlying compositions and associated rights. Consequently, the mechanical-only royalty floor should be eliminated.

- *There have been no significant changes in industry conditions since the statutory rates that are currently in place were negotiated that would justify an upward adjustment to the headline rates.* If anything, examination of how industry conditions have and have not changed supports a conclusion that the 2012 Settlement headline royalty rate should be lowered for the 2018-2022 period to best achieve the four statutory objectives. Specifically: (a) interactive services have become an increasingly important source for the distribution of musical works; (b) interactive streaming services have proven to be very valuable to the music industry economically, as revenues from streaming services have contributed significantly to stabilizing the sharp declines in industry revenues that started in 1999 due to music digitization and piracy and have helped to combat piracy by providing a revenue-generating source of distribution to many consumers who would otherwise not pay for music; and (c) interactive services remain unprofitable (and some have gone out of business entirely) while music publishers remain profitable. In short, interactive streaming's relative contribution has increased but its relative returns have not, which raises concerns regarding availability, fairness, and reflecting relative roles.

- *Consideration of other candidate benchmarks reinforces these conclusions.* Consideration of two very recent benchmarks reinforces my conclusions summarized above:

— *Direct deals recently reached between Pandora and music publishers support the conclusion that the overall structure is sound subject to eliminating the mechanical-only floors.*

— *Music publishers have recently agreed to royalty rates for phonorecords and permanent digital downloads that, when stated in comparable terms, are lower than the corresponding statutory royalty rates currently in effect for interactive streaming, supporting the conclusion that the royalty rates at issue in this proceeding should not be raised above the level of the rates in the 2012 Settlement.*

11. The remainder of my written testimony explains these conclusions in greater depth and provides details of the facts and analyses that led me to reach them.

II. ECONOMIC INTERPRETATION OF THE STATUTORY STANDARD

12. Before I turn to my analysis of the industry participants involved in this proceeding, and my analysis of reasonable royalty rates and terms, I set forth my interpretation of the Section 801(b)(1) objectives from the perspective of economics.

A. MAXIMIZE AVAILABILITY

13. Creative works will be available to the public only if parties are willing to create and distribute those works. The availability of creative works to the public thus depends on the economic incentives and financial returns earned by both content creators (*e.g.*, songwriters, publishers, performing artists, and record labels) and content distributors (*e.g.*, streaming services). These parties will not have economic incentives to incur the

costs of creating and distributing creative works—including investment costs—unless they have prospects of earning sufficient financial returns. Hence, the objective of maximizing the availability of creative works to the public will be achieved only if the statutory royalties give both writers/publishers and streaming services opportunities to earn adequate financial returns if they are able to create offerings that are attractive relative to those of their competitors. Exclusive focus on the returns of only one part of the overall value chain will fail to promote availability to the greatest extent practicable.

14. The increasingly important role played by streaming services in overall music distribution implies that musical works will be fully available to the public only if the statutory royalties give streaming services opportunities to earn adequate financial returns on their investments if they are able to create offerings that are attractive relative to those of their competitors. Streaming services have been promoting availability in multiple ways. First, streaming services increase the availability of existing catalogs of music. Specifically, interactive music streaming services provide anytime, anywhere, convenient accessibility to a huge number of songs, and multiple paths to music discovery.[9] One recent research study found that users who switch from an ownership model (iTunes) to an access model (Spotify) increase total music consumption, increase the variety of music consumed, and are better able to discover valued works.[10] Second, by offering a substitute for piracy and increasing the value consumers can derive from music,

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[9] See discussion in Section III.A below.

[10] Hannes Datta, George Knox, and Bart Bronnenberg, "Changing their Tune: How Consumers' Adoption of Online Streaming Affects Music Consumption and Discovery," working paper, Tilburg University, February 9, 2016, at 30.

streaming serves to increase the revenues available to reward songwriters and publishers, as well as the streaming companies themselves.[11]

15. If interactive streaming services are unable to earn sufficient financial returns, then they will find additional investment to be unprofitable and will eventually cease operations (as several have done), eliminating what has been an increasingly important source of access to music that has benefited consumers and the music industry at large.[12] Moreover, even if interactive streaming services remain in business, availability will not be maximized if high royalty rates either induce the services to charge retail prices that discourage some consumers from subscribing to those services or induce the services to provide less attractive products (leading to less use of the services).

16. Songwriters and publishers should also earn sufficient pecuniary and non-pecuniary rewards to have the proper incentives to continue producing content. In this regard, it is important to recognize that royalties from the streaming services at issue in this proceeding are only one (albeit increasingly important) revenue stream for songwriters and publishers.[13] There are a variety of other revenue streams that must be considered when evaluating the availability factor from the copyright owner perspective.

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[11] For a discussion of industry trends, see Section III.D below.

[12] This factor applies to interactive streaming services broadly rather than any one service. In a competitive marketplace, there is no guarantee that any one supplier (here, streaming service) will succeed.

[13] Non-financial rewards may also motivate songwriters.

B. AFFORD FAIR RETURN/FAIR INCOME

17. Economic logic does not prescribe a single conception of fairness as the appropriate one for all purposes. Instead, economists study the implications of adopting principles that are intuitively appealing and/or appear to be utilized by people in making actual decisions.

18. One important distinction among conceptions of fairness is whether the assessment of a particular outcome is made by reference to the characteristics of the outcome itself (*e.g.*, whether there is income inequality among different households) or whether the outcome is the result of a fair process or procedure (*e.g.*, asking whether there is equality of opportunity even if outcomes differ).[14]

19. It is difficult to see how notions of fairness based solely on the outcome could be meaningfully applied in the present context.[15] For example, trying to determine whether publishers or streaming services were more deserving of income at the margin would be almost impossible. Under such an approach, one would have to form views about what constitutes a fair societal distribution of wealth and then measure the wealth of the employees and owners of publishers and streaming services in order to evaluate the effects of any particular royalty payments. Moreover, such an approach would very

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[14] See, *e.g.*, Robert Nozick (1973) "Distributive Justice," *Philosophy & Public Affairs*, **3**(1): 45-126; Hal Varian (1975) "Distributive Justice, Welfare Economics and the Theory of Fairness," *Philosophy and Public Affairs*, **4**(3): 223-247.

[15] One of the leading conceptions of fairness regarding outcomes is that an outcome should be "envy free" in that no economic agent would rather trade places with another. See, for example, Hal Varian (1974) "Equity, envy, and efficiency," *Journal of Economic Theory*, **9**: 63-91.

likely turn on factors that have little or nothing to do with music publishing and streaming.[16]

20. Conceptions of fairness based on the idea that an outcome is fair if it is the result of a fair process is much more readily applicable to the present situation. Specifically, a bargain in which each party has equal knowledge, sophistication, and bargaining power is viewed by many economists to be a fair process. Indeed, many economic policies are (at least implicitly) predicated on the idea that an outcome is fair if it corresponds to what would have happened in an effectively competitive market that was not subject to other distortions. For example, the Acting Assistant Attorney General, Antitrust Division, recently stated:[17]

> The ultimate concern of antitrust law has always been protecting competition at all levels of the economy. Animating the beliefs of ordinary Americans who demand vigorous antitrust enforcement are the value of fairness and the belief that properly functioning competitive markets are themselves fair.

Under this conception of fairness, a fair return to a copyright owner and a fair income to a copyright user are the return and income that would arise in an effectively competitive market in the absence of a mandatory licensing requirement.

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16 For example, this approach might lead one to conclude that royalty rates should be reduced because shareholders of streaming services had reduced wealth as a result of having heavily invested in certain tech stocks that lost value.

17 Renata B. Hesse "And Never the Twain Shall Meet? Connecting Popular and Professional Visions for Antitrust Enforcement," speech presented September 20, 2016, *available at* https://www.justice.gov/opa/speech/acting-assistant-attorney-general-renata-hesse-antitrust-division-delivers-opening, site visited October 24, 2016, at 3. See also, *id.* at 2 ("[antitrust] professionals and the public are moving more toward a consensus vision of antitrust focused on protecting competition and the fairness inherent in it.").

21. In applying such an approach, it is important to account for sunk costs (*i.e.,* costs that a firm has already incurred and cannot recover). Although certain costs may be considered sunk in the short run, most costs are variable over long time horizons and would affect the competitive outcome. Stated another way, it is important to consider bargaining over the proper time frame. It is also important to observe that affording parties fair opportunities to earn incomes and returns does *not* imply that parties are entitled to guaranteed incomes or returns. Some parties will compete more successfully than others in effectively competitive markets, and both entry and exit are to be expected.

22. The so-called Shapley Value can also be interpreted as a process-based conception of fairness, and at least one academic article has suggested applying the Shapley Value to determine statutory royalty rates.[18] The Shapley Value provides an answer to the question of how to divide economic gains among parties that result when those parties cooperate with one another (*e.g.,* how to divide the overall profits available when some parties license their intellectual property to others).[19] In a remarkable paper, Professor Shapley demonstrated that, if one requires the solution or dividing rule to

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[18] Richard Watt (2011) "Fair Copyright Remuneration: The Case of Music Radio," *Review of Economic Research on Copyright Issues,* **7**(2): 21-37.

[19] Another well-known concept is the *core,* which consists of those allocations of the economic rewards having the property that no coalition (sub-group of the cooperating parties) receives less than it could obtain on its own (*i.e.,* that every coalition shares in the gains from trading with the others). The requirement that all coalitions benefit from participation can be interpreted as a fairness condition. Unfortunately, it is well known that there may be no such way of dividing the rewards (*i.e.,* the core is an empty set). (See, *e.g.,* Andreu Mas-Colell, Michael D. Whinston, and Jerry R. Green (1995) *Microeconomic Theory,* Oxford University Press at 677-678 ("Any empty core is indicative of competitive instability in the situation being modeled."); Varouj A. Aivazian and Jeffrey L. Callen (1981) "The Coase Theorem and the Empty Core," *Journal of Law and Economics,* **24**(1): 175-181 ("Examples of negotiations where the core does not exist are easy to concoct and may be quite common in practice.").)

possess certain properties (so-called axioms regarding what constitutes a reasonable outcome of a bargaining game), including one that is often interpreted as a fairness condition, then there is a unique formula for dividing the rewards that satisfies these properties.[20]

23. Although Shapley Value analysis may provide useful insights, the results of such an analysis should be examined with care. One reason for caution is that the Shapely Value takes the structure of the underlying situation or "game" as given and then characterizes the division of surplus among the players in a way that has been interpreted as "fair" *conditional on the structure of the game*. The Shapley Value says nothing about whether the structure of the game is itself fair. For example, in some situations, two parties can raise their share of the total rewards by "merging," so that they are treated as if they are a single entity when calculating the Shapley Value.[21] Many people would not consider it fair to allow many different suppliers to merge in order to increase their profits at the expense of consumers; yet the Shapley Value would itself be silent on this issue. Thus, in applying the Shapley Value, it is important to ensure that the structure of

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[20] Lloyd Shapley (1953) "A Value for n-Person Games," in Khun, H. and A. Tucker (eds.), *Contributions to the Theory of Games*, Vol. 2, Princeton: Princeton University Press. Subsequently, there have been many papers that provide alternative axioms generating the Shapley value as the solution. See, for example, André Casajus (2014) "The Shapley value without efficiency and additivity," *Mathematical Social Sciences*, **68**: 1-4.

[21] Richard Watt (2011) "Fair Copyright Remuneration: The Case of Music Radio," *Review of Economic Research on Copyright Issues*, **7**(2): 21-37, at 33-34, discusses a hypothetical numerical example illustrating this fact. See Ilya Segal (2003) "Collusion, Exclusion, and Inclusion in Random-Order Bargaining," *Review of Economic Studies*, **70**: 439-460 for a general analysis of the effects of such mergers or "collusion."

the underlying bargaining situation is itself fair (*i.e.*, no party has undue market or bargaining power and the process is sufficiently competitive).[22]

24. When applying the Shapley Value, it can be tempting to assume that many parties have merged in order to reduce the number of parties considered. This temptation can arise because the Shapley Value requires examining the economic rewards that each possible coalition (or sub-group) of economic agents could earn on its own, which can be a very large number.[23] If one considered each songwriter and streaming service to be a separate agent, the number of coalitions to be evaluated would be astronomical. Unfortunately, attempts to simplify the calculation by assuming that there are fewer songwriters or publishers can have the effect of increasing those parties' market power as reflected in the Shapley Value.[24] In summary, while the Shapley Value is a well-known (among economists) conception of fairness, it can be difficult to apply and must be used with care to avoid reaching misleading conclusions.

C. REFLECT RELATIVE ROLES

25. To a large extent, the objective of reflecting copyright owners' and users' relative "creative contribution, technological contribution, capital investment, cost, risk, and

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22 Interestingly, the notions of the Shapley Value and the competitive outcome converge. See, for example, Robert J. Aumann (1975) "Values of Markets with a Continuum of Traders," *Econometrica,* **43**(4): 611- 646.

23 When there are N agents, the number of possible coalitions is 2^N, which quickly becomes huge. For example, if there are 20 agents, there will be over one million coalitions (2^{20} equals 1,048,576).

24 If one attempts to simplify calculation of the Shapley Value by treating all writers and publishers as one agent and all streaming services as another, then the Shapley Value coincides with the Nash Bargaining Solution, which splits the gains from trade equally between the two bargaining parties.

contribution to the opening of new markets for creative expression and media for their communication" raises considerations similar to those raised by the first two statutory objectives.

26. Reflecting relative roles is similar to maximizing availability in that failure to reflect copyright owners' capital investments, costs, and risks can diminish the incentives to create and publish new works, while failure to reflect copyright users' capital investments, costs, and risks can lead to a curtailment of investments in streaming services. Moreover, the relative creative and technological contributions and contributions to opening up new markets capture the extent to which investments and other activities contribute to maximizing availability.

27. The objective of reflecting relative roles also raises issues similar to those raised by the fair income/fair return objective. In particular, failure to reflect the relative contributions parties make to the creation of benefits and the relative costs—including investment costs—that they incur to make those contributions, is unfair in the sense that effective competition or bargaining by parties with comparable bargaining power would reflect relative contributions and costs.[25]

28. From the perspective of economics, stating a separate objective of reflecting relative capital investment and risk also highlights the desirability of taking return on

[25] The long-run equilibrium price received by suppliers in a perfectly competitive market is equal to the suppliers' marginal cost, regardless of the suppliers' relative contribution to the creation of benefits. (See, *e.g.*, Andreu Mas-Colell, Michael D. Whinston, and Jerry R. Green (1995) *Microeconomic Theory*, Oxford University Press at 335-336.) Hence, were one to use *perfect* competition as the fairness notion, any return above cost would be unfair. However, consideration of effective competition or balanced bargaining leads to fair outcomes in which copyright owners share in the benefits created.

investments (including those that might be considered to be sunk costs) into account in determining statutory royalties. Stated differently, this factor counsels in favor of considering price setting in the context of a forward-looking process (*i.e.*, considering the effects on future investments).[26]

D. MINIMIZE DISRUPTIVE IMPACT

29. The final statutory objective—minimizing any disruptive impact on the structure of the industries involved and on generally prevailing industry practices—calls for an analysis of the impact that a change in the royalty rate paid by interactive streaming services would have on the music publishing and streaming industries. One might conclude that, logically, maintaining the status quo must be the least disruptive action. However, economic reasoning suggests that the issue is more complicated. Arguably, maintaining the status quo with respect to licensing terms and conditions would be disruptive if the current terms were creating, or are expected to create, financial conditions such that business as usual—at least with respect to the licensed activities—will be unsustainable over the 2018-2022 license period.

30. As discussed below, examination of available data demonstrates that, since the implementation of the 2012 Settlement, content creators have continued to develop new, high-quality music, and streaming services have become an increasingly popular and important source of content distribution. Thus, economic evidence points to an industry,

[26] One implication of taking the contrary position would be that the (now sunk) costs incurred to write existing songs should be ignored so that the writers of those songs would not be entitled to compensation.

that, while facing ongoing economic challenges (*e.g.*, piracy remains a threat), is likely to remain sustainable over the coming years. Therefore, the objective of minimizing disruption implies that it is desirable to avoid making major changes to the current statutory royalty scheme.

31. There is also a linkage between disruption and investment incentives, which ties back to the objectives of maximizing availability and affording parties fair incomes and fair returns. Consider what would happen, for example, if the royalty rates were dramatically increased. First, availability would be harmed because the incentives to make new investments in interactive streaming services would be reduced directly as the higher royalties resulted in lower expected returns on investment. Second, investment could be harmed by the fact that the change was disruptive—both incumbent interactive streaming services and potential entrants could become reluctant to invest because they perceive increased risks as a result of an inability to count on royalty rates remaining stable in the future. Moreover, to the extent that past investments were made with expectations regarding future royalties and those investments have not yet covered their costs, issues regarding the fairness of the effects on income would also be implicated.

III. INDUSTRY BACKGROUND

32. Before turning to the rate-setting task at hand, in this section, I present relevant background information regarding the music industry, including brief descriptions of the various relevant parties and an overview of sources of industry revenues and trends.

A. INTERACTIVE MUSIC STREAMING SERVICES

33. Streaming services are one of a variety of entities that distribute music. Music distribution platforms include traditional AM/FM radio stations, satellite radio, CD retailers, download retailers, pirate web sites, and streaming music services. Streaming services offer both noninteractive and interactive products. Noninteractive products are akin to traditional radio stations in that customers select a genre and the streaming service provides a curated playlist over which the customer has limited control.[27] In contrast, interactive products allow customers to pick and choose their own music "on demand" and to curate their own playlists.

34. Almost all of the major music streaming services still operating today became available to U.S. consumers in 2005 or later.[28] Pandora and iHeartRadio launched their Internet radio platforms in 2005[29] and 2008,[30] respectively; Spotify launched in the U.S.

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27 SoundExchange, "Licensing 101," *available at* http://www.soundexchange.com/service-provider/licensing-101/, site visited August 30, 2016.

28 An exception is Rhapsody, which launched in 2001 and has rebranded itself as Napster. (Benny Evangelista, "Music firms open online services, but will fans pay?" *SFGate*, December 3, 2001, *available at* http://www.sfgate.com/business/article/Music-firms-open-online-services-but-will-fans-2845907.php, site visited October 31, 2016; Janko Roettgers, "Napster Is Back as Rhapsody Rebrands Its Streaming Service," *Variety*, June 14, 2016, *available at* http://variety.com/2016/digital/news/rhapsody-napster-rebrand-1201795439/, site visited October 31, 2016.)

29 Erin Griffith, "As the music industry changes, Pandora's tune stays the same," *Fortune*, September 1, 2015, *available at* http://fortune.com/2015/09/01/pandora-ad-free/, site visited October 15, 2016.

30 "No AM/FM receiver required: Clear Channel brings top radio stations to Apple iPhone, iPod touch," *MacDailyNews*, October 13, 2008, *available at* http://macdailynews.com/2008/10/13/clear_channel_brings_top_radio_stations_to_apple_iphone_ipod_touch/, site visited September 1, 2016.

in 2011,[31] as did Google Play Music;[32] Amazon Prime Music launched in 2014,[33] as did Tidal;[34] and Apple Music launched in 2015.[35]

35. The various interactive streaming services—including Spotify, Apple Music, Rhapsody (now Napster), and Tidal—clearly compete with one another. Table 1 presents the estimated number of on-demand subscribers in the U.S. for these major streaming services.

Table 1: Shares of U.S. On-Demand Subscribers, March 2016

	Subscribers (in millions)	Share
Spotify	6.0	33.3%
Apple Music	4.0	22.2%
Rhapsody	2.0	11.1%
Tidal	2.0	11.1%
Others	4.0	22.2%
Total	18.0	100.0%

Source: Pandora, Board of Directors: Competitive Update, April 21, 2016.

31 *Id.*

32 Brennon Slattery, "Music Beta by Google To Launch Without Licenses," *PCWorld*, May 10, 2011, *available at* http://www.pcworld.com/article/227507/Music_Beta_by_Google_to_Launch_Without_Licenses.html, site visited September 1, 2016.

33 Chris Velazco, " What you need to know about Amazon Prime Music," *engadget.com*, June 12, 2014, *available at* https://www.engadget.com/2014/06/12/amazon-prime-music/, site visited October 16, 2016.

34 TIDAL, "TIDAL High Fidelity Music Streaming Service Launches Today," Press Release, October 28. 2014, *available at* http://news.cision.com/tidal/r/tidal-high-fidelity-music-streaming-service-launches-today,c9707115, site visited October 31, 2016.

35 Apple Press Info, "Introducing Apple Music—All The Ways You Love Music. All in One Place," June 8, 2015, *available at* https://www.apple.com/pr/library/2015/06/08Introducing-Apple-Music-All-The-Ways-You-Love-Music-All-in-One-Place-.html, site visited September 8, 2016.

36. These share figures understate the actual degree of competition that interactive music services face in attracting customers. First, other formats, including physical distribution, digital downloads, and noninteractive streaming services place some competitive pressure on interactive services.[36] Second, although interactive streaming has helped to combat music piracy, these services continue to face competitive pressure from unpaid file-sharing sites available to consumers.[37]

37. These share figures also overstate the actual market power or bargaining power that interactive music services have with respect to music publishers. When negotiating with an interactive streaming service, an economically rational music publisher will take into account its ability to reach consumers through alternative means. Thus, if consumers are willing to switch their listening to other interactive service providers or to other forms of music distribution in order to access particular music if it becomes unavailable from a given interactive streaming service, then that service will have a weak bargaining position. As a result, an interactive service will tend to have less market power or bargaining power with respect to content owners when music listeners engage in multi-

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[36] In *Web IV*, the Judges found that there is downstream competition between subscription interactive streaming services and subscription noninteractive streaming services. *Determination of Royalty Rates and Terms for Ephemeral Recording and Webcasting Digital Performance of Sound Recordings*, 81 Fed. Reg. 26,316, 26,347 (May 2, 2016) (hereinafter "*Web IV Final Determination*").

[37] Ryan Faughnder, "Music piracy is down but still very much in play," *Los Angeles Times*, June 28, 2015, *available at* http://www.latimes.com/business/la-et-ct-state-of-stealing-music-20150620-story.html, site visited September 21, 2016. ("Apple's biggest rival when it launches its $10-a-month streaming music service on Tuesday might not be Spotify or Tidal, but piracy."); United States Copyright Office, "Copyright and the Music Marketplace," February 2015, *available at* http://copyright.gov/policy/musiclicensingstudy/copyright-and-the-music-marketplace.pdf, site visited June 3, 2016 (hereinafter *Report on Music Licensing*) at 78-79.

homing (*i.e.,* listen to music on multiple distribution platforms) because consumer switching costs are particularly low—multi-homing consumers already patronize alternative access sources.[38] Notably, the data indicate there is extensive multi-homing.[39]

38. The competition to serve music listeners has resulted in high-quality, innovative streaming services for consumers. Significant innovations that benefit consumers include:

- **Access and Portability.** As one industry commentator notes, today "…we take for granted the ease with which we can access the entirety of recorded music through streaming."[40] That ease of access is the result of innovation and investment by streaming services. Interactive streaming services enable consumers to access an entire catalogue of music—potentially tens of millions of songs—on portable devices without having to physically store any of the music. Apple's 2001 advertising campaign for its iTunes download service touted the

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38 Interactive streaming services are examples of what are known as two-sided platforms. For analyses of the effects of multi-homing on the pricing of two-sided platforms, see Mark Armstrong (2006) "Competition in two-sided markets," *RAND Journal of Economics,* **37**(3): 668-691, and Jean-Charles Rochet and Jean Tirole (2003) "Platform Competition in Two-Sided Markets," *Journal of the European Economic Association,* **1**(4): 990-1029.

39 For instance, [redacted]. (SPOTCRB0001526-1564 at 1542.)

40 Tom Barnes, "16 Years Ago Today, Napster Changed Music as We Knew It," *Music.Mic*, June 1, 2015, *available at* https://mic.com/articles/119734/16-years-ago-today-napster-changed-music-as-we-knew-it#.Vm5kX2IEe, site visited September 1, 2016.

possibility of "1000 songs in your pocket;" today its Apple Music streaming service offers consumers access to over 30 million songs.[41]

- **Playlists and Music Discovery.** Interactive services, such as Spotify and Apple Music have algorithms that facilitate consumer discovery of new music based on their listening history.[42] Perhaps the best known recommendation engine is Pandora's Music Genome Project, which uses highly trained musicologists and software to map songs' key musicological characteristics and link them to other songs with similar musical "DNA."[43] That recommendation and discovery engine will soon be available through an interactive streaming service, as it will be incorporated into Pandora's forthcoming on-demand service.[44]

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41 John Patrick Pullen, "Streaming Showdown: Apple Music vs. Spotify vs. Pandora vs. Rdio," *Time.com*, June 9, 2015, *available at* http://time.com/3913955/apple-music-spotify-pandora-rdio-streaming/, site visited September 8, 2016.

42 Sarah Mitroff and Xiomara Blanco, "Apple Music vs Spotify: What's the difference?" CNET, July 2, 2015, *available at* https://www.cnet.com/news/apple-music-vs-spotify-whats-the-difference/, site visited October 28, 2016; Jordan Bromley, "Guest Column: Why Music Streaming Is Good for Creators and Consumers," *Billboard*, July 25, 2016, *available at* http://www.billboard.com/articles/business/7446721/5-reasons-subscribe-music-streaming-service, site visited September 1, 2016.

43 Written Direct Testimony of Michael Herring, Pandora Media Inc., ¶¶ 13-18. See also, Rob Walker, "The Song Decoders," *New York Times Magazine*, October 14, 2009, available at http://www.nytimes.com/2009/10/18/magazine/18Pandor-t.html, site visited October 29, 2016.

44 Written Direct Testimony of Christopher Phillips, Pandora Media Inc., ¶ 30. Pandora has incurred substantial expenses in connection with its Music Genome Project:

> Even before incurring the incremental expenses associated with redesigning the service to include interactive features, which I discuss in the following section, Pandora had spent more than [redacted] creating and refining the MGP, its proprietary algorithms, and the necessary infrastructure, hardware, and software to offer a world-class radio product for our nearly 78 million active users.

(Written Direct Testimony of Michael Herring, Pandora Media Inc., ¶ 27.)

- **Social Media.** With interactive streaming services, consumers can easily share music and communicate with friends, other fans, and even artists. For instance, Spotify's service is integrated into Facebook, allowing users to see what friends are listening to, share songs, and receive recommendations for live shows in the user's area.[45] Moreover, many streaming sites offer artist biographies, touring information, song lyrics, and other information to which consumers might not otherwise have convenient access, which can provide benefits to both consumers and artists.[46] Pandora's forthcoming interactive service will have similar functionality, including allowing subscribers to share their playlists with other subscribers.[47]

- **Sound Quality.** In 2014, Tidal launched, offering lossless, high-resolution audio.[48] And Deezer launched Deezer Elite, a high-fidelity streaming service.[49]

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45 Patrick Salyer, "5 Ways Spotify is Pioneering the Hyper-Social Business Model," March 22, 2012, *available at* http://mashable.com/2012/03/22/spotify-social-media/#HWZ3A_KCikqY, site visited October 18, 2016.

46 John Paul Titlow, "5 Ways Streaming Music Will Change in 2016," *Fast Company*, December 30, 2015, *available at* https://www.fastcompany.com/3054776/5-ways-streaming-music-will-change-in-2016, site visited September 1, 2016.

47 Written Direct Testimony of Christopher Phillips, Pandora Media Inc., ¶ 12.

48 TIDAL, "TIDAL High Fidelity Music Streaming Service Launches Today," Press Release, October 28. 2014, *available at* http://news.cision.com/tidal/r/tidal-high-fidelity-music-streaming-service-launches-today,c9707115, site visited October 31, 2016.

49 Glenn Peoples, "Deezer Finally Coming to America on September 15," *Billboard*, September 10, 2014, *available at* http://www.billboard.com/articles/business/6244190/deezer-expanding-united-states, site visited October 30, 2016 (announcing the launch of Deezer Elite in the United States on September 15, 2014).

- **Safety.** Obtaining access to music from interactive streaming services is also safer than obtaining music through pirate sites. Interactive streaming services, such as those offered by the participants in the present proceeding, are trusted sources that create little risk of spreading potentially malicious viruses with which consumer devices can be infected from otherwise untrustworthy, pirated file-sharing sites.[50]

39. As discussed in Section III.D below, the innovations brought about by interactive streaming services, and the resulting enhanced consumer experience, have helped increase paid consumption of music and stabilize music industry revenues.

B. SONGWRITERS AND PUBLISHERS

40. Composers, lyricists, and/or songwriters (collectively "songwriters") are the creators of musical works. Although many songwriters perform their own musical works, it is also common for songwriters to compose songs to be performed by others.[51] Songwriters typically enter into contractual arrangements with music publishers, which promote and license the songwriter's work, collect royalties on behalf of the songwriter,

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[50] Max Eddy, "Game of Thrones Torrents are Perfect for Delivering Malware," *PC Watch*, April 05, 2013, *available at* http://securitywatch.pcmag.com/none/310063-game-of-thrones-torrents-are-perfect-for-delivering-malware, site visited September 1, 2016.

[51] Billboard's list of recent top songwriters features a mix of singer-songwriters (*e.g.*, Adele) and songwriters who create music for others to perform (*e.g.*, Max Martin). (Ed Christman, "Publishers Quarterly: Warner/Chappell Has Its Best Quarter In 10 Years," *billboard*, May 5, 2016, *available at* http://www.billboard.com/biz/articles/news/publishing/7357837/publishers-quarterly-warnerchappell-has-its-best-quarter-in-10, site visited August 29, 2016.)

and sometimes offer financing in the form of advance payments.[52] Music publishers and songwriters negotiate a split of the royalty payments, with each often—but not always—receiving 50 percent.[53] In some cases, songwriters are commissioned to write a song and are compensated with a fee for the work, but give up ownership rights to the song.[54]

41. Music publishers and songwriters derive revenue from a variety of sources. Specifically, musical works are subject to several types of rights, the primary ones being:

- *Mechanical Licenses*: Mechanical licenses cover reproductions of music in both physical formats (*e.g.*, CDs, tapes, and vinyl) and digital formats (*e.g.*, downloads and interactive streams).[55]
- *Performance Licenses*: Performance licenses cover "public" performances of musical works—those that are performed live in a public setting or where a substantial number of persons are gathered, as well as musical works transmitted by, among others, radio, television, or digital music services.[56]

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52 See generally, *Report on Music Licensing* at 19.

53 *Id*. at 19.

54 Mary Dawson, "The Top Ten FAQs On the Business of Songwriting #10," *The Internet Writing Journal*, September 2001, available at http://www.writerswrite.com/journal/sep01/the-top-ten-faqs-on-the-business-of-songwriting-9015, site visited October 15, 2016.

55 *Report on Music Licensing* at 25. See also NMPA, "Music Publishing 101," available at http://nmpa.org/music-publishing-101/, site visited October 20, 2016.

56 *Id*.

- *Synchronization licenses*: Synchronization licenses cover music used in conjunction with video, including film, television, commercials, and music videos.[57]
- *Folio licenses*: Folio licenses cover music in written form, including lyrics and musical notations.[58]

42. Data indicate that mechanical license revenues from interactive streaming services are small relative to other sources of publisher revenues. For example, they amounted to just under [redacted] of total music publishing revenues in 2015.[59]

C. LICENSING OF MECHANICAL RIGHTS AND PUBLIC PERFORMANCE RIGHTS

43. In order to provide users with access to musical works, interactive streaming services must acquire both mechanical rights and public performance rights licenses for those works. Indeed, from the perspective of interactive streaming services, a mechanical license and a public performance license to a given musical composition are perfect complements: neither one has any value to the streaming service without the other. Thus, in making business decisions, a streaming service must consider the effects of its actions on the sum of the amounts paid for these licenses, and all else equal, an increase in the royalty charged for one type of license will lower a service's willingness to pay for the other. Coupled with the fact that the revenues that songwriters and publishers derive

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57 *Id.*

58 *Id.*

59 NMPA00001424.xlsx.

from licensing a composition to an interactive streaming service are equal to the sum of the public performance and mechanical royalties, this complementarity indicates that—from the perspective of economics—the two royalty rates should be jointly determined.

44. Because of this complementarity, it is necessary to understand how both mechanical rights and performance rights are acquired by interactive services and under what marketplace conditions they do so.

1. Mechanical Rights

45. To secure mechanical rights, interactive services typically either avail themselves of the statutory license at issue in this proceeding or negotiate directly with music publishers.

46. The music publishing industry is moderately concentrated. The four largest publishers—Sony/ATV (26.6 percent), Warner/Chappell (23 percent), Universal Music Publishing Group (12 percent), and Kobalt Music Publishing (11.7 percent)—collectively accounted for just over 73 percent of the top 100 radio songs tracked by Billboard as of the second quarter in 2016.[60] In addition, there are several other significant publishers, including BMG and Songs Music Publishing, and many thousands of smaller music publishers and self-publishing songwriters.[61]

47. The market share data might create the misimpression that private negotiations by interactive services to secure mechanical rights take place in an effectively competitive

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60 "Publisher Market Shares as reported by Billboard v2016-10-21.xlsx."

61 *Report on Music Licensing* at 19. See also Harry Fox Agency, "Why Affiliate with HFA," *available at* https://www.harryfox.com/publishers/why_affiliate.html, site visited June 3, 2016.

marketplace. However, evidence suggests that there is little competition among publishers in licensing mechanical rights to interactive streaming services.[62] Specifically, the evidence indicates that, from an interactive streaming service's point of view, the rights to the song portfolios of the largest publishers are complements rather than substitutes. This complementarity arises because an interactive streaming service would not be able to offer an attractive product without a license from at least each of the biggest publishers.[63] This is the case for two mutually reinforcing reasons. First, for an interactive streaming service to be competitive, it must offer listeners access to the songs to which they want to listen. Without a license covering the repertories of at least each of the larger publishers, the interactive service will be likely to fail to be able to do so. Second, because of a lack of transparency in the musical works licensing marketplace, interactive services often do not know which publishers control the rights to the works they want to perform. As a result, without a license from at least the larger publishers, interactive services run a significant risk of facing infringement lawsuits.[64]

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62 Moreover, as I explain in Sections III.C.2 and IV.C.3 below, there is a lack of competition among music publishers in the sale of public performance rights because of both the use of joint licensing agents (the performing rights organizations) and the must-have nature of some publishers.

63 Written Direct Testimony of Adam Parness, Pandora Media Inc., ¶ 17 ("An on-demand service would not be viable in my view without a license to publicly perform the repertory of a major music publisher.").

64 Written Direct Testimony of Adam Parness, Pandora Media Inc., ¶¶ 15-20. See also *Meredith Corp. v SESAC LLC*, 1 F. Supp. 3d 180 (S.D.N.Y., 2014) at 218, which addressed similar issues in a related context, stating:

> First, virtually all composers affiliate with only one of the three PROs. *See* Def. 56.1 ¶ 20; Pl. 56.1 ¶ 209; Jaffe Rep. 17. Second, almost all local [television] stations have licenses from all three PROs. *See* Pl. 56.1 ¶¶ 206, 207; Jaffe Rep. 22. As a practical matter, a station must have such licenses, because it is unable

48. Along similar lines, the Judges found in *Web IV* that licenses to the repertoires of the three largest record companies were "must haves" for interactive streaming services and, thus, were complements, rather than substitutes, for one another.[65] It is notable in this regard that, in 2015, the second and third largest record companies, Sony Music Entertainment and Warner Music Group, had revenue shares of 22.6 percent and 17.1 percent, respectively.[66] By contrast, the two largest music publishers, Sony/ATV and UMPG both had larger shares of music publishing revenues—26.6 percent and 23.1 percent, respectively.[67]

2. Public Performance Rights

49. To date, public performance licenses generally have been offered by PROs. The American Society of Composers, Authors and Publishers ("ASCAP")[68] and Broadcast

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> to control—or, sometimes, even identify— what music is contained within third-party programs. [Emphasis in original.]

65 See, *e.g.*, *Web IV Final Determination* at 26342. (quoting Shapiro WDT at 15):

> The evidence shows clearly that the major interactive services "must have" the music of each major record company to be commercially viable. The repertoires of the major record companies are not substitutes for each other in the eyes of either interactive services or the record companies themselves. This means that there is no true "buyer choice" in this market. Thus, the market for licensing recorded music to interactive services is not workably competitive.

66 "WMG makes biggest recorded music market share gains of 2015; indies cement publishing lead," *Music & Copyright*, April 28, 2016 *available at* https://musicandcopyright.wordpress.com/2016/04/28/wmg-makes-biggest-recorded-music-market-share-gains-of-2015-indies-cement-publishing-lead/, site visited October 30, 2016.

67 *Id.*

68 ASCAP is "[a] professional organization of 565,000 songwriters, composers and music publishers." (ASCAP, "We are ASCAP," *available at* http://www.ascap.com/, site visited June 3, 2016.)

Music, Inc. ("BMI")[69] are the two largest U.S. PROs and collectively provide the rights necessary to publicly perform more than 90 percent of musical works that require licenses.[70] Until relatively recently, SESAC, Inc., a third, smaller, U.S. PRO accounted for the balance.[71] Global Music Rights ("GMR"), a fourth U.S. PRO, recently launched and now also accounts for a small, but growing portion of musical works public performance rights licenses, including the works of popular song writers such as Pharrell Williams, members of Fleetwood Mac, and the estates of John Lennon and Ira Gershwin, among others.[72]

50. Because of strong concerns about the exercise of considerable market power, the United States Department of Justice ("DOJ") brought antitrust lawsuits against both ASCAP and BMI. Those suits were settled, and, as part of the settlements, ASCAP and BMI entered into consent decrees with DOJ that impose certain restrictions on those PROs, including requiring them to grant licenses on non-discriminatory terms to any user that requests one and by providing for a "rate court" that determines "reasonable"

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69 BMI represents "more than 10.5 million musical works created and owned by more than 700,000 songwriters, composers and music publishers." (BMI, "What We Do," *available at* http://www.bmi.com/about, site visited June 3, 2016.)

70 *Report on Music Licensing* at 20.

71 SESAC "currently licenses the public performances of more than 400,000 songs on behalf of its 30,000 affiliated songwriters, composers and music publishers …" (SESAC, "About Us," *available at* https://www.sesac.com/About/About.aspx, site visited August 26, 2016.)

72 Sarah Skates, "Global Music Rights Has Growing Roster, Negotiating Power," *Music Row*, October 30, 2014, *available at* https://www.musicrow.com/2014/10/global-music-rights-has-growing-roster-negotiating-power/, site visited October 27, 2016.

royalties in the event the PRO and licensee cannot agree on rates or terms for a license.[73] In this regard, it is worth noting that, although SESAC is not subject to an antitrust consent decree, it recently settled private litigation raising antitrust concerns that was brought against it by representatives of the terrestrial radio and local television industries.[74]

51. As I discuss in Section IV.C.3 below, evidence indicates that each of the four PROs is a "must have" from the perspective of interactive services. In addition, for similar reasons, were a large publisher to license its public performance rights directly to an interactive service rather than through a PRO, that publisher would also almost certainly be a "must have" licensor.

D. INDUSTRY TRENDS

52. In this section, I examine national and global trends in the music industry, with a focus on what has changed since the 2012 Settlement.[75] As I discuss below, music streaming services have helped the industry combat piracy and have been an important

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[73] *Report on Music Licensing* at 36-37; *United States v. ASCAP*, No. 41–1395, 2001 WL 1589999, 2001–02 Trade Cas. (CCH) ¶ 73,474 (S.D.N.Y. June 11, 2001) ("ASCAP Consent Decree"), §§ VI, IX; *United States v. BMI*, 1966 Trade Cas. (CCH) ¶ 71,941 (S.D.N.Y.1966), *amended*, No. 64–CIV–3787, 1994 WL 901652, 1996–1 Trade Cas. (CCH) ¶ 71,378 (S.D.N.Y. Nov. 18, 1994) ("BMI Consent Decree"), § XIV.

[74] In settling its litigation, SESAC agreed, with regard to its dealing with local television and radio broadcasters, to many of the same restrictions imposed on ASCAP and BMI by their consent decrees (*e.g.*, fee-setting by a neutral third party in the event of a negotiating impasse and mandatory licensing). (*Meredith Corp. v. SESAC LLC*, Opinion and Order, 09 Civ. 9177 (PAE), Feb. 19, 2015 at 8.))

[75] Both global and national sales are relevant dimensions on which to consider the data. In particular, because musical compositions have almost no marginal costs associated with usage and a musical composition can be consumed anywhere in the world, the decision to produce music depends, in large part, on whether total global earnings will be sufficient to offset the fixed costs of creating the composition.

source of recent growth for the music industry, both in the U.S. and globally. In this way, the numerous innovations that streaming services have brought to the music industry have benefitted, among others, music publishers and songwriters.

53. Music industry retail revenues (including revenues earned from streaming) provide an indicator of the overall health of the music industry to all industry participants, including songwriters and music publishers. Figure 1 below shows inflation-adjusted revenue per capita for the U.S. music industry based on data reported by the Recording Industry Association of America ("RIAA").[76] As the figure shows, the dramatic decline in industry revenues (adjusted for inflation and population) began in 2000. Specifically, revenues in the U.S. peaked in 1999 at $14.6 billion ($20.7 billion in 2015 dollars) and were about $7 billion in 2015.[77] It should be noted that licensed streaming services had *de minimis* revenues prior to 2005. The fact that the drop in music industry revenues began years before paid streaming became popular indicates that licensed streaming services were not the cause of the decline in music industry revenues.

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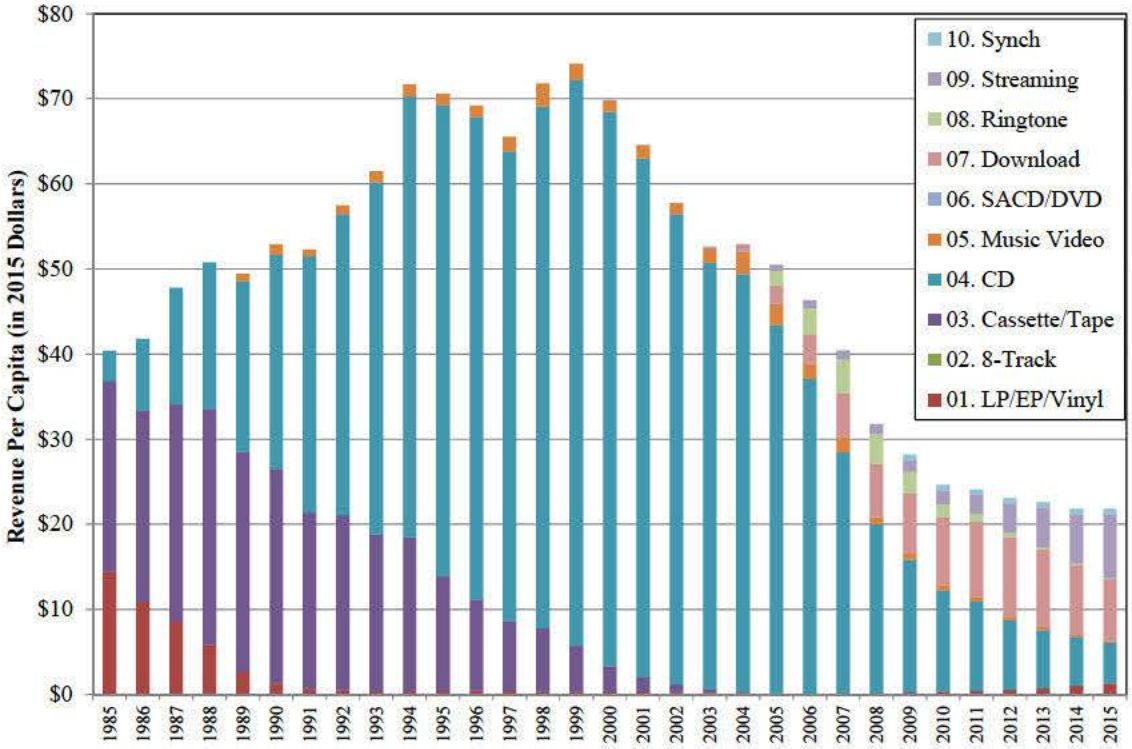
[76] Annual revenues are based on the estimated retail dollar value of music sales measured in 2015 dollars, and expressed as a fraction of annual U.S. population. (RIAA U.S. Sales Database, *available at* https://www.riaa.com/u-s-sales-database/, site visited August 31, 2016; U.S. Census Bureau population estimates.) Downloads includes downloads of singles, albums, music videos, and kiosk sales. Streaming includes revenues attributable to paid subscriptions (*e.g.*, paid subscriptions of Spotify, TIDAL, and Apple Music), streaming radio service revenues distributed by SoundExchange (*e.g.*, royalties from Pandora and SiriusXM), and other non-subscription (ad-supported) on-demand streaming (*e.g.*, YouTube, Vevo, and ad-supported Spotify). (Joshua P. Friedlander, "News and Notes on 2015 RIAA Shipment and Revenue Statistics," RIAA, *available at* https://www.riaa.com/wp-content/uploads/2016/03/RIAA-2015-Year-End-shipments-memo.pdf, site visited August 29, 2016.)

[77] RIAA U.S. Sales Database, *available at* https://www.riaa.com/u-s-sales-database/, site visited August 31, 2016.

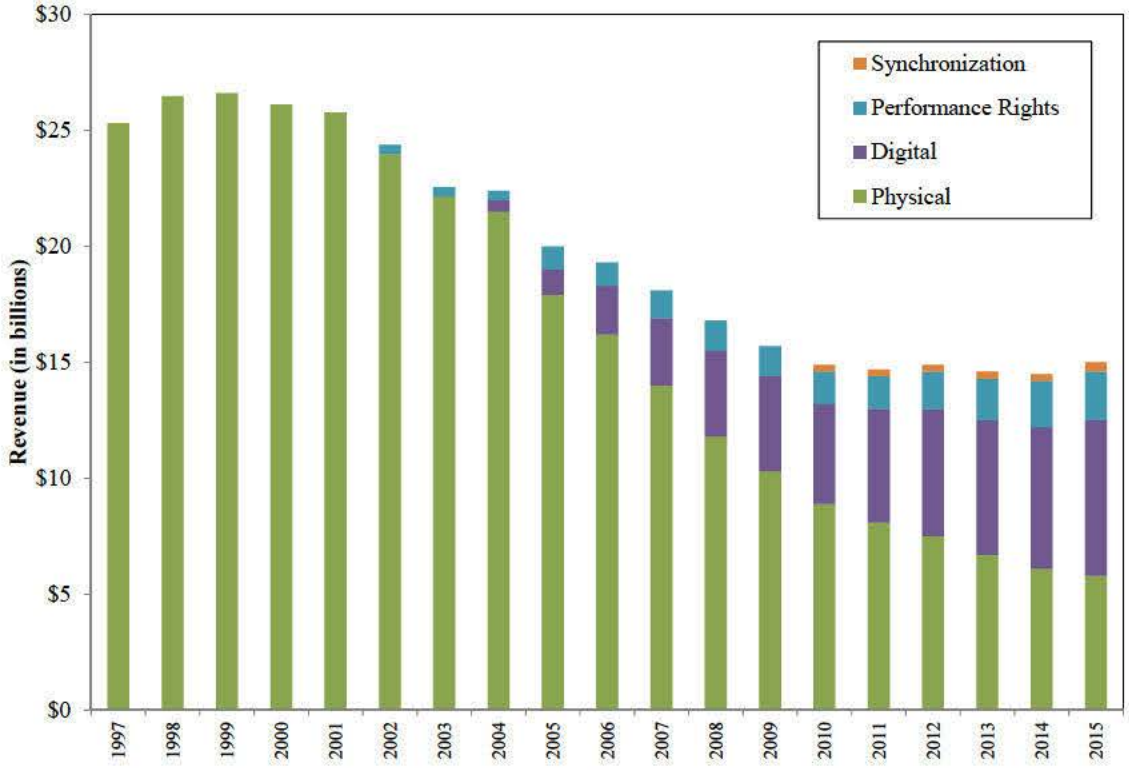
Figure 1: U.S. Music Revenue (per capita), 1985-2015



Sources: RIAA U.S. Sales Database (inflation-adjusted U.S. recorded music revenues by format); U.S. Census Bureau Population Data (U.S. census population estimates).

54. Figure 2 below presents worldwide revenues. As can be seen from the figure, worldwide revenues generally track the trends of U.S. revenues described immediately above. In particular, global music revenue also peaked in 1999 and underwent a substantial decline thereafter. In recent years, global music revenue has stabilized as digital sales have accounted for an increasing share of industry revenue.

Figure 2: Global Music Revenue, 1997-2015



Sources: IFPI Recording Industry in Numbers 2014 (SPOTCRB0003415); IFPI Global Music Report 2016 (SPOTCRB0000803).

55. Examination of Figures 1 and 2 suggests four broad points:

- There has been a history of new formats emerging to replace incumbent formats. For example, cassettes replaced vinyl, and then CDs replaced cassettes. When this substitution was among different revenue-generating formats, the new formats represented innovations that increased the value of music to consumers and facilitated the growth of industry revenues.

- From 2000 through 2014, the music industry's revenues suffered substantial losses each year relative to the previous year. The popular press, industry observers, and academic researchers widely attribute much, but not all, of this

decline to the digitization of music and rise of unlicensed music file-sharing sites, most notably starting with Napster in 1999.[78]

- The decline in music industry revenues was not triggered by licensed streaming services. For instance, in 2002, total music revenues declined by nearly $7 per person in the U.S., yet streaming services did not earn measurable amounts of revenues in that year according to RIAA.

- In fact, the data and industry analyses indicate that streaming (including interactive streaming) is stabilizing industry revenues. Figure 1 shows that streaming accounted for an increasing share of U.S. music revenue starting

[78] See, *e.g.*, David Goldman, "Music's lost decade: Sales cut in half," *CNN Money*, February 3, 2010, *available at* http://money.cnn.com/2010/02/02/news/companies/napster_music_industry/, site visited September 1, 2016: ("In the time between Napster's shuttering and iTunes' debut [2003], many of Napster's 60 million users found other online file sharing techniques to get music for free. Even after iTunes got people buying music tracks for just 99 cents, it wasn't as attractive as free."); Luis Aguiar, Nestor Duch-Brown, and Joel Waldfogel, "Revenue, New Products, and the Evolution of Music Quality since Napster," Institute for Prospective Technological Studies Digital Economy Working Paper 2015/03, European Commission JRC Technical Reports, 2016 ("With the appearance of Napster in 1999, revenue from recorded music began to fall in the US after rising for decades. In 2012 North American recorded music revenue was 75% below its 1998 level in real terms, and revenue in Europe was down by 70%. Industry observers have long viewed file sharing as the cause of the decline in revenue and have sought relief in the form of stronger copyright enforcement…."); ABC News, "RIAA: New Data Show Napster Hurt Sales," February 26, 2002, *available at* http://abcnews.go.com/Technology/story?id=98801, site visited October 27, 2016 ("Shipments of CD singles sank by 39 percent last year, according to data released by the Recording Industry Association of America. 'Napster hurt record sales,' said RIAA president Hilary Rosen. In particular, Rosen pointed to the drop in the sales of singles, once the format that fueled the music industry, as evidence of Napster's affect [sic].")

around 2011, when Spotify debuted in the United States.[79] Many commentators believe that streaming (including interactive streaming) has reduced piracy.[80]

56. This last point merits further discussion. The apparent freefall of revenues since 1999 has leveled off as revenues attributable to streaming have grown substantially in the last five years. According to data published by the RIAA, streaming revenues in the U.S. grew by more than 40 percent between 2012 and 2013, by 29 percent between 2013 and 2014, and by another 29 percent between 2014 and 2015.[81] During the first half of 2016,

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79 Other data also show that on-demand music streaming is increasing rapidly. According to Nielsen data, there were 317 billion on-demand music streams in 2015, up 93 percent from the prior year. And the first half of 2016 has continued to see growth with 209 billion on-demand streams, up 59 percent from the same period in 2015. (See Nielsen, "2015 Nielsen Music U.S. Report," p. 8; Nielsen, "2016 Nielsen Music U.S. Mid-Year Report" at 2.)

80 For example, a recent academic study finds that every 47 streams displaces one illegal download. (Luis Aguiar and Joel Waldfogel, "Streaming Reaches Flood Stage: Does Spotify Stimulate or Depress Music Sales?" Institute for Prospective Technological Studies Digital Economy Working Paper 2015/05, European Commission JRC Technical Reports, 2016.) And a study conducted by Spotify found that piracy in the Netherlands declined as Spotify gained popularity and that artists who have their music available on Spotify tended to experience fewer unpaid downloads from peer-to-peer file sharing sites such as BitTorrent. (Will Page, "Adventures in the Netherlands: Spotify, Piracy, and the new Dutch experience," *Spotify*, July 17, 2013, *available at* https://press.spotify.com/us/2013/07/17/adventures-in-netherlands/, site visited September 8, 2016.) The conclusions of those studies are supported by industry observation. For instance, one commentator notes that "[Spotify] has almost single-handedly stopped piracy's raid on the music business and handed the reins back to the industry that underestimated the modern digital landscape in the first place." (Ethan Wolff-Mann, "Spotify Doesn't Make (or Lose) Money for the Music Business. Here's Why That's Actually a Victory," *Money*, October 27, 2015, *available at* http://time.com/money/4086968/spotify-music-industry-revenues/, site visited September 1, 2016.)

81 Joshua P. Friedlander, "News and Notes on 2015 RIAA Shipment and Revenue Statistics," RIAA, *available at* https://www.riaa.com/wp-content/uploads/2016/03/RIAA-2015-Year-End-shipments-memo.pdf, site visited August 29, 2016; Joshua P. Friedlander, "News and Notes on 2014 RIAA Shipment and Revenue Statistics," RIAA, *available at* http://www.riaa.com/wp-content/uploads/2015/09/2013-2014_RIAA_YearEndShipmentData.pdf, site visited August 30, 2016.

music streaming revenues in the U.S. increased by 57 percent compared to the first half of 2015.[82] As one commentator noted, with regard to the growth of the global music industry, it "was the massive surge in streaming… that made the real difference."[83]

57. With this background in mind, I now turn to the changes that have taken place since the 2012 Settlement. First, overall album consumption has increased dramatically due, in part, to strong growth in streaming music. Figure 3 demonstrates that, since 2013 (the first year Nielsen included streaming equivalent albums in its estimates), overall album consumption has increased by 23 percent. This increase was primarily due to a 370-percent increase in streaming music, which more than offset a 28-percent decline in physical sales and digital downloads.[84]

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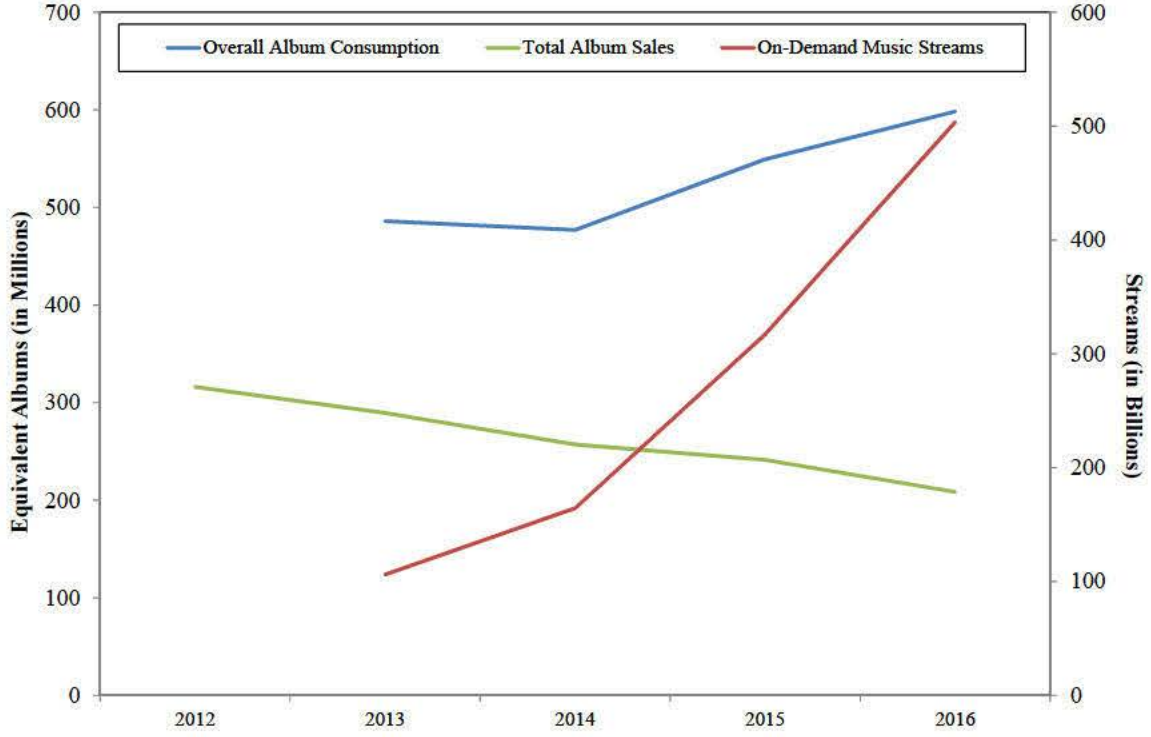
82 Joshua P. Friedlander, "News and Notes on 2016 Mid-Year RIAA Shipment and Revenue Statistics," RIAA, *available at* http://www.riaa.com/wp-content/uploads/2016/09/RIAAMidyear16.pdf, site visited September 21, 2016.

83 Craig Fitzpatrick, "Streaming drives reversal of music industry decline," newstalk.com, April, 13, 2016, *available at* http://www.newstalk.com/Streaming-drives-reversal-of-music-industry-decline, site visited September 8, 2016. See also Susmita Baral, "Spotify and Apple Music To The Rescue? Music Industry Growing For First Time Since 1990s Thanks To Streaming Services, *International Business Times*, September 20, 2016, *available at* http://www.ibtimes.com/spotify-apple-music-rescue-music-industry-growing-first-time-1990s-thanks-streaming-2419436, site visited October 26, 2016:

> This time around, the source of high sales are streaming services, like Spotify Ltd. and Apple Music, that give listeners access to an abundance of music at no cost in lieu of listening to ads or for a monthly fee. "It feels like the market is slowly recovering after years of being in crisis and shrinking," Zach Katz, the head of U.S. operations at BMG Rights Management GmbH, a record label and music publisher, told Bloomberg Technology. "It's absolutely a step in the right direction."

84 Nielsen Music Report 2013, 2014, 2015, and Mid-year Report 2016. Overall Album Consumption includes all albums and track equivalent albums and streaming equivalent albums (in millions); Total Album Sales includes CDs, cassettes, vinyl LPs, and digital albums (in millions); On-Demand Music Streams includes all on-demand audio and video music streams (in billions). 2016 figures are based on projection of mid-year values.

Figure 3: U.S. Music Consumption



Sources: Nielsen U.S. Music Reports 2013, 2014, 2015, and Mid-year 2016 (2016 numbers projected based on 2016 mid-year report).

58. With respect specifically to music publisher revenues, data from the NMPA indicate that, since the 2012 Settlement, publishing revenues have been [redacted].

Although streaming may have partially replaced physical sales and downloads, studies also suggest that there are other reasons why consumers stopped purchasing music, including the proliferation of more appealing non-music entertainment options (*e.g.*, Netflix, social media, and video games). For example, one study found that [redacted]

For example, the NMPA estimates that total publishing revenue declined by [redacted] between 2013 and 2014, but increased by [redacted] between 2014 and 2015.[85]

59. In 2015, the three largest publishers Sony/ATV, UMPG, and Warner/Chappell collectively earned over [redacted] in profits from U.S music publishing operations: Sony/ATV earned over [redacted],[86] UMPG earned over [redacted],[87] and Warner-Chappell earned nearly [redacted].[88]

60. Growth in the numbers of songwriters registering with U.S. PROs also suggests that the publishing industry has improved since the 2012 Settlement. As noted above, ASCAP and BMI are the two largest U.S. PROs and collectively represent the majority of composers and publishers in the U.S.[89] Membership in ASCAP and BMI has increased substantially over the last several years. For example, ASCAP membership increased from 460,000 in 2012 to 570,000 in 2015, an increase of 24 percent.[90] Similarly, BMI

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85 NMPA00001424.xlsx.

86 SONY-ATV00003701.xlsx. Profit is based on reported Net Income.

87 UMPG00002118.xlsx. Profit is based on reported earnings before interest and taxes ("EBIT").

88 WC00000829.xlsx. Profit is based on reported Net Result.

89 *Report on Music Licensing* at 20.

90 ASCAP Annual Report 2012, *available at* https://web.archive.org/web/20130903223522/http://www.ascap.com/~/media/files/pdf/about/annual-reports/2012-annual-report.pdf, site visited October 26, 2016; ASCAP Annual Report 2015, *available at* https://www.ascap.com/-/media/files/pdf/about/annual-reports/2015-annual-report.pdf, site visited October 26, 2016.

membership increased from 500,000 affiliates in 2012 to 700,000 affiliates in 2015, an increase of 40 percent.[91]

61. The number of musical works in ASCAP's repertory also grew from a reported 8.5 million works in 2011to 10 million works in 2015—an increase of nearly 18 percent. BMI's repertory has increased even more substantially during the same period—by over 60 percent, and, in 2015, included 10.5 million musical works.[92] This growth has contributed to substantial PRO revenue. For instance, ASCAP announced this year that its revenue has topped a "record-breaking" $1 billion for a second straight year.[93] BMI similarly reported "record-breaking" revenue of $1 billion.[94] SESAC also shows

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91 BMI Annual Report 2012, *available at* http://www.bmi.com/images/news/2012/AnnualReview_2011_2012.pdf, *BMI*, site visited October 31, 2016; BMI Annual Report 2015, *available at* http://www.bmi.com/pdfs/publications/2015/BMI_Annual_Review_2015.pdf, site visited October 31, 2016.

92 ASCAP Annual Report 2011; ASCAP Annual Report 2015, *available at* https://www.ascap.com/-/media/files/pdf/about/annual-reports/2015-annual-report.pdf, site visited October 26, 2016; BMI Annual Report 2011, *available at* http://www.bmi.com/pdfs/publications/2011/BMI_Annual_Review_2011.pdf, site visited October 26, 2016; BMI Annual Report 2015, *available at* http://www.bmi.com/pdfs/publications/2015/BMI_Annual_Review_2015.pdf, site visited October 31, 2016; and "ASCAP Reports Increased Revenues in 2011," March 8, 2012, *available at* www.ascap.com/press/2012/0308_ascap-reports.aspx, site visited October 19, 2016.

93 ASCAP, "ASCAP Revenue Tops $1 Billion for Second Year in a Row: Market-Leading PRO Strengthens Core Business, Continues Transformation," April 27, 2016, *available at* http://www.ascap.com/press/2016/0427-ascap-revenue-tops-one-billion-for-second-year.aspx, site visited September 14, 2016.

94 BMI, "BMI Reports Record-Breaking Revenues of Over $1 Billion," September 10, 2015, available at http://www.bmi.com/news/entry/bmi_reports_record_breaking_revenues_of_over_1_billion, site visited September 14, 2016.

evidence of growth—for instance, SESAC's revenue had grown to $182 million in 2014 from $167 million in 2013.[95]

62. These positive trends are projected to continue into the coming license term. A recent analyst report states that "[w]e expect 2016 to be the first year since 1998 in which the global music industry will grow revenues, and we expect this growth to accelerate in the next three years, driven by increased consumption of music on paid streaming platforms," and that 2016 is an "inflection point for global music revenues."[96] These trends are apparent in the U.S. as well. For instance, RIAA notes that the "first half 2016 results illustrate the emergence of paid [music streaming] subscriptions as a primary revenue driver for the United States music industry" and "strong growth in revenues from subscription streaming services more than offset declines in unit based sales of physical and digital music download products. Overall revenues at retail increased 8.1%... the strongest industry growth since the late 1990's."[97]

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95 Ed Christman, "SESAC Buys the Harry Fox Agency," *Billboard*, July 7, 2015, *available at* http://www.billboard.com/articles/news/6620210/sesac-buys-the-harry-fox-agency, site visited October 23, 2016.

96 Credit Suisse Global Equity Research, "Global Music," April 4, 2016.

97 Joshua P. Friedlander, "News and Notes on 2016 Mid-Year RIAA Shipment and Revenue Statistics," RIAA, *available at* http://www.riaa.com/wp-content/uploads/2016/09/RIAAMidyear16.pdf, site visited September 21, 2016. The RIAA data show that total U.S. revenues have grown by 8 percent between 1H 2015 and 1H 2016, led by a 112 percent increase in paid subscription streaming revenues during the same period.

63. Although interactive streaming has reduce the extent of piracy, it has not eliminated the threat of piracy entirely. For example, the U.S. Copyright Office reported that:[98]

> [i]n addition, a broad range of stakeholders—with the exception of the CFA and Public Knowledge—pointed to piracy as a continuing challenge that depresses revenues for both legal music providers and rightsholders. But piracy was not a significant focus of discussion. Unlike in the Napster era, stakeholders now seem resigned to this marketplace condition and the perhaps irreversible impact it has had on the industry. RIAA—which abandoned its lawsuits against individual file-sharers several years ago—observed that piracy "certainly is in the background when you talk about whether digital music services are earning enough money or paying enough money, [and] competing against free remains a problem." DiMA agreed that "the truth is that any legitimate digital service right now competes with free." This sentiment was echoed by Spotify as well: "We are competing with piracy. It's a reality that we all face on every level of the ecosystem. We are all competing with free." [Footnotes omitted.]

One implication of the remaining existence of piracy is that streaming music is likely to continue to displace a combination of unpaid listening of pirated music and paid listening of other formats.

64. Despite the role that interactive services have played in stabilizing the music industry since the 2012 Settlement, and in sharp contrast to music publishers, stand-alone interactive services generally remain unprofitable. One recent commentary about the financial health of the streaming industry notes that "[a]s the [streaming] industry gets more competitive, the possibility of profits looks even more unlikely."[99] Another industry commentator notes that:[100]

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98 *Report on Music Licensing* at 78-79.

99 Jeremy Bowman, "Music Streaming Is a Money Pit: As the industry gets more competitive, the possibility of profits looks even more unlikely," *The Motley Fool*,

> For record labels, music streaming is big business. They earned $2.2bn from services such as Spotify, Deezer and Pandora last year — a figure that has quintupled in five years. It is also a golden age for music lovers, as listening to songs has never been easier. But for the streaming services themselves, survival is a struggle. None of the most popular services has ever turned a profit and some people doubt any of them ever will.

65. As a pure-play, interactive streaming service and one of the industry leaders, Spotify's financial performance provides a useful benchmark for whether streaming services earn excess profits. In 2015, Spotify lost $192 million (€173 million).[101] In fact, Spotify has lost money every year since 2010, with total 2010-2015 losses amounting to [redacted][102] Moreover, several interactive streaming services have

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September 18, 2016, *available at* http://www.fool.com/investing/2016/09/18/music-streaming-is-a-money-pit.aspx, site visited September 19, 2016. ("The music streaming wars are getting hotter. In recent weeks, Pandora Media […] announced plans for an on-demand streaming service to match Spotfiy and Apple […], Amazon.com […] said it plans to launch an on-demand service compatible with its voice-activated Echo device for just $5/month, and SoundCloud, after launching a subscription service earlier this year, is offering three months of SoundCloud Go for just $0.99. And those players are fighting with Jay-Z's Tidal, […] Google Play and YouTube, iHeartRadio, and other services for market share. There's a problem, here, though. No one is making any money.")

100 Robert Cookson, "Losses point to bleak future for music streaming services," *Financial Times*, December 3, 2015, *available at* http://www.ft.com/cms/s/0/160ad860-9840-11e5-95c7-d47aa298f769.html#axzz4KjutHMFz, site visited September 19, 2016.

101 Tim Ingham, "Spotify Revenues Topped $2BN Last Year as Losses Hit $194M," musicbusinessworldwide.com, May 23, 2016, *available at* http://www.musicbusinessworldwide.com/spotify-revenues-topped-2bn-last-year-as-losses-hit-194m/, sited visited October 3, 2016. See also SPOTCRB00058634. [redacted]. (SPOTCRB0005863.) Annual figures provided in Euros were converted to U.S. dollars using the corresponding annual exchange rate reported by the Federal Reserve (series AEXUSEU).

102 *Id.*

gone out of business in recent years, including Rdio (certain assets of which were acquired by Pandora), Rara and Beatport.[103]

IV. THE 2012 SETTLEMENT IS AN EXCELLENT BENCHMARK AND REQUIRES ONLY MINOR MODIFICATION HERE.

66. With this background, I now turn to my analysis of reasonable rates and terms for the statutory license at issue. In this section, I explain that, because the previous settlement was negotiated with all parties knowing that the alternative was a rate-setting proceeding governed by the 801(b)(1) standard, it is reasonable to assume that the prior agreement accounted for the four statutory factors. I then examine whether the marketplace has changed in ways that would call for an adjustment to the 2012 Settlement rates and terms. As discussed below, I find that: (a) the overall structure of the 2012 Settlement remains reasonable, except that—a as a result of the fragmentation taking place in the musical works public performance rights licensing marketplace—the mechanical royalty floors are no longer appropriate, and (b) there have been no changes of significance that support increasing the headline (or "all-in") statutory rates—if anything, the relevant changes suggest that rates should be lowered.

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[103] Andrew Flanagan, "Rdio's Bankruptcy: Inside a Failing Music Streaming Service," *Billboard*, September 26, 2015, *available at* http://www.billboard.com/articles/business/7519014/rdio-bankruptcy-story-how-it-happened-failing-streaming-service, site visited October 25, 2016; Tim Ingham, "Rara Will Be Shut Or Sold as CEO Jez Bell Exits," *MusicBusiness Worldwide*, March 13, 2015, *available at* http://www.musicbusinessworldwide.com/rara-must-be-sold-or-closed-as-ceo-exits/, site visited October 25, 2016; An Update on Beatport Services, *Beatport*, May 10, 2016, *available at* https://blog.beatport.com/en/an-update-on-beatport-services/, site visited October 25, 2016.

A. THE BENEFITS OF USING THE 2012 SETTLEMENT AS A BENCHMARK

67. In theory, one could determine reasonable rates by: (a) building a model of the industry; (b) using the model to predict what the industry outcome would be for each possible combination of royalty rate structure and rate levels; and (c) choose the combination of rate structure and levels that best achieves the four statutory objectives and, thus, is reasonable. Given the complexity of the industry and the data that would be needed to construct such a model, this approach is highly impractical and very likely unreliable.

68. An alternative approach is to rely on industry participants to identify rate structures and levels that are reasonable and promote attainment of the statutory objectives. These privately discovered solutions serve as benchmarks for determining a reasonable statutory rate structure and reasonable statutory rate levels. This is the approach that generally has been used in prior CRB proceedings, including *Phonorecords II*.

69. Of course, private agreements cannot all be expected to be equally good benchmarks. Some agreements may do poor jobs of attaining the statutory objectives because they were negotiated in the presence of distortionary differences in bargaining positions, or by parties in very different situations than those subject to the statutory license regime. Hence, it may be necessary to either disregard entirely certain benchmarks, or to make adjustments to account for differences between the benchmark market and the target market.

70. The process of adjusting benchmarks can be complex and subject to error. It is thus desirable to find benchmarks that are negotiated under conditions that make it unnecessary to make large adjustments. For example, benchmarks involving the same license rights and the same parties tend to need less adjustment than other benchmarks, all else equal. It is also important that there is reason to believe that the parties to the benchmark negotiation have incentives to reach an agreement that attains the statutory objectives (or comes reasonably close).

71. Fortunately, the 2012 Settlement requires only minor adjustment. This is so for several reasons:

- it involved similar (and in some cases the same) parties, and an identical set of rights;
- unlike some other potential benchmark agreements that cover other services and products (or were negotiated concurrently with agreements covering other services or products), the 2012 Settlement covered only the rights at issue in the present proceeding;
- it is relatively recent and an examination of how the industry has changed demonstrates that it is not an outdated benchmark;
- there do not appear to have been any asymmetries in market power or bargaining positions that would have distorted the outcome in favor of interactive streaming services; and

- the settlement was negotiated in the shadow of an 801(b)(1) rate-setting proceeding in which both sides could have litigated, and I am unaware of any evidence indicating that either side was disadvantaged with respect to the ability to pursue such litigation.

72. It is useful to consider the last point in greater detail. The economics of bargaining indicates that, as long as there are not significant asymmetries in the ability of either side to pursue litigation, private parties negotiating a settlement in the shadow of an 801(b)(1) proceeding will tend to agree to terms and conditions that promote the 801(b)(1) statutory objectives.[104] This is so because leading economic theories of bargaining demonstrate that disagreement points (*i.e.*, the economic payoffs that the bargaining parties will earn if they fail to reach agreement) play a key role in determining the bargaining outcome by providing baselines from which each party can assess its gains from reaching a particular agreement.[105] The more favorable is a party's disagreement point, the stronger its bargaining position and the greater its ability to negotiate an agreement favorable to it. If the parties fail to reach an agreement, they will very likely

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104 In the absence of a statutory shadow, one cannot assume that *every* negotiated agreement will achieve the availability objective to a reasonable extent (*e.g.*, there may be a problem due to one side's possessing monopoly power as in the case of major record companies negotiating with interactive streaming services for the licensing of public performance rights).

105 John F. Nash (1950) "The Bargaining Problem," *Econometrica*, **18**(2): 155-162; Ariel Rubinstein (1982) "Perfect Equilibrium in a Bargaining Model," *Econometrica*, **50**(1): 97-109; Ken Binmore, Ariel Rubinstein, and Asher Wolinsky (1986) "The Nash Bargaining Solution in Economic Modelling," *The RAND Journal of Economics*, **17**(2): 176-188; John Sutton (1986) "Non-Cooperative Bargaining Theory: An Introduction," *The Review of Economic Studies*, **53**(5): 709-724.

rely on the statutory license.[106] Hence, the Judges' anticipated interpretation of the statutory objectives will affect the disagreement points in the private bargaining. Consequently, the anticipated interpretation will be reflected in the bargaining outcome as long as the parties have roughly comparable abilities to litigate.

73. In addition to shadow effects, there are factors specific to each of the particular statutory objectives that lead to their being reflected in privately negotiated agreements. I consider each in turn:

- *Maximize Availability.* Economically rational parties negotiating a licensing agreement will seek to maximize availability, all else equal. To see why, consider a hypothetical bargaining situation in which content distributors had the ability to reach an agreement that was so one-sided that content creators would have little economic incentive to create new musical works and the supply of such works would fall dramatically. The expected result would be to suppress consumer demand for the distributors' services, reducing their profits. Hence, it would not

[106] There is an asymmetry in that the statutory license is compulsory for the licensor but not the licensee. However, there do not appear to have been any imbalances in market power or bargaining positions that would have allowed interactive streaming services to take advantage of this asymmetry to obtain unreasonably low rates. As of the fourth quarter of 2012, the four largest publishers at the time (Sony/ATV, Warner/Chappell, UMPG, and Kobalt Music Group) collectively accounted for over 72 percent of the Billboard top 100 songs. (Ed Chapman, "Sony/ATV Top Publisher for 2012's Fourth Quarter," *Billboard*, March 1, 2013, *available at* http://www.billboard.com/biz/articles/news/digital-and-mobile/1550519/sonyatv-top-publisher-for-2012s-fourth-quarter, site visited October 27, 2016.) Moreover, interactive streaming was a less important means of music access in 2012. The number of on demand streams has grown nearly fivefold between 2013 and 2016 (see Figure 3 above) and notable interactive streaming services, including those from Apple, Amazon, and Tidal, did not exist in 2012.

be in the self-interest of the distributors to reach such a deal—it would be more profitable to agree to a license that better supported the supply of new music.[107]

- *Afford Fair Return/Fair Income.* One conception of fairness is that copyright owners and users earn the returns and incomes that would arise in an effectively competitive market in the absence of a mandatory licensing requirement. When the parties are equally matched—and I am unaware of any evidence that suggests that they were not so matched at the time of the negotiations—the bargaining outcome can be seen as the outcome of effective competition.

- *Reflect Relative Roles.* As long as neither party has excessive market power or benefits from a governmental policy that "tips the scales in its favor," economic principles of bargaining indicate that negotiated settlements will reflect relative contributions. In particular, the parties' relative contributions will be reflected in their disagreement points—the less one party's relative contribution, the less favorable that party's disagreement point will be relative to the other party's. I am unaware of any evidence that either side had excessive market power or enjoyed other advantages that would have distorted the settlement agreement.

- *Minimize Disruptive Impact.* In assessing the costs and benefits of an agreement, the parties have economic incentives to account for disruption and to minimize

[107] Of course, there may be inherent tradeoffs between promoting availability and meeting other bargaining objectives, and the precise ways in which these tradeoffs will be resolved will depend, in part, on whether the parties have unbalanced bargaining power and whether there is a statutory backstop.

their collective costs of disruption in order to maximize their collective benefits from the agreement.

B. THE 2012 SETTLEMENT AND STATUTORY ROYALTIES CURRENTLY IN EFFECT

74. The current statutory rates, adopted in the prior proceeding, are based on the 2012 Settlement, which was reached on April 11, 2012 and became effective on January 1, 2014.[108] Subpart B of the regulations "establishes rates and terms of royalty payments for interactive streams and limited downloads of musical works by subscription and nonsubscription digital music services."[109] Subpart C of the regulations "establishes rates and terms of royalty payments for certain reproductions or distributions of musical works through limited offerings, mixed service bundles, music bundles, paid locker services and purchased content locker services."[110]

75. The 2012 Settlement has several elements:[111]

- *Headline Rates that Vary with Service Characteristics.* Under the revenue prong, a headline royalty rate is applied to applicable service revenue. The headline rate is 10.5 percent for services licensed under Subpart B.[112] The headline rates for

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108 Federal Register, Vol. 78, No. 219 at 67938-951.

109 37 CFR 385.10(a).

110 37 CFR 385.20(a).

111 There are also other, less central features that I will not discuss in the text, including overtime adjustments (37 CFR 385.12(d)) and promotional royalty rates (37 CFR 385.14).

112 37 CFR 385.12(c).

services licensed under Subpart C vary, ranging from 10.5 to 12 percent.[113] In accord with economic principles and the fact that mechanical and public performance rights are perfect complements from the perspective of an interactive streaming service, the headline rate covers both mechanical royalties and public performance royalties.

- *Per-subscriber Minimums that Vary with Service Characteristics.* There is a set of per-subscriber minimums that apply to the sum of mechanical and public performance royalties and which vary depending on the type of service.[114] For example, the minimum for a *non-portable stand-alone service* is equal to the lesser of $0.50 per subscriber per month and subminimum II,[115] while the minimum for a *portable service* is equal to the lesser of $0.80 per subscriber and subminimum I.[116]

- *Deduction for Performance Rights Royalties.* In order to determine the incremental payment due under the statutory license, a licensee may subtract the amounts paid for public performance rights from the total royalty payment.

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113 37 CFR 385.23(a).

114 37 CFR 385.13 and 37 CFR 385.23.

115 A non-portable stand-alone service is "a subscription service through which an end user can listen to sound recordings only in the form of interactive streams and only from a non-portable device to which such streams are originally transmitted while the device has a live network connection." (37 CFR 385.13(a)(1).) Subminimum II is defined in 37 CFR 385.13(c).

116 A portable service is "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 CFR 385.13(a)(3).) Subminimum I is defined in 37 CFR 385.13(b).

- *A Mechanical-Only Floor*. For certain types of services operating under Subpart B, the mechanical royalty payment due after deduction of the performance rights payments is subject to a per-subscriber, mechanical-only floor. These floors vary by service, and free non-subscription/ad-supported services have no mechanical-only floor at all. There are no mechanical-only floors for any service operating under Subpart C.

76. Table 2 summarizes the baseline royalty rate and the associated minimums and floors for each type of subscription service under Subpart B, while Table 3 does so for Subpart C services.[117] For any given service, the smaller of the two applicable subminimum percentages reported in Tables 2 and 3 is used to calculate that component of the royalty formula when "the record company is the licensee,"[118] and the larger of the two percentages is used when it is not.[119] The percentage is generally applied to the service provider's payments to the record company.[120]

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117 Dollar amounts are per subscriber per month.

118 37 CFR 385.13(b)(1), 385.13(c)(1), 385.23(b)(1).

119 37 CFR 385.13(b)(2), 385.13(c)(2), 385.23(b)(2).

120 37 CFR 385.13(b), (c); 37 CFR 385.23(b). There is an exception for a music bundle containing a physical phonorecord when the music bundle is distributed by a record company for resale and the record company is the compulsory licensee; in this case, the percentages is applied to "the record company's total wholesale revenue from the music bundle." (37 CFR 385.23(b)(3).)

Table 2: Summary of Current Subpart B Licensing Rates

	(1) Standalone Non-Portable Subscription Streaming Only	(2) Standalone Non-Portable Subscription Mixed	(3) Standalone Portable Subscription Service	(4) Bundled Subscription Services	(5) Free Non-Subscription/Ad-Supported Services
Description	An interactive streaming subscription service accessed from a non-portable device	A subscription service allowing interactive streams or limited downloads but only from a non-portable device	A subscription service allowing interactive streams or limited downloads from a portable device	A subscription service made available to end users with one or more other products or services as part of a single transaction	A service offering free of any charge to the end use
Headline Rate	10.5%	10.5%	10.5%	10.5%	10.5%
Minimums	*Lesser of* $0.50 Subminimum II (18% or 22%)	*Lesser of* $0.50 Subminimum I (17.36% or 21%)	*Lesser of* $0.80 Subminimum I (17.36% or 21%)	N/A Subminimum I (17.36% or 21%)	N/A Subminimum II (18% or 22%)
Floor	$0.15	$0.30	$0.50	$0.25	N/A

Source: 37 CFR 385.12, 37 CFR 385.13.

Table 3: Summary of Current Subpart C Licensing Rates

	(1) Mixed Service Bundle	(2) Music Bundle	(3) Limited Offering	(4) Paid Locker Service	(5) Purchased Content Locker Service
Description	An offering of one or more music services (*e.g.*, downloads) together with one or more non-music services or products (*e.g.*, Internet service)	Offering of two or more of physical phonorecords, permanent downloads, or ringtones as part of one transaction	A subscription service offering either a limited catalog (*e.g.*, a particular genre) or streams of preprogrammed playlists	A service that provides online access to previously-purchased music	Services offered for free to purchasers of permanent downloads or physical phonorecords
Headline Rate	11.35%	11.35%	10.50%	12.00%	12.00%
Minimums	N/A Subminimum (17.36% or 21%)	N/A Subminimum (17.36% or 21%)	*Greater of* $0.18 Subminimum (17.36% or 21%)	*Greater of* $0.17 Subminimum (17.11% or 20.65%)	N/A Subminimum (18% or 22%)
Floor	N/A	N/A	N/A	N/A	N/A

Source: 37 CFR 385.23.

77. As noted above, because the 2012 Settlement was negotiated with all parties knowing that the alternative was a hearing governed by the 801(b)(1) standard, it is reasonable to assume that the prior agreement accounted for the four statutory factors. In the remaining two parts of this section, I examine whether the marketplace has changed in ways such that the terms of the settlement no longer achieve the four statutory objectives. As discussed below, I find that, with the exception of the mechanical royalty floor, the overall structure and rate levels remain economically sound.

C. RATE STRUCTURE

78. Even though the underlying settlement was negotiated fairly recently, it is still possible that there may be a need to adjust the rate structure and/or rate levels if either (i) industry conditions have changed markedly over time, or (ii) there is evidence that certain elements of the 2012 Settlement have led to problems achieving the statutory objectives.

79. First, consider whether there have been any changes in industry conditions that would warrant a change in the rate structure. As I will now discuss, the overall rate structure remains sound, but one modification would better attain the statutory objectives.

1. Royalties as a Percentage of Service Revenues Subject to a Per-Subscriber Minimum

80. In the 2012 Settlement, industry participants agreed to a rate structure that assessed total royalties for mechanical rights and public performance rights on a percentage-of-revenue basis subject to certain minimums and floors. My analysis has identified no changes in industry conditions since then that would require changing the

fundamental structure of the percentage-of-revenue prong or the minimums applied to the calculation of the available royalty pool in step one of the royalty calculation.

81. In *Web IV,* the Judges rejected calls to adopt a percentage-of-revenue structure for the statutory royalties determined in that proceeding. They did so based on the lack of record support, particularly in the light of the threat of industry disruption and the difficulty of measuring revenues in important instances.[121] The situation in the present proceeding is markedly different in critical respects. Perhaps the key difference is that there exists an industrywide settlement whose structure has been successfully adopted by industry participants. Hence, concerns regarding disruption run in the opposite direction (*i.e.,* they support having a percentage-of-revenue prong coupled with minimums).

82. There are, however, revenue measurement issues that arise in the present proceeding. Determining a licensee's applicable revenues is relatively straightforward when the licensee operates its interactive streaming service as a stand-alone, subscription-based, music-only business. However, when the streaming service is operated at least in part to generate other economic benefits for the parent company (*e.g.,* to foster broader and deeper relationships with customers that facilitate the profitable sales of other goods

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[121] See *Web IV Final Determination* at 26326:

> Relatedly, SoundExchange's rationale in support of a greater of structure that record companies should share in the upside if the Services monetize their models at a faster rate is wholly unconvincing. Absent proof that the per-play prong had been set too low, there is no justification for assuming that the record companies should share in that monetization through a percentage-of-revenue prong in the rate structure.

See also *id.,* citing NAB Ex. 4011 (Weil WRT) ("a percent-of-revenue rate would create uncertainty and controversy regarding the definition and allocation of revenue.").

and services) or incorporates non-music offerings to a significant degree, it can be difficult to accurately calculate the relevant music service revenue. Accounting difficulties also arise when a streaming service is sold as a part of a larger bundle of services, or when the service is advertising supported and the advertising is sold in bundles that include other outlets. Under these circumstances, any proposed allocation of revenues across services and goods is likely to be contentious.

83. Because of potential measurement problems, a royalty calculated purely as a percentage of revenues could be very difficult to apply. Inclusion of a per-subscriber minimum in the rate structure, as was done in the previous settlement, offers a solution to this problem. The minimum can be applied when the determination of applicable revenues is too difficult.[122] For example, it is my understanding that [redacted].

84. I also note that, in addition to raising measurement issues, I testified in *Web IV* that, because royalties assessed as a percentage of revenue would result in streaming services that were more successful at monetization paying more than services that were less successful, such royalties could inefficiently suppress innovation, run counter to the statutory objective of having the license fees reflect relative contributions to value, and

[122] A per-subscriber minimum would also protect publishers if a situation arose in which a streaming service was willing to "gamble" on future success by charging very low prices today in way that a publisher would not agree to do under conditions of effective competition.

have adverse implications for risk-sharing.[123] Although, as a matter of theory, these underlying principles hold for the licensing of musical compositions to interactive streaming services, there are significant differences between *Web IV* and the current proceeding. Most important, there exists evidence that interactive streaming services have continued to innovate under revenue-based royalties,[124] suggesting that the theoretical concern is not a practical concern in this instance, and that there is no need to abandon the current percentage-of-revenue structure to promote innovation.[125]

2. The Structure of Different Headline Rates and Minimums for Different Services should be Continued.

85. As describe above, both the headline royalty rates and the per-subscriber minimums vary across services depending on their characteristics (*e.g.*, portable or not; standalone or part of a music bundle). Economic analysis indicates that this structure should be maintained to facilitate continuing innovation, experimentation, and differentiation in means of making music accessible to consumers. Retaining this structure will have this effect by allowing royalty amounts to (partially) reflect

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123 Written Rebuttal Testimony of Michael L. Katz, February 23, 2015, amended April 21, 2015, § III.A.

124 See Section III.A above.

125 There are at least two other ways in which the situation here differs from that of *Web IV*. First, the proposed percentage rates are lower, which reduces the strength of any adverse effects. Second, interactive services rely on subscription-based revenue models to a greater extent than do noninteractive streaming services, which tend to rely on advertising-based revenue models. This difference is relevant because the price per-subscriber tends to be very close to a specific price point (*e.g.*, $10 per month), with the use of quality competition to attract more subscribers. Hence, a more successful service's costs would scale with the number of subscribers whether paying a royalty tied to revenues or a royalty tied to the number of subscribers. In contrast, it is my understanding that there are significant differences in revenues per subscriber earned by advertising-supported services.

differences in the underlying commercial economics of different types of services. For instance, consumers' willingness to pay for a service will tend to vary with the characteristics of that service (*e.g.*, consumers generally will be less willing to pay for a non-portable, limited service than for a portable, unlimited service).[126] A one-size-fits all royalty rate will not be able to reflect those differences, which could render certain types of services unprofitable even though—under an appropriate royalty scheme—such services would benefit music consumers, publishers, and streaming services by better meeting the needs of certain consumer segments.[127]

86. I am unaware of any change in industry conditions that would indicate a need to change this element of the rate structure, and maintaining the status quo structure will continue to facilitate the offering of a range of services, as well as the ongoing development of new and improved services through which to access music.

3. The Mechanical-Only Floors Should be Eliminated so that Minimums Apply only to the Total Royalties Paid by Streaming Services to Publishers.

87. There is one respect in which the industry has changed in ways that make a modification desirable: as the result of past and potential future fragmentation of the licensing of public performance rights, a separate floor on mechanical royalties no longer promotes the statutory objectives.

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126 Written Direct Testimony of Christopher Phillips, Pandora Media Inc., ¶¶ 16, 25.

127 Pandora's revised service offering will have multiple tiers of services that will qualify for the statutory license at issue in this proceeding, and those different tiers of service will have different price points. (Written Direct Testimony of Christopher Phillips, Pandora Media Inc., ¶¶ 17-32.)

88. As explained in Section III.C above, mechanical rights and public performance rights are perfect complements from the perspective of an interactive streaming service, and there is no economic rationale for setting the two rates separately from one another. Nevertheless, under the current framework, if public performance rights license fees increase sufficiently, then the total payment for public performance and mechanical rights will increase above the current headline rates.

89. To see the effect of increasing PRO payments, consider application of the 2012 Settlement to a hypothetical example in which Pandora offered a standalone portable service with a $10 per-month subscription fee. Applying the headline rate of 10.5 percent yields a provisional royalty of $1.05. Because $1.05 is greater than $0.80, and thus greater than the lesser of $0.80 and Subminimum I, the per-subscriber minimum is not binding in this hypothetical example. Therefore, the total royalty pool would be equal to $1.05.

- If Pandora's payments for performance rights equal 5 percent of revenue, then the mechanical royalty (before the floor) will be equal to the difference between the total royalty pool and the total performance rights license fees: 10.5 percent – 5 percent = 5.5 percent. Because 5.5 percent of $10 is $0.55, the mechanical-only floor of $0.50 has no impact. As a result, Pandora pays a total of 10.5 percent of revenue, or $1.05 per subscriber per month, for mechanical and performance rights.
- If Pandora's performance rights fees increase to 6 percent, then the result is a mechanical royalty (before the floor) of $0.45 (= 10.5 percent – 6 percent).

> Because this fee is below the floor, Pandora will pay the mechanical floor of $0.50 to the publishers for mechanical rights, in addition to paying 6 percent (or $0.60) to the publishers for performance rights. Combined, the all-in royalty increases to $1.10 per subscriber per month, or 11 percent of revenue, which is greater than the headline rate of 10.5 percent.

90. To understand why the mechanical-only floor is no longer warranted, it is critical to understand how the marketplace for performance rights licenses has changed and may continue to change. It is my understanding that, at the time of the 2012 Settlement, the PRO licensing marketplace was fairly stable. There were three U.S. PROs, two of which were subject to rate regulation under the terms of consent decrees with the DOJ. This stability had implications for the negotiations that led to the 2012 Settlement: a participant in those negotiations has testified that the mechanical-only floor, although agreed to as a concession to the publishers, was considered by the services to be a concession without economic impact because the services viewed it as highly unlikely that the mechanical-only floor would ever get triggered.[128]

91. After the 2012 Settlement was finalized, the performance rights marketplace began to change in unexpected ways. Among other things, a fourth U.S. PRO (GMR) emerged, creating another entity from which interactive streaming services have to secure

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[128] Written Direct Testimony of Adam Parness, Pandora Media Inc., ¶ 21 ("The music services would not have agreed to extend the floor fee provisions in Subpart B in the 2012 Settlement if we had thought that services charging subscribers $9.99 per month might pay an effective percentage of revenue higher than 10.5%"); telephonic interview with Adam Parness, Head of Publisher Licensing and Relations, Pandora Media, Inc., October 30, 2016.

a license, this one not subject to rate-court oversight.[129] In addition, music publishers began to threaten to withdraw from the PROs, thereby further increasing the number of entities from which streaming services might potentially have to secure licenses.[130] Finally, at least some PROs are undertaking efforts to provide only "fractional" licenses to the works in their repertories, thereby requiring streaming services to secure licenses from every co-owner of a work, whether affiliated with a PRO or not.[131] Collectively, these changes threatened to increase (and in some cases did increase) the numbers of entities with which interactive services had to negotiate to secure performance rights.

92. To understand the significance of this unanticipated development in the music licensing marketplace, it is important to recognize that, from an interactive streaming service's point-of-view, the public performance rights sold by the various PROs (or by

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129 About Global Music Rights, *available at* http://globalmusicrights.com/, site visited October 25, 2016.

130 *Report on Music Licensing* at 151-152:

> With the petitions pending [to modify the consent decrees to allow partial withdrawals from PROs], however, both Sony/ATV and UMPG—which together represent some 50% of the music publishing market—have made it clear that they may well choose to withdraw *all* rights from the PROs in the future. The specter of across-the-board withdrawal by the major publishers from ASCAP and BMI is concerning to many in the music sector. … The Office agrees that the full withdrawal of leading publishers from ASCAP and BMI would likely significantly disrupt the music market by fundamentally altering the licensing and payment process for the public performance of musical works without an established framework to replace it, at least in the short run. [Emphasis in original.]

131 The BMI rate court recently ruled that the BMI Consent Decree does not address the issue of fractional licensing and that, consequently, BMI is free to issue fractional-rights licenses if it chooses to do so. (*U.S. v. Broadcast Music, Inc.*, Opinion & Declaratory Judgment, 64 Civ. 3787 (LLS), September 16, 2016, at 6.). See also, Written Direct Testimony of Adam Parness, Pandora Media Inc., ¶ 20; Pandora / GMR license agreement, September 14, 2015, PAN_CRB115_00090960.

the larger publishers if they choose to license their portfolios themselves) are complements for one another. This complementarity arises for the same reasons that the mechanical rights licensed by large publishers are complements for one another from an interactive streaming service's perspective: these public performance rights are "must have." First, because an interactive streaming service is unable to offer an attractive product without access to the musical works covered by each of the PROs (and any publisher of sufficient size), it must secure licenses from all such entities. Second, because of a lack of transparency regarding which publishers or PROs control the rights to which works, it is costly and difficult for an interactive streaming service to protect itself from infringement suits unless it has coverage from all major performance rights licensing entities. This second problem is made even worse by the prospect of "fractional licenses."[132] Consequently, as Pandora's Head of Publisher Licensing and Relations describes, "a license from each of the four PROs is a 'must-have' for an interactive

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[132] The U.S. Department of Justice recently reached the following conclusions regarding the effects of fractional licensing in its review of the ASCAP and BMI consent decrees:

> Allowing fractional licensing would also impair the functioning of the market for public performance licensing and potentially reduce the playing of music. If ASCAP and BMI were permitted to offer fractional licenses, music users seeking to avoid potential infringement liability would need to meticulously track song ownership before playing music. As the experience of ASCAP and BMI themselves shows, this would be no easy task. … The difficulties, delays, and imperfections that are tolerated in the context of PRO payments would prove fatal to the businesses of music users, who need to resolve ownership questions *before* playing music to avoid infringement exposure. [Emphasis in original.]

(U.S. Department of Justice, "Statement of the Department of Justice on the Closing of the Antitrust Division's Review of the ASCAP and BMI Consent Decrees," August 4, 2016, at 13-14.)

streaming service."[133] Moreover, given that several of the larger publishers have repertories that are larger than those of the two smaller U.S. PROs, one would expect that a similar relationship would hold if the larger music publishers were to license performance rights for their works on a publisher-by-publisher basis. And, indeed, Pandora's Head of Publisher Licensing and Relations has testified that "[a]n on-demand service would not be viable in my view without a license to publicly perform the repertory of a major music publisher."[134]

93. By logic first identified by Antoine Cournot in 1838, firms offering complementary products tend to set higher prices than would even a monopoly seller of the same products. This phenomenon arises because a monopoly seller of two complementary products would internalize the fact that lowering the price of one product would increase sales of both products, whereas a seller that internalizes the benefits of only one of the products has less incentive to lower the price.[135] Thus, fragmentation and

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133 Written Direct Testimony of Adam Parness, Pandora Media Inc., ¶ 19:

> 19. In part because the PROs aggregate large numbers of commercially important rights owners into a single bundle, in part because music users lack real-time access to reliable ownership and PRO-affiliation information about the musical works they perform, and in part because the Copyright Act authorizes significant statutory damage awards for copyright infringement, a license from each of the four PROs is a "must-have" for an interactive streaming service.

134 Written Direct Testimony of Adam Parness, Pandora Media Inc., ¶ 17; see also Section III.C.1 above.

135 *Web IV Final Determination* at 26342:

> In the parlance of economics, the "must have" suppliers are complements, not substitutes, because buyers need each of them and cannot substitute one for another …. This concept is well known in economics. When two essential inputs must be used together, they are often referred to as

the associated necessity to separately negotiate with increasing numbers of complementary rightsholders will be a problem, at least until the rightsholders become so fragmented that no one is "must have."[136]

94. In sum, the various forms of (unanticipated) fragmentation in the performance rights marketplace threaten to increase performance rights license fees to the point that the mechanical-only floor is triggered. This triggering of the mechanical-only floor would have nothing to do with an increase in the intrinsic value of performance rights or mechanical rights. Rather, it would reflect the ability of copyright holders to exert market power over interactive services in the form of supra-competitive performance rights license fees. Allowing the publishers to benefit from such exertion of market power runs contrary to the 801(b)(1) objectives. Hence, the 2012 Settlement benchmark should be adjusted by eliminating the mechanical-only floor.

> "Cournot Complements." The evidence … shows that the repertoires of the major record companies are Cournot Complements for interactive services. [Quoting Shapiro WRT at 15.]

136 The U.S. Department of Justice described a version of the Cournot-complements problem (known as hold-out) that arises specifically from fractional licensing:

> allowing fractional licensing might also impede the licensed performance of many songs by incentivizing owners of fractional interests in songs to withhold their partial interests from the PROs. A user with a license from ASCAP or BMI would then be unable to play that song unless it acceded to the hold-out owner's demands, providing the hold-out owner substantial bargaining leverage to extract significant returns.

(U.S. Department of Justice, "Statement of the Department of Justice on the Closing of the Antitrust Division's Review of the ASCAP and BMI Consent Decrees," August 4, 2016, at 15.)

D. RATE LEVELS

95. As I now discuss, consideration of each of the four statutory objectives indicates that there have been no changes of significance since the 2012 Settlement was entered into that would justify an upward adjustment to the royalty rates. As noted above, music industry revenues are increasing, and evidence suggests that this increase is attributable to streaming innovation.

96. It is useful to consider each of the four objectives in turn:

- *Maximize Availability.* The availability of creative works to the public depends on both content creators (*i.e.*, songwriters and publishers) and content distributors (*e.g.*, streaming services) having sufficient financial incentives. As described in Section III.D above, the music publishing industry has stabilized and leading publishers have earned considerable profits, while interactive streaming services continue to be unprofitable. Hence, neither the current state of the industry, nor changes in industry conditions since the 2012 Settlement indicates that availability would be improved by increasing royalty rates. If anything, this factor counsels in favor of reducing rates to induce interactive streaming services, to invest, innovate, and enter to an even greater extent.

- *Afford Fair Return and Income.* The facts that the music industry has stabilized and publishers are currently more profitable than are interactive streaming services certainly does not suggest that royalty rates should be raised to promote fairness. Arguably, they suggest that rates should be lowered.

- *Reflect Relative Roles.* As described in Sections III.A and III.D above, interactive streaming has become an increasingly important form of music distribution, and there has been significant innovation by interactive music streaming services that is valuable to consumers and has helped stimulate music revenues and put a halt to the precipitous decline in music recording revenues that began in 2000. That innovation continues. Pandora's investment in its interactive service offerings has also been significant, including over $100 million on acquisitions (including the acquisition of certain intellectual property and technology assets from Rdio), product engineering and development costs, and incremental marketing costs.[137] Similarly, it has been reported that Spotify spent $159 million (€143.3 million) on research and development and $273.5 million (€246.5 million) on sales and marketing in 2015.[138] Music publishers spend relatively little to invest in the creation, marketing, and distribution of musical works,[139] while songwriters invest

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137 Written Direct Testimony of Michael Herring, Pandora Media Inc., ¶ 46.

138 Tim Ingham, "Spotify Revenues Topped $2BN Last Year as Losses Hit $194M," musicbusinessworldwide.com, May 23, 2016, *available at* http://www.musicbusinessworldwide.com/spotify-revenues-topped-2bn-last-year-as-losses-hit-194m/, site visited October 3, 2016.

139 Rebuttal Testimony of Charles Ciongoli, Before the COPYRIGHT ROYALTY BOARD, In the Matter of DIGITIAL PERFORMANCE RIGHT IN SOUND RECORDINGS AND EPHEMERAL RECORDINGS, Docket No. 2005-1 CRB DTRA, September 2006, at 54 ("Universal Publishing spends little or nothing to create, market, promote, manufacture and distribute copyrighted musical works."). [redacted] Travel and entertainment expenses are considered to be marketing-related by Universal's chief financial officer. (Rebuttal Testimony of Charles Ciongoli, Before the COPYRIGHT ROYALTY BOARD, In the Matter of DIGITIAL PERFORMANCE RIGHT IN SOUND RECORDINGS AND EPHEMERAL RECORDINGS, Docket No. 2005-1 CRB DTRA, September 2006, at 7-8.)

their time in the creation of musical works. All things considered, industry trends and conditions do not indicate that the statutory objective would be better achieved by raising rates.

- *Minimize Disruptive Impact.* This objective suggests that the status quo should be maintained. Although all parties in the music value chain face challenging economic conditions, under the current statutory rates there has been a strong supply of new, high-quality musical works and ongoing investment in the creation of innovative streaming services. Maintaining the current statutory rates would minimize any disruptive impact on the structure of the industries involved, as well as industry practices. Moreover, minimizing disruption can be expected to promote future investment. Rate stability facilitates the services' investment planning and promotes investment, all else equal. Hence, investment incentives are promoted by avoiding rate changes in the absence of strong reasons based on application of the other three factors.

Similarly, Warner-Chappell [redacted]

Publishers do not invest in traditional R&D. If one includes artists and repertoire (A&R) as a form of research and development, UMPG and Warner-Chappel [redacted]

V. EXAMINATION OF DIRECT DEALS CONFIRMS THAT EXTENDING THE CURRENT STRUCTURE AND RATES IS REASONABLE

97. I have examined two other candidate benchmarks: (a) direct deals between music publishers and Pandora, and (b) direct deals between music publishers and record companies. A virtue of these alternative benchmarks is that they are very recent. However, there are important differences in terms of the rights negotiated, so these benchmarks must be interpreted with care. As I now discuss, analysis of both of these alternative benchmarks supports the conclusion that adoption of a slightly modified version of the 2012 Settlement would promote achievement of the four 801(b)(1) factors going forward. Specifically, examination of these candidate benchmarks supports the conclusions that: (a) the overall structure remains reasonable but the fragmentation of the licensing of public performance rights has rendered the floors on mechanical royalties inappropriate, and (b) there are no sound grounds for increasing the headline (or "all-in") statutory rates.

A. DIRECT DEALS BETWEEN PANDORA AND MUSIC PUBLISHERS

98. Broadly speaking, Pandora has entered into two different types of license agreements with music publishers. First, Pandora has entered into agreements with some of the larger music publishers that specify the payments for all of the performance and mechanical rights that Pandora needs to offer interactive streaming, limited downloads, and its noninteractive streaming service.[140] Second, Pandora has entered into agreements with other publishers (including thousands of smaller publishers through Music Reports,

[140] As discussed below, Pandora's agreements with [redacted] are slightly more complicated, but their overall effect is similar.

Inc. ("MRI")) that specify the payments only for mechanical rights—the payments for performance rights are separately specified in agreements with the PROs.[141]

99. As I will now describe, collectively, these agreements support maintaining the structure of the 2012 Settlement with the one modification discussed above—elimination of the mechanical-only floor. Moreover, while one must be cautious about reading too much into any one rate in agreements that cover both interactive and noninteractive services, and involve tradeoffs among different rates and among rates and non-rate terms, Pandora's direct deals in no-way suggest that the statutory royalty rates should be raised from the levels of the 2012 Settlement.

100. A key feature of the terms in Pandora's agreements with some of the largest music publishers (covering the majority of publishing industry revenues) is that [redacted]

141 Written Direct Testimony of Michael Herring, Pandora Media Inc., ¶ 49; telephonic interview with Adam Parness, Head of Publisher Licensing and Relations, Pandora Media, Inc., October 30, 2016.

142 [redacted]

[143]

101. To see how this works, consider a standalone portable subscription service. The all-in royalty calculated in Step 1 of the statutory royalty calculation (Calculate the All-In Royalty for the Service) would be the greater of

[143] Telephonic interview with Steve Bene, General Counsel, Pandora Media Inc., October 25, 2016.

[redacted]

102. Working through this final formula, [redacted]

103. [redacted][146]

104. As noted above, Pandora has also entered into agreements with music publishers that specify payments only for mechanical rights—performance rights payments to these publishers are specified in Pandora's agreements with PROs. It is my understanding that, [redacted][147] Accordingly, Pandora's agreements with these publishers are consistent with the conclusion that the mechanical-only floor of the 2012 Settlement is no longer appropriate.

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144 Telephonic interview with Steve Bene, General Counsel, Pandora Media Inc., October 25, 2016; [redacted].

145 *Id.* [redacted] (Telephonic interview with Adam Parness, Head of Publisher Licensing and Relations, Pandora Media Inc., October 30, 2016.)

146 Pandora's agreement with [redacted]

147 Telephonic interview with Steve Bene, General Counsel, Pandora Media Inc., October 25, 2016.

105. Now, consider the implications that Pandora's direct deals with publishers have for determining reasonable rate levels. As with any negotiation that covers more than the precise rights that one is attempting to value, careful consideration must be given to the entirety of the relationship between the contracting parties. Specifically, Pandora's negotiated agreements contain rate and non-rate terms for three distinct tiers of service, including both subscription, interactive streaming and advertising-supported, noninteractive streaming. The simultaneous agreement with respect to multiple services can cloud the interpretation of any given number in a contract because the rates are negotiated as a package. That said, based on the information currently available to me, Pandora's agreements with music publishers certainly are consistent with the conclusion that the rates of the 2012 Settlement remain reasonable, and there is no evidence of which I am aware that suggests that these agreements, when properly evaluated, call for higher rates.

B. DIRECT DEALS BETWEEN MUSIC PUBLISHERS AND RECORD COMPANIES FOR MECHANICAL RIGHTS FOR PHYSICAL FORMATS AND PERMANENT DIGITAL DOWNLOADS

106. Music publishers have recently agreed to royalty rates for phonorecords and permanent digital downloads. As I now discuss, these agreed to rates are lower than the corresponding statutory royalty rates currently in effect for interactive streaming. As a result, this benchmark suggests that, if anything, the current headline rate in the 2012 Settlement is too high.

107. In June 2016, the NMPA, NSAI, the Church Music Publishers Association ("CMPA"), Songwriters of North America ("SONA") and the Harry Fox Agency

("HFA") reached a partial settlement with Universal Music Group ("UMG") and Warner Music Group ("WMG"), two of the three major record labels.[148] In October 2016, Sony Music Entertainment ("SME"), the third of the major record labels, also agreed to the settlement.[149] Under the terms of the proposed settlement, the mechanical royalties for physical phonorecords (*e.g.*, CDs, cassettes, and records) and permanent digital downloads would remain unchanged from the current rate of either $0.091 per song or $0.0175 cents per minute of playing time or fraction thereof, whichever amount is larger.[150]

108. This rate can be compared to the status quo for interactive services, expressed on either a percentage-of-revenue-basis or equivalent-plays basis.

109. I first note that, expressed as a share of an average retail price of approximately one dollar per track for a digital download, the $0.091 figure corresponds to a percentage royalty rate of just 9.2 percent, which is less than 10.5 percent.[151] As presented in Table

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148 81 FR 48371, July 25, 2016.

149 In the Matter of Determination of Rates and Terms for Making and Distributing Phonorecords (Phonorecords III), Docket No. 16-CRB-0003-PR (2018-2022), Motion to Adopt Settlement Industry-Wide, October 28, 2016.

150 See 81 FR 48371, July 25, 2016 ("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, with one minor conforming update…'."). See also 37 CFR 385.3(a). ("For every physical phonorecord and permanent digital download made and distributed, the royalty rate payable for each work embodied in such phonorecord shall be either 9.1 cents or 1.75 cents per minute of playing time or fraction thereof, whichever amount is larger.").

151 If a song is longer than 5.2 minutes (that is, $0.091/$0.0175), a royalty over $0.091 is applicable. (*Id.*) The vast majority of songs are less than 5.2 minutes long. One report suggests that the average length of songs in 2008 was 3.91 minutes with a standard deviation of 0.76 minutes. (Rhett Allain, "Why are Songs on the Radio About the Same Length?" *Wired*, July 11, 2014, *available at* https://www.wired.com/2014/07/why-are-

4, there has been an increase in the average price of single digital downloads, from $0.99 in 2006 to $1.20 in 2016, and a corresponding decline in the current statutory mechanical rate as a share of the price, from 9.2 percent to 7.6 percent.[152]

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songs-on-the-radio-about-the-same-length/, site visited October 27, 2016.) Assuming song length is approximately normally distributed, then approximately 97.5 percent of songs are less than 5.4 minutes long (close to the break-even value length of 5.2 minutes). Thus, the value $0.091 that I use in the calculations presented in this section is very close to the actual average royalty payment per song.

Data regarding the length of the top 200 streamed songs on Spotify in the U.S. during the week of October 20, 2016, also confirms that my use of $0.091 is reasonable. In particular, 190 out of the 200 songs (or 95 percent) were less than 5.2 minutes long, with a mean song length of 3.68 minutes and standard deviation of 0.72 minutes. (Spotify Top 200, *available at* https://spotifycharts.com/regional/us/weekly/latest, site visited October 27, 2016.) Weighted by the share of streams that each song accounted for during the period shows that 97.4 percent of the streamed songs were less than 5.2 minutes in length. And the stream-weighted average royalty payment, accounting for the length of song, is $0.0912, virtually equal to the $0.091 per-track royalty that I use in my analysis.

Use of a more comprehensive data source might generate slightly different results, but would be highly unlikely to alter the finding that the permanent digital download royalty rates are lower than the corresponding statutory royalty rates currently in effect for interactive streaming. For instance, even if only 80 percent of streamed songs were less than 5.2 minutes long, and the remaining 20 percent had lengths uniformly distributed between 5.20 and 8 minutes, the share-weighted average royalty payment per song would be $0.096. Using this amount, instead of $0.091, would not change the substantive conclusions discussed in the text.

[152] Price per track is calculated as the average revenue per track for single digital downloads.

Table 4: The Current Statutory Rate As a Share of Price Per Digital Track

	Revenue (in millions)	Tracks (in millions)	Price Per Track	Royalty Per Track	Royalty as a Share of Price
2006	$581	586	$0.99	$0.091	9.2%
2007	$811	819	$0.99	$0.091	9.2%
2008	$1,032	1,043	$0.99	$0.091	9.2%
2009	$1,172	1,124	$1.04	$0.091	8.7%
2010	$1,336	1,177	$1.14	$0.091	8.0%
2011	$1,522	1,332	$1.14	$0.091	8.0%
2012	$1,624	1,392	$1.17	$0.091	7.8%
2013	$1,568	1,328	$1.18	$0.091	7.7%
2014	$1,408	1,199	$1.17	$0.091	7.8%
2015	$1,227	1,021	$1.20	$0.091	7.6%
2016 1H	$520	432	$1.20	$0.091	7.6%

Source: RIAA U.S. Sales Database.

110. Next, I consider the comparison on a royalty-per-equivalent-play basis, which converts unit sales of physical formats and permanent digital downloads into equivalent numbers of streams by applying a conversion ratio of streams per track. Nielsen uses a ratio of 150 streams per track for purposes of compiling the Billboard lists.[153] Other industry participants also use a ratio of 150 streams per track. For example, RIAA uses it to determine whether an album has attained platinum or gold status.[154] I note that a recent

[153] Specifically, starting in December 2014, Nielsen began calculating "album equivalents" based on the assumption that 10 tracks are equivalent to one album sale and 1,500 streams are equivalent to one album sale.

Billboard staff indicated that these ratios are based on "accepted industry benchmarks for digital and streaming data." (See "Billboard 200 Makeover: Album Chart to Incorporate Streams & Track Sales," *Billboard.com*, November 19, 2014, *available at* http://www.billboard.com/articles/columns/chart-beat/6320099/billboard-200-makeover-streams-digital-tracks, site visited September 7, 2016.)

[154] RIAA News Release, "RIAA Debuts Album Award with Streams," February 1, 2016, *available at* http://www.riaa.com/riaa-debuts-album-award-streams/, site visited September 8, 2016:

academic study by Dr. Aguiar and Professor Waldfogel suggests a conversion rate of approximately 137 streams per song based on a displacement study using data from Spotify, which is in line with the 150-to-1 conversion that I consider here.[155]

111. Table 5 shows the implied mechanical rate based on the permanent digital download rate as a function of hypothetical subscription services with a subscriber fee of $10 per subscriber per month. The average streams per user per month for Spotify's

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> After a comprehensive analysis of a variety of factors – including streaming and download consumption patterns and historical impact on the program – and also consultation with a myriad of industry colleagues, the RIAA set the new Album Award formula of 1,500 on-demand audio and/or video song streams = 10 track sales = 1 album sale. Also effective today, RIAA's Digital Single Award ratio will be updated from 100 on-demand streams = 1 download to 150 on-demand streams = 1 download to reflect the enormous growth of streaming consumption in the two plus years since that ratio was set. Just as RIAA announced when setting the initial formula in 2013, our analysis and the determination of a formula is based on comparative consumption patterns, not marketplace value.

In its earlier 2013 explanation of the conversion (100-to-1), the RIAA stated that the conversion they had established:

> was the culmination of a year-long project by the RIAA, led by [Cary] Sherman, and a variety of label marketing, business and data analysis executives, in which the RIAA examined comprehensive information comparing data on digital downloads to similar data on on-demand audio and video streams. The RIAA also closely consulted with NARM/digitalmusic.org, many digital music services, artist managers and industry leaders. It is important to note the new certification approach, including the formula of 100 streams being equivalent to one download, is an approximate barometer of comparative consumer activity; the financial value of streams and downloads were not factored into the equation.

(RIAA News Release, "RIAA Adds Digital Streams to Historic Gold & Platinum Awards," May 9, 2013, *available at* http://www.riaa.com/riaa-adds-digital-streams-to-historic-gold-platinum-awards/, site visited September 8, 2016.)

155 Luis Aguiar and Joel Waldfogel, "Streaming Reaches Flood Stage: Does Spotify Stimulate or Depress Music Sales?" Institute for Prospective Technological Studies Digital Economy Working Paper 2015/05, European Commission JRC Technical Reports, 2016.

premium ($10 per month) service is approximately [redacted].[156] Based on this usage rate and a $10 per subscriber per month subscription fee, the implied mechanical royalty revenue would be [redacted], substantially below the status quo.

Table 5: All-in Royalty Rate based on Permanent Digital Downloads Royalty and Conversion Ratio of 150-to-1

Streams per Subscriber per Month	Royalty per Sub per Month	Royalty as a Share of $10 Subscription
100	$0.061	0.61%
200	$0.121	1.21%
300	$0.182	1.82%
400	$0.243	2.43%
500	$0.303	3.03%
600	$0.364	3.64%
700	$0.425	4.25%
800	$0.485	4.85%
900	$0.546	5.46%
1000	$0.607	6.07%

112. The proposed settlement between music publishers and UMG, WMG, and SME further confirms the validity of maintaining the statutory royalty rates currently in effect. In particular, the fact that the publishers agreed to maintain the status quo rates indicates that neither new information nor changes in marketplace conditions warranted a change to the status quo. Indeed, after accounting for inflation, the publishers actually agreed to the equivalent of a lower percentage royalty rate.

156 Spotify streaming data [redacted]

113. In summary, examination of the agreements that music publishers have recently reached regarding royalty rates for phonorecords and permanent digital downloads supports the conclusion that royalty rates for interactive music streaming services should not be raised. Indeed, this examination suggests that these royalty rates should be lowered.

VI. CONCLUSION

114. Drawing on my training and experience as an economist, my examination of the public records of earlier proceedings, my analysis of the relevant industries, and my examination of the evidence produced in the present proceeding, I conclude that the royalty structure and rates of the 2012 Settlement—which underlies the statutory royalties currently in effect—provide an economically-sound basis on which to set the statutory rates going forward, and that only minimal adjustments to this benchmark are required to determine reasonable rates: namely, removing the mechanical-only royalty floors.

PUBLIC VERSION

Before the
UNITED STATES COPYRIGHT ROYALTY JUDGES
The 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)

DECLARATION OF MICHAEL L. KATZ

I, Michael L. Katz, 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 31st day of October, 2016 in London, United Kingdom.

Michael L. Katz

APPENDIX A

PUBLIC VERSION
October 2016

CURRICULUM VITAE OF MICHAEL L. KATZ

Haas School of Business
University of California, Berkeley
Berkeley, CA 94720

katz@haas.berkeley.edu

EMPLOYMENT

July 1987 to present
Sarin Chair in Strategy and Leadership
Professor of Economics
University of California, Berkeley
Joint appointment in the Economics Department and Haas School of Business. Past service as member of Academic Senate Committee on Budget and Interdepartmental Relations, Director of the Institute for Business Innovation, Associate Dean for Academic Affairs, chair of Economic Analysis and Policy Group, chair of Strategic Planning Committee, and chair of Policy & Planning Committee. Research areas include competition and public policy in network and system industries, innovation, and pricing. Principal teaching in areas of business strategy and microeconomics.

July 2007 to June 2009
Harvey Golub Professor of Business Leadership
New York University
Appointed to Department of Management and Organizations, Stern School of Business. Research areas included healthcare competition. Taught business strategy courses.

September 2001 to January 2003
Deputy Assistant Attorney General for Economic Analysis
U.S. Department of Justice
Oversaw economic analysis in support of all Antitrust Division enforcement activities. Reported directly to the Assistant Attorney General for Antitrust. Managed unit of approximately 55 professional economists. Undertook multidimensional effort to integrate economists more fully into investigation, decision, and litigation processes.

January 1994 to January 1996
Chief Economist
Federal Communications Commission
Responsible for integrating economics into all aspects of Commission policy making. Reported directly to the Chairman of the Commission. Formulated and implemented regulatory policies for all industries under Commission jurisdiction. Managed teams of lawyers and economists to design regulatory policies and procedures.

July 1981 to June 1987
Assistant Professor of Economics
Princeton University
Conducted research on sophisticated pricing, standards development, cooperative R&D, and intellectual property licensing. Served as Assistant Director of Graduate Studies. Taught courses in microeconomics, industrial organization, and antitrust and regulation.

EDUCATION

D.Phil. 1982
Oxford University
Doctorate in Economics. Thesis on market segmentation and sophisticated pricing.

A.B. *summa cum laude* 1978
Harvard University
As an undergraduate, completed courses and general examinations for Economics doctorate.

SERVICE

Coeditor, *Journal of Economics & Management Strategy*, 1991-2001 and 2003-present.

Editorial Board member, *Information Economics and Policy*, 2004-present.

Editorial Board member, *Journal of Industrial Economics*, 2007-2013.

Editorial Board member, *California Management Review*, 1998-2000 and 2003-2007. Editor 2000-2001.

Board Member, Berkeley Executive Education, February 2013-present.

U.S. Advisory Board member, NTT DOCOMO, Inc., October 2011-April 2013.

Spectrum Policy Invited Expert, President's Council of Advisors on Science and Technology, September 2011-May 2012.

Member, Committee on Wireless Technology Prospects and Policy Options, The National Academies, 2003-2011.

Deputy Marriage Commissioner, City and Country of San Francisco, October 2, 2010.

Member, Computer Science and Telecommunications Board, The National Academies, 2000-2001 and 2004-2008.

Member, Spectrum Policy Working Group, Digital Age Communication Act Project, Progress & Freedom Foundation, January 2005-March 2006.

Member, Consumer Energy Council of America, Universal Service Forum, 2000-2001.

AWARDS AND HONORS

Chairman's Special Achievement Award, Federal Communications Commission, 1996.

The Earl F. Cheit Outstanding Teaching Award, University of California, Berkeley, 1992-1993 and 1988-1989. Honorable Mention, 1999-2000 and 1996-1997.

Alfred P. Sloan Research Fellow, 1985-1988.

National Science Foundation Graduate Fellow, 1978-1981.

John H. Williams Prize (awarded to the Harvard College student graduating in Economics with the best overall record), 1978.

GRANTS

Principal Investigator, Nokia Corporation grant on business-model innovation, 2009-2012.

Principal Investigator, Microsoft Corporation grant, "Research on Competition Policy for Intellectual Property," joint with Richard J. Gilbert, 2006

Recipient, Berkeley Committee on Research grant, 2004-2005, 1996-1997.

Recipient, Berkeley Program in Finance Research grant, 1990.

Researcher, Pew Foundation grant: "Integrating Economics and National Security," 1987-1990.

Principal Investigator, National Science Foundation grants:

"A More Complete View of Incomplete Contracts," joint with Benjamin E. Hermalin, 1991-1993.

"Game-Playing Agents and the Use of Contracts as Precommitments," 1988-1989.

"The Analysis of Intermediate Goods Markets: Self-Supply and Demand Interdependence," 1985-1986.

"Imperfectly Competitive Models of Screening and Product Compatibility," 1983-1984.

"Screening and Imperfect Competition Among Multiproduct Firms," 1982.

PUBLICATIONS

"Multiplant Monopoly in a Spatial Market," *Bell Journal of Economics* Vol. 11, No. 2 (Autumn 1980).

"Non-uniform Pricing, Output and Welfare Under Monopoly," *Review of Economic Studies* Vol. L, No. 160 (January 1983).

"A General Analysis of the Averch-Johnson Effect," *Economic Letters* Vol. 11, No. 3 (1983).

"The Socialization of Commodities," co-authored with L.S. Wilson, *Journal of Public Economics* Vol. 20, No. 3 (April 1983).

"The Case for Freeing AT&T," co-authored with Robert D. Willig, *Regulation* (July/August 1983) and "Reply to Tobin and Wohlstetter," *Regulation* (November/December 1983).

"Plea Bargaining and Social Welfare," co-authored with Gene M. Grossman, *American Economic Review* Vol. 73, No. 4 (September 1983).

"Firm-Specific Differentiation and Competition Among Multiproduct Firms," *Journal of Business* Vol. 57, No. 1, Part 2 (January 1984).

PUBLICATIONS continued

"Nonuniform Pricing with Unobservable Numbers of Purchases," *Review of Economic Studies* Vol. LI (July 1984).

"Price Discrimination and Monopolistic Competition," *Econometrica* Vol. 52, No. 6 (November 1984).

"Tax Analysis in an Oligopoly Model," co-authored with Harvey S. Rosen, *Public Finance Quarterly* Vol. 13, No. 1 (January 1985). Reprinted in *The Distribution of Tax Burdens,* D. Fullerton and G.E. Metcalf (eds.), Camberley: Edward Elgar Publishing Ltd. (2003), and *The Economics of Taxation,* J. Alm (ed.), Cheltenham: Edward Elgar Publishing Ltd. (2011) .

"Network Externalities, Competition, and Compatibility," co-authored with Carl Shapiro, *American Economic Review* Vol. 75, No. 3 (June 1985). Reprinted in *Antitrust and Competition Policy,* A.N. Kleit (ed.), Camberley: Edward Elgar Publishing Ltd. (2005).

"On the Licensing of Innovations," co-authored with Carl Shapiro, *Rand Journal of Economics* Vol. 16, No. 4 (Winter 1985).

"Consumer Shopping Behavior in the Retail Coffee Market," co-authored with Carl Shapiro, in *Empirical Approaches to Consumer Protection* (1986).

"Technology Adoption in the Presence of Network Externalities," co-authored with Carl Shapiro, *Journal of Political Economy* Vol. 94, No. 4 (August 1986).

"How to License Intangible Property," co-authored with Carl Shapiro, *Quarterly Journal of Economics* Vol. CI (August 1986).

"An Analysis of Cooperative Research and Development," *Rand Journal of Economics* Vol. 17, No. 4 (Winter 1986).

"Product Compatibility Choice in a Market with Technological Progress," co-authored with Carl Shapiro, *Oxford Economic Papers: Special Issue on Industrial Organization* (November 1986).

"The Welfare Effects of Third-Degree Price Discrimination in Intermediate Goods Markets," *American Economic Review* Vol. 77, No. 2 (March 1987).

"R&D Rivalry with Licensing or Imitation," co-authored with Carl Shapiro, *American Economic Review* Vol. 77, No. 3 (June 1987).

"Pricing Publicly Provided Goods and Services," in *The Theory of Taxation for Developing Countries,* D.M. Newbery and N.H. Stern (eds.), Washington, D.C.: World Bank (1987).

PUBLICATIONS continued

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"R&D Cooperation and Competition," co-authored with Janusz A. Ordover, *Brookings Papers on Economic Activity: Microeconomics* (1990).

Intermediate Microeconomics, co-authored with Harvey S. Rosen, Burr Ridge, IL: Richard D. Irwin (1st ed. 1991, 2nd ed. 1994, 3rd ed. 1997). Translated into Italian and Russian.

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"Product Introduction with Network Externalities," co-authored with Carl Shapiro, *Journal of Industrial Economics* Vol. XL, No. 1 (March 1992).

"Defense Procurement with Unverifiable Performance," co-authored with Benjamin E. Hermalin, in *Incentives in Procurement Contracting*, J. Leitzel and J. Tirole (eds.), Boulder, Colorado: Westview Press (1993).

"Judicial Modification of Contracts Between Sophisticated Parties: A More Complete View of Incomplete Contracts and Their Breach," co-authored with Benjamin E. Hermalin, *Journal of Law, Economics, & Organization* Vol. 9, No. 2 (1993).

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"Ongoing Reform of U.S. Telecommunications Policy," *European Economic Review* Vol. 41 (1997).

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"Observable Contracts as Commitments: Interdependent Contracts and Moral Hazard," *Journal of Economics & Management Strategy* Vol. 15, No. 3, (Fall 2006).

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"The Economics of Product-Line Restrictions with an Application to the Network Neutrality Debate," co-authored with Benjamin E. Hermalin, *Information Economics and Policy*, Vol. 19, No. 2 (June 2007).

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"Information and the Hold-Up Problem," co-authored with Benjamin E. Hermalin, *RAND Journal of Economics*, Vol. 40, No. 3 (Autumn 2009).

"A Simple Test for Distinguishing between Internal Reference Price Theories," co-authored with Tülin Erdem and Baohong Sun, *Quantitative Marketing and Economics*, Vol. 8, No. 3 (September 2010).

"Insurance, Consumer Choice, and the Equilibrium Price and Quality of Hospital Care," *The B.E. Journal of Economic Analysis & Policy*: Vol. 11, Issue 2 (Advances) (January 2011).

PUBLICATIONS continued

"Customer or Complementor? Intercarrier Compensation with Two-Sided Benefits," co-authored with Benjamin E. Hermalin, *Journal of Economics & Management Strategy,* Vol. 20, No. 2 (Summer 2011).

"Efficient Division of Profits from Complementary Innovations," co-authored with Richard J. Gilbert, *International Journal of Industrial Organization,* Vol. 29, No. 4 (July 2011).

"Increasing Connectedness and Consumer Payments: An Overview," in *Consumer Payment Innovation in the Connected Age.* Kansas City: Kansas City Federal Reserve (2012).

"Product Differentiation through Exclusivity: Is there a One-Market-Power-Rent Theorem?" co-authored with Benjamin E. Hermalin, *Journal of Economics & Management Strategy,* Vol. 22, No. 1 (Spring 2013).

"Provider Competition and Healthcare Quality: More Bang for the Buck?" *International Journal of Industrial Organization,* Vol. 31, No. 5 (September 2013).

"How Can Competition Policy and Competition-Policy Economics Contribute to Solving the Healthcare Crisis?" in *The Analysis of Competition Policy and Sector Regulation,* M. Peitz and Y. Spiegel (ed.s), Singapore: World Scientific (2014).

"Competitive Consequences of Technological Change and the Telecommunications Act of 1996," contribution to "Reflecting on Twenty Years under the Telecommunications Act of 1996 (A Collection of Essays on Implementation)," *Federal Communications Law Journal,* Vol. 68, Issue 1 (February 2016).

"Weak versus Strong Net Neutrality: Correction and Clarification," co-authored with Joshua Gans, *Journal or Regulatory Economics,* Vol. 50, Issue 1 (August 2016).

"Wither Net Neutrality?" *Review of Industrial Organization,* forthcoming.

"Introduction" co-authored with Carl Shapiro, in *Standing on the Shoulders of Giants: Colleagues Remember Suzanne Scotchmer's Contributions to Economics,* Stephen M. Maurer (ed.), Cambridge: Cambridge, forthcoming.

"What's So Special about Two-Sided Markets?" co-authored with Benjamin E. Hermalin, in *Economic Theory and Public Policies: Joseph Stiglitz and the Teaching of Economics,* New York: Columbia University Press, forthcoming.

APPENDIX B

Appendix B: Testimony in the Last Four Years

Before the United States District Court Eastern District of New York. United States of America, et al. v. American Express Co., et al. 10-CV-04496 (NGG) (RER). Deposition August 28-29, 2013. Oral testimony July 29-30, 2014, and August 18, 2014.

Before the World Trade Organization. Australia — Certain Measures Concerning Trademarks and Other Plain Packaging Requirements Applicable to Tobacco Products and Packaging. Dispute DS434. Written Reports March 9, 2015, and October 26, 2015.

Before the Copyright Royalty Judges, Library of Congress. Determination of Royalty Rates and Terms for Ephemeral Recording and Digital Performance of Sound Recordings (Web IV). 14-CRB-0001-WR (2016-2020). Deposition April 1, 2015. Written testimony October 7, 2014, and February 23, 2015 (amended April 21, 2015). Oral testimony May 11, 2015, and May 26, 2015.

Before the California Public Utilities Commission. Joint Application of Charter Communications, Inc.; Charter Fiberlink CA-CCO, LLC (U6878C); Time Warner Cable Inc.; Time Warner Cable Information Services (California), LLC (U6874C); Advance/Newhouse Partnership; Bright House Networks, LLC; and Bright House Networks Information Services (California), LLC (U6955C) Pursuant to California Public Utilities Code Section 854 for Expedited Approval of the Transfer of Control of both Time Warner Cable Information Services (California), LLC (U6874C) and Bright House Networks Information Services (California), LLC (U6955C) to Charter Communications, Inc., and for Expedited Approval of a pro forma transfer of control of Charter Fiberlink CA-CCO, LLC (U6878C). Application 15-07-009. Written testimony January 25, 2016.

Before the California Public Utilities Commission. Order Instituting Investigation into the State of Competition Among Telecommunications Providers in California, and to Consider and Resolve Questions raised in the Limited Rehearing of Decision 08-09-042. Investigation 15-11-007 (Filed November 5, 2015). Written testimony March 15, 2016, and June 1, 2016. Oral testimony July 20, 2016.

Before the United States District Court District of Arizona. SolarCity Corporation v. Salt River Project Agricultural Improvement and Power District 2:15-CV-00374-DLR. Deposition August 31, 2016.

APPENDIX C

Appendix C: List of Materials Considered

	Date	Bates Number(s)
Produced Documents		
Music Publishing Rights Agreement Between Amazon and Universal Music Corp	06/2016	AMZN00001617-1629
Amazon 10-K for the Fiscal Year Ended December 31, 2015	01/2016	AMZN00002165-2257
Subscription Service/Live Radio US Term Sheet between Apple and Sony/ATV Music Publishing	06/2015	APL-PHONO_00005380-5386
Subscription Service/Live Radio US Term Sheet between Apple and Universal Music Publishing Group	06/2015	APL-PHONO_00005388-5398
Subscription Service/Live Radio US Term Sheet between Apple and Warner/Chappell Music	06/2015	APL-PHONO_00005399-5404
Grace Kramme, Music Discovery Deep Dive, *Apple*, iTunes Marketing, June 2012	06/2012	APL-PHONO_00005405-5495
MiDiA Research, "State of the Streaming Nation: How Streaming And Smartphones Disrupt Radio Audiences," MiDiA Consumer Surveys, January 2016	01/2016	APL-PHONO_00005652-5693
WW iTunes Finance, Allocated P&L US 2011-2016	--	APL-PHONO_00006828
Ipsos OTX MediaCT, "Keeping Pace with Digital Music Behavior," *Music Discovery Report*, 2012	--	APL-PHONO_00006909-6946
Apple Inc iTunes - Albums and Songs Downloads, 2011-2016	--	APL-PHONO_00008614-8619
Apple Inc Apple Music- Publisher Royalty Bearing Plays US Only by Calendar Quarter 2015-2016	--	APL-PHONO_00008620-8623
Subscription Service/Live Radio US Term Sheet between Apple and BMG Rights Management	06/2015	BMG00000093-95
Music Publishing Rights Agreement Between CUR Media and BMG Rights Management	01/2016	BMG00000120-132
License Agreement Between Pandora and BMG Rights Management	06/2016	BMG00000272-285
Music Publishing Rights Agreement Between Slacker and BMG Rights Management	08/2014	BMG00000323-333
BMG 2012 US Financials, Publishing NPS and Overhead	--	BMG00000563
BMG 2013 US Financials, Publishing NPS and Overhead	--	BMG00000564
BMG 2014 US Financials, Publishing NPS and Overhead	--	BMG00000565
BMG 2015 US Financials, Publishing NPS and Overhead	--	BMG00000566
License Agreement Between Pandora and Downtown Music Publishing	12/2015	DR00000001-13
Publishing License Agreement Between Google and Downtown Music Publishing	03/2014	DR00000059-77
Neal Mohan, "Why Ads Point to A Bright Future for the Music Industry," Draft	--	GOOG-PHONOIII-00000003-16
Fred Von Lohmann, "Report: How Google fights piracy," *Updates on Technology Policy Issues, Google*, September 10, 2013	09/2013	GOOG-PHONOIII-00000578-581
Continued Progress on Fighting Piracy, *Updates on Technology Policy Issues, Google*, October 17, 2014	10/2014	GOOG-PHONOIII-00000608-611
How Google Fights Piracy, *Google*, September 2013	09/2013	GOOG-PHONOIII-00000612-637
Amended Content License Agreement Between Google and Universal Music Publishing Group	01/2013	GOOG-PHONOIII-00000647-689
Publishing License Agreement Amendment Between Google and DCFC	10/2012	GOOG-PHONOIII-00000827-836
Amendment No 1 to Publishing License Agreement Between Google and Downtown Music Publishing Group	02/2016	GOOG-PHONOIII-00000839-841
Music Performance Agreement for Youtube Between BMI and Google	12/2013	GOOG-PHONOIII-00000904-926
Performance License Agreement for Youtube Between Google and SESAC	06/2016	GOOG-PHONOIII-00001043-1068
Publishing License Agreement Between Google and Doors Music Company	09/2014	GOOG-PHONOIII-00001137-1155
Google Play Music Research Overview	--	GOOG-PHONOIII-00002814-2852
Google Play Music User Counts	--	GOOG-PHONOIII-00003164
Google CRB Pull (Financials)	--	GOOG-PHONOIII-00003186
Youtube Red User Counts	--	GOOG-PHONOIII-00003187
Google Play Music Subscriber Forecasts	--	GOOG-PHONOIII-00003191
Subscription Service/Live Radio US Term Sheet between Apple and Kobalt Music Publishing	06/2015	KOBALT00000011-14
License Agreement Between Pandora and Kobalt Music Publishing America	12/2015	KOBALT00000037-54
Music Publishing Rights Agreement Between SoundCloud and Kobalt Music Publishing America	03/2016	KOBALT00000055-75
John Villasenor, "Digital Music Broadcast Royalties: The Case for a Level Playing Field," *Issues in Technology Innovation*, No 19, *Brookings Institute*, August 2012	08/2012	NMPA00000069-96
2011-2015 Music Publishing Income Chart	--	NMPA00000817-821
2015 NMPA Publisher Revenues by Subcategories with Forecasts	--	NMPA00000822
2015 Revenue Calculations	--	NMPA00000826-27
2011-2014 Mechanical Revenue Breakdown	--	NMPA00000835
2013-2014 Publishing Revenue Charts	--	NMPA00000843-845
2013 Revenue Calculations	--	NMPA00000849-50
Copyright and the Music Marketplace, A Report of the Register of Copyrights, *United States Copyright Office*, February 2015 ("Report on Music Licensing")	02/2015	NMPA00001047-1291
Patrick D Smith, "Economic Observation on Direct Licensing of Digital Music Performance Rights in Europe," *RBB Economics*, February 19, 2016	02/2016	NMPA00001380-1409
2014-2015 Top 25 Publisher Actual Revenue Comparison (Including Performance and Mechanical Royalties)	--	NMPA00001422-23
NMPA 2013-2015 Industry Revenue Comparisons and Major/Indie Revenue Comparisons	--	NMPA00001424
Performance License Agreement Between Pandora and GMR	09/2015	PAN CRB115 00090960-90966
Music Publishing Rights Agreement Between Slacker and EMI Entertainment	08/2014	SONY-ATV00000045-58
Music Publishing Rights Agreement Between Amazon and Sony/ATV Music Publishing	05/2014	SONY-ATV00000196-204
Music Publishing Rights Agreement Between CUR Media and Sony/ATV	01/2016	SONY-ATV00000309-325
License Agreement Between Pandora and Sony/ATV	11/2015	SONY-ATV00001764-1780
Binding Term Sheet Between Sony/ATV Music Publishing, EMI Entertainment World, and Youtube	04/2007	SONY-ATV00001820-1839
Amendment No 1 to Binding Term Sheet Between SoundCloud and EMI Entertainment, Sony/ATV	03/2016	SONY-ATV00001952-1956
Sony EMI US and Worldwide Financials, 2013-2016	--	SONY-ATV00003700
Sony/ATV US and Worldwide Financials, 2013-2016	--	SONY-ATV00003701
Sony/ATV Music Publishing US Business Meeting, June 2, 2016	06/2016	SONY-ATV00005143-5170
Performance License Agreement Between Spotify and BMI	12/2015	SPOTCRB0000003-17
Chris Price, "Listomania: Winners & Losers in the Battle for Spotify Playlist Supremacy," *New Slang Media*, December 2015	12/2015	SPOTCRB0000030-51

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	Date	Bates Number(s)
The Internet Radio Revolution Has Arrived: Platforms, Services, Audiences and Advertisers Reinvent Audio, *BIA/Kelsey*, April 2014	04/2014	SPOTCRB0000198-227
Glenn Peoples, "What Happens When Spotify Gets Behind an Artist? A Case Study of Hozier and Major Lazer," *Billboard*, August 7, 2015	08/2015	SPOTCRB0000360-364
CSI@Spotify, Streaming Services Competitive Landscape, Spotify, March 2016	03/2016	SPOTCRB0000473-511
Spotify vs Pandora Cross-Usage Percentages	--	SPOTCRB0000696
IFPI Global Music Report 2016	03/2016	SPOTCRB0000803-846
The Competitive Landscape: How Should We Shape Our Strategy in Response? *Spotify*	05/2016	SPOTCRB0001526-1564
IFPI, Recording Industry in Numbers 2014 Edition	--	SPOTCRB0003415-3540
MiDiA Research, "Fighting Free With Free:How YouTube Usurped BitTorrent," MiDiA Consumer Surveys, April 2015	04/2015	SPOTCRB0004013
Will Page, "Spotify's Impact on Music Piracy," *Spotify*	--	SPOTCRB0004038-4043
License Agreement Between Spotify and Sony/SATV	04/2016	SPOTCRB0005704-5715
Spotify Consolidated Financial Statements, December 31, 2014	03/2015	SPOTCRB0005716-5768
Spotify US Financials 2015 and User Metrics	--	SPOTCRB0005863
Spotify Unaudited Worldwide Financials and User Metrics	--	SPOTCRB0005864
Music Publishing Rights Agreement Between SoundCloud and Universal Music	01/2015	UMPG00000127-146
Music Publishing Rights Agreement Between Slacker and Universal Music Publishing Group	09/2014	UMPG00000169-181
Direct License for Performance Rights between Pandora and UMPG-BMI	09/2013	UMPG00000210-216
Direct License for Performance Rights between Pandora and UMPG-ASCAP	07/2013	UMPG00000403-407
Webcasting Service License Agreement Between Apple and Universal Music Publishing Group	06/2013	UMPG00000889-902
Agreement Between Google and Universal Music Publishing Group	08/2012	UMPG00001119-1160
Enders Analysis, Global Music Publishing Revenue Data, October 2013	10/2013	UMPG00001987
Music Publishing Global Market Share from Enders and Music & Copyright	--	UMPG00002110
UMPG Current Rates with Streaming Services as of July 2016	07/2016	UMPG00002126
Universal Music Publishing Group US P&L, 2012-2016	--	UMPG0002118
Music Publishing Rights Agreement Between Amazon and Warner/Chappell Music	06/2014	WC00000052-64
Warner-Chappell Comparative US P&L Analysis, 2011-2016	--	WC000000829
Webcasting Service License Agreement Between Apple and Warner/Chappell Music	06/2013	WC00000097-111
License Agreement Between Pandora and Warner/Chappell Music	01/2016	WC00000353-376
Music Publishing Rights Agreement Between SoundCloud and Warner/Chappell Music	11/2014	WC00000568-599

Filings

37 Copyright Federal Register 385, Docket No 2006-3 CRB DPRA Mechanical and Digital Phonorecord Delivery Rate Determination Proceeding ("Final Rule")	01/2009	--
37 Copyright Federal Register 385, Docket No 2006-3 CRB DPRA Mechanical and Digital Phonorecord Delivery Rate Determination Proceeding ("Amendments to Final Rule")	02/2009	--
37 Copyright Federal Register 385, Docket No 2011–3 CRB Phonorecords II Adjustment of Determination of Compulsory License Rates for Mechanical and Digital Phonorecords	11/2013	--
Comments of Pandora Media, Inc In Response to the Department of Justice's Review of the ASCAP and BMI Consent Decrees	--	--
Copyright Act 17 U S C §801	01/2012	--
CRB DSTRA, Rebuttal Testimony of Charles Ciongoli	07/2007	--
Docket No 2009-1 Review of Copyright Royalty Judges Determination	01/2009	
Federal Register, Vol 78, No 219	11/2013	--
Meredith Corp v Sesac LLC, 1 F Supp 3d 180 (S D N Y , 2014)	03/2014	--
Phonorecords II, Proposed Rule, May 17, 2012	05/2012	--
Phonorecords II, Final Rule, November 13, 2013	11/2013	--
Phonorecords III, Amazon Initial Disclosures & Initial Rate Proposal	07/2016	--
Phonorecords III, Apple Preliminary Disclosures	07/2016	--
Phonorecords III, Determination of Rates and Terms for Making and Distributing Phonorecords, 81 Federal Register 48371, July 25, 2016	07/2016	--
Phonorecords III, Determination of Rates and Terms for Making and Distributing Phonorecords, Notice announcing commencement of proceeding with request for Petitions to Participate, 81 FR 255	01/2016	--
Phonorecords III, Google Initial Disclosures	07/2016	--
Phonorecords III, Motion to Adopt Settlement Industry-Wide, October 28, 2016	10/2016	--
Phonorecords III, NMPA + NSAI Proposed Rates & Terms	07/2016	--
Phonorecords III, Notice of Participants and Scheduling Order for Phonorecords III	02/2016	--
Phonorecords III, Pandora Initial Disclosures	07/2016	--
Phonorecords III, SME Preliminary Disclosures	07/2016	--
Phonorecords III, Spotify Initial Disclosures	07/2016	--
Phonorecords III, Written Direct Testimony of Adam Parness	11/2016	--
Phonorecords III, Written Direct Testimony of Chris Phillips	11/2016	--
Phonorecords III, Written Direct Testimony of Michael Herring	11/2016	--
Radio Music License Comm , Inc v Sesac, Inc , 29 F Supp 3d 487 (E D Pa , 2014)	06/2014	--
Recording Industry Association of America, Inc. v. Librarian of Congress , No 09-1075, 2010 WL 1251076 ("Determination of Appeal of an Order of the Copyright Royalty Board")	06/2010	--
SDARS II, Amended Rebuttal Testimony of Janusz Ordover	07/2012	--
SDARS II, Revised Witness Testimony of Roger G Noll	08/2012	--
SDARS II, Written Testimony of Janusz Ordover	11/2011	--

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	Date	Bates Number(s)
SDARS III, Written Testimony of Jonathan Orszag	10/2016	--
SDARS III, Written Testimony of Paul Wazzan	10/2016	--
SDARS III, Written Testimony of Robert Willig	10/2016	--
SDARS III, Written Testimony of Carl Shapiro	10/2016	
U S Department of Justice, "Statement of the Department of Justice on the Closing of the Antitrust Division's Review of the ASCAP and BMI Consent Decrees," August 4, 2016	08/2016	--
U S v Broadcast Music, Inc , Opinion & Declaratory Judgment, 64 Civ 3787	09/2016	--
United States v. ASCAP, No 41–1395, 2001 WL 1589999, 2001–02 Trade Cas (CCH) ¶ 73,474 (S D N Y June 11, 2001) ("ASCAP Consent Decree")	06/2001	--
United States v. BMI, 1966 Trade Cas (CCH) ¶ 71,941 (S D N Y 1966), *amended*, No 64–CIV–3787, 1994 WL 901652, 1996–1 Trade Cas (CCH) ¶ 71,378 (S D N Y Nov 18, 1994) ("BMI Consent Decree")	11/2014	--
Web IV, Corrected Direct Testimony of Daniel L Rubinfeld	02/2015	--
Web IV, Determination of Royalty Rates and Terms for Ephemeral Recording and Webcasting Digital Performance of Sound Recordings, 81 Fed Reg 26,316, 26,347 ("Final Determination")	03/2016	--
Web IV, Pandora Media, Inc 's Proposed Findings of Fact and Conclusions of Law	06/2015	--
Web IV, Written Direct Testimony of Michael L Katz	10/2014	--
Web IV, Written Direct Testimony of Stephan McBride	10/2014	--
Web IV, Written Rebuttal Testimony of Carl Shapiro	02/2015	--
Web IV, Written Rebuttal Testimony of Larry Rosin	02/2015	--
Web IV, Written Rebuttal Testimony of Michael Herring	02/2015	--
Web IV, Written Rebuttal Testimony of Michael Katz	02/2015	--

Data

AEXUSEU: U S / Euro Foreign Exchange Rate, U S Dollars to One Euro, Annual, Not Seasonally Adjusted, Federal Reserve Economic Data, Economic Research Division, Federal Reserve Bank of St Louis	--	--
Bureau of Labor Statistics, US Consumer Price Index, All Urban Consumers 1973-2016	--	--
Publisher Market Shares as reported by Billboard v2016-10-21 xlsx	--	--
RIAA U S Sales Database, available at https://www riaa com/u-s-sales-database/, site visited August 31, 2016	--	--
Rolling Study SL & Flex Users and Report Data	04/2016	--
Spotify Streaming Data: Query 1a - Users by Tier - CRB csv	--	--
Spotify Streaming Data: Query 1b - Streams by Tier - CRB csv	--	--
U S Census Bureau Population Data (U S census population estimates)	--	--

Reports

Amazon 10-Q For the Quarterly Period Ended June 30, 2016	07/2016	--
Amazon 10-Q For the Quarterly Period Ended March 31, 2016	04/2016	--
ASCAP Annual Report 2011; ASCAP Annual Report 2015, available at https://www ascap com/-/media/files/pdf/about/annual-reports/2015-annual-report pdf, site visited October 26, 2016	--	--
ASCAP Annual Report 2012, available at https://web archive org/web/20130903223522/http://www ascap com/~/media/files/pdf/about/annual-reports/2012-annual-report pdf, site visited October 26, 2016	--	--
ASCAP Annual Report 2015, available at https://www ascap com/-/media/files/pdf/about/annual-reports/2015-annual-report pdf, site visited October 26, 2016	--	--
BMI Annual Report 2011, available at http://www bmi com/pdfs/publications/2011/BMI_Annual_Review_2011 pdf, site visited October 26, 2016	--	--
BMI Annual Report 2012, available at http://www bmi com/images/news/2012/AnnualReview_2011_2012 pdf, BMI, site visited October 31, 2016	--	--
BMI Annual Report 2015, available at http://www bmi com/pdfs/publications/2015/BMI_Annual_Review_2015 pdf, site visited October 31, 2016	--	--
BMI Annual Report 2015, available at http://www bmi com/pdfs/publications/2015/BMI_Annual_Review_2015 pdf, site visited October 31, 2016	--	--
Comscore: Competitor Tracker - Monthly Active Users (Mobile vs Web), June 2016	06/2016	--
Content Cost Assumptions, Pandora Internals	04/2016	--
Cowen and Company, "1Q16 Results Beat our Forecast but '16 Remains an Investment Year," April 29, 2016	04/2016	--
Cowen and Company, "Survey: User Update and Analysis of Upcoming On Demand Service," June 29, 2016	06/2016	--
CRB 115 Model Support, Pandora Internals	04/2016	--
Credit Suisse Global Equity Research, "Global Music," April 4, 2016	04/2016	--
Enders Analysis, Global Music Publishing 2016	06/2016	--
Enders Analysis, Music Publishing 2004	04/2004	--
Enders Analysis, US Music Publishing 2014-17	05/2015	--
Flex Roadshow - Marketing Brief, Pandora Internals	04/2016	--
IFPI Digital Music Report 2015: Charting the Path to Sustainable Growth	03/2015	--
Joshua P Friedlander, "News and Notes on 2015 RIAA Shipment and Revenue Statistics," *RIAA*	03/2016	--
Joshua P Friedlander, "News and Notes on 2016 Mid-Year RIAA Music Shipment and Revenue Statistics," *RIAA*	09/2016	--
Joshua P Friedlander, "News and Notes on 2014 RIAA Shipment and Revenue Statistics," *RIAA*	09/2015	--
Long Term Model - US + ANZ, Pandora Internals	04/2016	--
Media Vision, Musiksverige - Fildelning & Nedladdning, Utdrag ur rapport Q2 2011	08/2011	--

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	Date	Bates Number(s)
MusicWatch Annual Music Study 2015 Report to Pandora Media	--	
Nielsen Music 360 Report 2015 Highlights	09/2015	--
Nielsen Music US Mid-Year Report 2016	07/2016	--
Nielsen Music US Report 2013	01/2014	--
Nielsen Music US Report 2014	01/2015	--
Nielsen Music US Report 2015	01/2015	--
Nielsen The Total Audience Report Q4 2015	03/2016	--
NMPA International Survey of Music Publishing Revenues, 12th Edition	--	--
Pandora Board of Directors: Competitive Update	04/2016	--
Pandora Brand Equity Tracker (BET) Wave 8	05/2016	--
Pandora Content Acquisition Costs 2012-2016	--	--
Pandora Income and Balance Sheets 2012-2016	--	--
Pandora Media 10-K For the Fiscal Year Ending December 31, 2015	02/2016	--
Pandora Media 10-Q For the Quarterly Period Ended June 30, 2016	07/2016	--
Pandora Reports Q2 2016 Financial Results Press Release	07/2016	--
PiperJaffray, "Pandora OnDemand Likely Launching in September," August 19, 2016	08/2016	--
REV FlexRadio _ Summary of Current Research_to share	11/2015	--
Sandvine, Global Internet Phenomena, 2016, Latin America & North America	06/2016	--

Pandora Agreements

Binding Term Sheet Between Pandora and UMPG	09/2016	--
Digital Product Agreement Between Pandora and Universal Music Group Recording Services	09/2016	--
License Agreement Between Pandora and ABKCO	07/2016	--
License Agreement Between Pandora and ATLAS	12/2015	--
License Agreement Between Pandora and Audiam	09/2016	--
License Agreement Between Pandora and CD Baby	09/2016	--
License Agreement Between Pandora and Disney	10/2016	--
License Agreement Between Pandora and Do Write Music	08/2016	--
License Agreement Between Pandora and Domino	09/2016	--
License Agreement Between Pandora and ImageM	08/2016	--
License Agreement Between Pandora and Memory Lane	08/2016	--
License Agreement Between Pandora and Missing Link	08/2016	--
License Agreement Between Pandora and Music Sales	09/2016	--
License Agreement Between Pandora and Next Decade	09/2016	--
License Agreement Between Pandora and Pulse	12/2015	--
License Agreement Between Pandora and Real Songs	08/2016	--
License Agreement Between Pandora and Reservoir	08/2016	--
License Agreement Between Pandora and Royalty Network	08/2016	--
License Agreement Between Pandora and SONGS	12/2015	--
License Agreement Between Pandora and TRO	08/2015	--
License Agreement Between Pandora and Tunecore	08/2016	--
License Agreement Between Pandora and Words	08/2016	--
Performance License Agreement Between Pandora and ASCAP	01/2016	--
Performance License Agreement Between Pandora and BMI	12/2015	--
Performance License Agreement Between Pandora and SESAC	07/2016	--
Sound Recording License Agreement Between Pandora and Merlin	09/2016	--
Sound Recording License Agreement Between Pandora and Orchard	09/2016	--
Sound Recording License Agreement Between Pandora and SME	09/2016	--

Academic Articles

André Casajus (2014) "The Shapley value without efficiency and additivity," *Mathematical Social Sciences*, 68: 1–4	03/2014	--
Andreu Mas-Colell, Michael D Whinston, and Jerry R Green (1995) *Microeconomic Theory* , Oxford University Press	--	
Ariel Rubinstein (1982), "Perfect Equilibrium in a Bargaining Model," *Econometrica* 50(1): 97-109	01/1982	--
Ben Shiller and Joel Waldfogel (2011) "Music for a Song: An Empirical Look at Uniform Pricing and Its Alternatives," *The Journal of Industrial Economics* , 59(**4**): 630-660	12/2011	--
Ben Shiller and Joel Waldfogel (2013) "The Challenge of Revenue Sharing with Bundled Pricing: An Application to Music," *Economic Inquiry* , 51(**2**): 1155-1165	04/2013	--
Catherine C de Fontenay and Joshua S Gans (2014) "Bilateral Bargaining With Externalities," *The Journal of Industrial Economics* , 62(**4**): 756-788	12/2014	--
David J Salant (2007) "Formulas for Fair, Reasonable and Non-Discriminatory Royalty Determination," *SIIT 2007 Proceedings*	--	--
David R Strickler, "Royalty Rate Setting For Sound Recordings By The United States Copyright Royalty Board: The Judicial Need For Independent Scholarly Economic Analysis," *Review of Economic Research on Copyright Issues* , 2015, vol 12(1/2), pp 1-15	12/2015	--
Faruk Gul (1989) "Bargaining Foundations of Shapley Value," *Econometrica* , 57(**1**): 81-95	01/1989	--
Felix Oberholzer-Gee and Koleman Strumpf (2010) "File-Sharing and Copyright," Innovation Policy and the Economy, Volume 10, University of Chicago Press, February 2010	02/2010	--
Hal Varian (1974) "Equity, envy, and efficiency," *Journal of Economic Theory* , 9: 63-91	09/1974	--

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	Date	Bates Number(s)
Hal Varian (1975) "Distributive Justice, Welfare Economics and the Theory of Fairness," *Philosophy and Public Affairs* , 4 (3): 223-247	--	--
Hannes Datta, George Knox, and Bart Bronnenberg (2016) "Changing Their Tune: How Consumers' Adoption of Online Streaming Affects Music Consumption and Discovery," *Working Paper,* February 2016	02/2016	--
Ilya Segal (2003) "Collusion, Exclusion, and Inclusion in Random-Order Bargaining," *Review of Economic Studies* , 70: 439-460	--	--
Jean-Charles Rochet and Jean Tirole (2003) "Platform Competition in Two-Sided Markets," *Journal of the European Economic Association,* 1(4): 990-1029	06/2003	--
Joel Waldfogel (2012) "Copyright Protection, Technological Change, and the Quality of New Products: Evidence from Recorded Music since Napster," *Journal of Law and Economics* , 55(**4**): 715-740	--	--
Joel Waldfogel (2012) "Copyright Research in the Digital Age: Moving from Piracy to the Supply of New Products," *American Economic Review* , 102(**3**): 337-342	05/2012	--
Joel Waldfogel, "Digitization, Copyright, and the Flow of New Music Products," *Handbook of the Economics of Art and Culture* , December 2014, p 277-297	12/2014	--
Joel Waldfogel (2010) "Music file sharing and sales displacement in the iTunes era," *Information Economics and Policy* , 22(**4**): 306-314	12/2010	--
Joel Waldfogel, "Music Piracy and Its Effects on Demand, Supply, and Welfare," *Innovation Policy and the Economy,* Volume 12, University of Chicago Press, April 2012, p 91 - 109	04/2012	--
Joel Waldfogel (2010) "The Four P's of Digital Distribution in the Internet Era: Piracy, Pie-Splitting, and Pipe Control," *Review of Economic Research on Copyright Issues* , 7(**2**): 3-20	--	--
John F Nash (1950), "The Bargaining Problem," *Econometrica* 18(2): 155-162	04/1950	--
John Sutton (1986), "Non-Cooperative Bargaining Theory: An Introduction," *The Review of Economic Studies* 53(5): 709-724	--	--
Ken Binmore, Ariel Rubinstein, and Asher Wolinsky (1986), "The Nash Bargaining Solution in Economic Modelling," *The RAND Journal of Economics* 17(2): 176-188	--	--
Lester G Telser, "The Usefulness of Core Theory in Economics," *The Journal of Economic Perspectives,* Volume 8, Issue 2 (Spring, 1994), *151-164*	--	--
Lloyd Shapley, (1953), "A Value for n-Person Games", in Khun, H and A Tucker (eds), *Contributions to the Theory of Games,* Vol 2, Princeton: Princeton University Press	--	--
Luis Aguiar and Joel Waldfogel (2015) "Streaming Reaches Flood Stage: Does Spotify Stimulate or Depress Music Sales?" Institute for Prospective Technological Studies Digital Economy Working Paper 2015/05, *European Commission JRC Technical Reports* , 2016	05/2015	--
Luis Aguiar, Nestor Duch-Brown, and Joel Waldfogel (2015) "Revenue, New Products, and the Evolution of Music Quality since Napster," *Institute for Prospective Technological Studies Digital Economy Working Paper* 2015/03, European Commission JRC Technical Reports, 2016	03/2015	--
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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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BEFORE: THE HONORABLE SUZANNE BARNETT

THE HONORABLE JESSE M. FEDER

THE HONORABLE DAVID R. STRICKLER

Copyright Royalty Judges

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March 13, 2017

9:05 a.m.

VOLUME III

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MR. MARKS: They are in the binder, yeah.

JUDGE STRICKLER: Thank you.

JUDGE BARNETT: Overruled. We're going to allow this.

MR. JANOWITZ: Thank you.

JUDGE BARNETT: All the audiovisual aids for everyone. Mr. Marks?

JUDGE STRICKLER: But just to be clear, the slides, you're not offering them in evidence?

MR. MARKS: No. They're -- they're just simply as guideposts for Mr. -- for Dr. Katz to comment on as part of his direct testimony.

DIRECT EXAMINATION

BY MR. MARKS:

Q. Dr. Katz, would you please state your full name for the record?

A. Michael Louis Katz.

Q. Professor Katz, what is your profession?

A. I'm an economist.

Q. What is your relationship with the University of California at Berkeley?

A. I'm now emeritus. I'm -- in the business school, I'm the Sarin Chair emeritus in strategy and leadership, and I'm also an emeritus professor of economics in the economics department.

Q. When did you join the faculty at Berkeley?

A. In 1987.

Q. Would you please briefly describe your educational background?

A. So I have an undergraduate degree in economics from Harvard, and then I have a doctorate degree from Oxford University, also in economics.

Q. And what areas of economics do you specialize in?

A. Generally in industrial organization, antitrust, and regulation. And I've also done work specifically on network effects and on intellectual property.

Q. Have you published dozens of peer-reviewed articles in your fields of expertise?

A. Yes, I have.

Q. And have you written a microeconomics textbook?

A. Yes, with a co-author, I have.

Q. Have you ever worked in the public sector?

A. Yes. I worked in the Federal Communications Commission. On the Federal Communications Commission, I was the chief

1 economist. And then I also was the equivalent of
2 the chief economist but called the deputy assistant
3 attorney general for economic analysis in the
4 Antitrust Division of the U.S. Department of
5 Justice.
6 Q. And have you provided expert testimony
7 before?
8 A. Yes, I have.
9 Q. In what kinds of settings?
10 A. In state court, federal court, state
11 regulatory proceedings, and also before the U.S.
12 Congress.
13 Q. Have you ever testified before this
14 tribunal?
15 A. Yes, I have. I testified in Web IV.
16 MR. MARKS: We offer Professor Katz as an
17 expert in industrial organization economics,
18 antitrust economics, and the economics of
19 intellectual property.
20 MR. JANOWITZ: No objection.
21 JUDGE BARNETT: Dr. Katz is so qualified.
22 BY MR. MARKS:
23 Q. Professor Katz, did you prepare written
24 direct testimony in connection with this proceeding?
25 A. Yes, I did.

Q. I have placed before you what has been marked for identification as Pandora Exhibit 885. Do you recognize this document?

A. Yes, I do.

Q. What is it?

A. It's the written direct testimony that I filed in this matter.

Q. If I could ask you to please turn to the last page before the appendices.

A. Yes.

Q. Is that your signature?

A. Yes, it is.

Q. And if I could direct your attention back to paragraph 2 of the document.

A. Yes.

Q. Do the first two sentences reflect what your employment relationship with Berkeley was at the time of your written direct?

A. At the time of my written direct, I was still employed and had not yet gone emeritus.

MR. MARKS: We offer Exhibit 885 into evidence.

MR. JANOWITZ: No objection.

JUDGE BARNETT: 885 is admitted.

(Pandora Exhibit Number 885 was marked

1 and received into evidence.)
2 BY MR. MARKS:
3 Q. Dr. Katz, what was the nature of the
4 assignment that you were given?
5 A. So I was asked to assess from the
6 perspective of economics or interpret from the
7 perspective of economics the 801(b)(1) objectives,
8 and then with those objectives in mind and the
9 economic interpretation of those objectives,
10 determine what would constitute reasonable rate
11 levels and rate structure for the interactive
12 service royalties that are at issue in this
13 proceeding.
14 Q. And what do you mean when you use the
15 word "reasonable" in the context of this rate
16 proceeding?
17 A. So the reasonable is then, the way I
18 interpret it as an economist, what the 801(b)(1)
19 objectives call for.
20 Q. Have you prepared --
21 JUDGE STRICKLER: Excuse me, I have a
22 question. Are you saying that you don't -- you
23 don't think there's any content to the phrase
24 "reasonable terms and conditions," other than what
25 we see in subsections A through D?

1 THE WITNESS: Certainly -- I mean, I
2 think there's a broad sense of what reasonable means
3 but, I mean, it's really focused -- focused really
4 on the four objectives as a key part of it.
5 I mean, I think in looking at those
6 objectives, I also took a pretty expansive view, so
7 it incorporates a lot of things into reasonableness,
8 but I didn't -- yeah, I haven't offered a separate
9 opinion on reasonableness otherwise, although maybe,
10 I guess, as an economist, probably always have in my
11 mind that efficiency is a good thing, things like
12 that, but I, as much as I could, tried to tie it to
13 the 801(b) objectives.
14 JUDGE STRICKLER: Thank you.
15 BY MR. MARKS:
16 Q. And, Dr. Katz, have you prepared a set of
17 slides to assist in going through your testimony
18 this morning?
19 A. Yes, as we've discussed.
20 Q. If we could turn to the second slide,
21 please.
22 Dr. Katz, can you just briefly summarize
23 for the judges the conclusions that you have reached
24 as part of your written direct testimony?
25 A. Yes. And as it shows here, I mean, the

1 essential approach I took was to look at the 2012
2 settlement involving the same Services, and I
3 concluded there's a good benchmark, an excellent
4 benchmark, in fact. And in looking at that, I
5 drew -- I guess, the major conclusions are really
6 that it's a -- you can use largely as is, with one
7 modification. So I think that it's reasonable to
8 maintain, and I'll talk about the details more, to
9 maintain the fact that they're product-specific
10 headline rates, for the different products, and
11 those headline rates cover both the mechanical
12 royalties and the performance royalties.
13 I think it's reasonable to maintain the
14 product-specific minimums. And, again, those are
15 minimums that apply to both the performance and the
16 mechanical royalties. And then, as I'll no doubt
17 explain, I think it's reasonable to remove the
18 mechanical-only floor, which applies to Subpart B,
19 and there aren't any floors in Subpart C.
20 Now, the other thing is -- well, that's
21 my primary benchmark. I also looked at a couple of
22 others to see if they corroborated it or if they
23 contradicted it. And, in particular, I looked at
24 direct deals between publisher, particularly
25 Pandora -- I'm sorry -- Services, particularly

1 Pandora, and publishers, and I conclude that
2 supports the findings in terms of structure, and
3 then I looked at the proposed settlement, having to
4 do with Subpart A, and concluded that that
5 reinforces the conclusions regarding rate levels.
6 Q. Professor Katz, before turning to your
7 analysis of reasonable rate levels and structure,
8 I'd like to begin with your assessment of the 801(b)
9 objectives.
10 Can you walk us through your economic
11 interpretation of each objective, starting with the
12 first objective of maximizing availability?
13 A. Yes. So in terms of maximizing
14 availability, I guess the central point is just if
15 you're going to have musical works available to the
16 public, you need to make sure that both sides have
17 the right incentives or have incentives to
18 participate, and so it means we need to make sure
19 that the writers and publishers are adequately
20 compensated and also that the streaming services are
21 adequately compensated. And a key part of that, I
22 think, as an economist, though, is it's not to say
23 that anyone is guaranteed an income; it's that you
24 have the opportunity to compete and to succeed, if
25 you're able to offer -- have a better offering than

either a rival service, if you're a service, or than other songwriters or publishers, if you're on that side.

Q. Are the prices charged to consumers relevant as an economic matter to the objective of maximizing availability?

A. Yes, because, if you think about it, if you said, for example, say, look, there are millions of songs available, anyone who wants can listen to a song, as long as you're willing to pay a thousand dollars every time you listen to the song, then clearly, I think we'd all agree, that's not really meaningful availability.

What it means to be available is that consumers can get access at prices that they're willing to pay. And so it is an important part of thinking about this.

And it ties -- even though we're talking about retail prices, that ties back to the licensing because the level and structure of royalties can affect the resulting retail prices.

Q. Turning now to the second objective, to afford a fair return and fair income, how do you as an economist think about this objective?

A. Well --

JUDGE BARNETT: Excuse me. These slides are marked restricted. Are we in restricted territory here?

MR. MARKS: We're not in restricted territory. Thank you for calling that to my attention. There will be some restricted slides at the back. I think there's just a restrictive footer on the -- on the document itself because, at the back, there are some restricted slides.

If you like, we can prepare an alternate set that only marks the -- the specific pages that are restricted as restricted.

JUDGE BARNETT: Always we would like to have only the pages that are restricted to be marked restricted, not just in this instance.

MR. MARKS: I apologize. And we'll -- we'll prepare a replacement set.

JUDGE BARNETT: Thank you.

BY MR. MARKS:

Q. So coming back to the -- the second objective, affording a fair return and fair income, how -- how do you as an economist think about that objective?

A. So, you know, economics generally, I mean, thinks about fairness a lot of different ways,

and you can talk about fair outcomes versus fair process. And what I concluded was the -- the most useful or practical way of thinking about it here was really to focus on whether the process is fair. And, in particular, a conception that's often used in economics is that a process is fair if it's -- if it's competitive or the outcome of a competitive market. A competitive bargaining process is fair.

And so that's the -- the central notion of fairness that I used here.

Q. Can -- can you briefly describe what you mean by a competitive market?

A. Well, in particular, I'm going to start by saying what I don't mean. I don't mean a perfectly competitive market. And, again, I know from my participation in Web IV that this is an issue that has been before the judges before, but really think of the notion of effective competition, that there is multiple independent suppliers and the consumers have the ability to go back and forth among the different suppliers in response to differences in prices or -- or product quality.

So, really, an essential element is that the buyers have choice. But it doesn't have to be the -- the textbook ideal of perfect competition.

Q. Turning to the third objective, can you briefly explain the economic interpretation of the relative roles objective?

A. So I will try to be brief and just say that, particularly some of it's in the slide and in my testimony, I think there's a lot of overlap with reflect relative roles in terms of the first two objectives, which is to say if you're not reflecting the -- the contributions that each side makes, you're unlikely to be maximizing availability.

And also I think argue both -- both intuitively but also in terms of what a competitive or effectively competitive market would do, that you would expect the fairness, that you'd -- that you would compensate or reward both sides for their contributions.

But I also think on top of it, the emphasis or the statement in the statute about contributions and investments just highlights the point that in thinking about both maximizing availability and reflecting relative roles, we should take sunk investments into account because that's a form of contribution.

Q. Could you provide an example of the type of sunk cost that you would recommend be considered?

A. So what I mean about that is you think about it with a songwriter. Once the song is written, the work is done. You can't get the work back.

I mean, the cost has been incurred. And one could take the point of view that says, well, now that the song is created, the -- you know, the cost -- there's no cost anymore of using it, so why should you compensate somebody, and you think that's just wrong. When you take a longer-term view, you've got to take into account that the -- I think the person both for fairness deserves to be compensated for the -- the costs that have already been incurred but also because of creating incentives going forward.

If everybody expects that once they sink a cost, they're not going to ever be compensated for it, they're not going to be willing to invest in writing songs or, in the case of a service, invest in all the expenses that the Services have while they're trying to create a successful financial model.

JUDGE STRICKLER: Would you include in those costs the opportunity cost of -- to the -- to the licensor of being able to license?

THE WITNESS: Yeah, I do think that -- and that's something that I will talk about, that opportunity cost is a relevant concept here because otherwise, I mean, again, you could -- you have this extreme view that just says once the intellectual property is created and it's there, you say the cost is zero. And I think that's missing important factors, both the sunk costs and thinking about the opportunity cost.

JUDGE STRICKLER: You will be addressing the opportunity cost later?

THE WITNESS: Yes, I will.

BY MR. MARKS:

Q. Finally, the objective of minimizing disruptive impact, how from an economic perspective do you interpret that objective?

A. So I think about it, I want to be clear, on a continuum, because I know some people think of it as more binary, but think of it as a general matter that disruption is minimized if you're preserving the status quo, but I don't take -- as I say, both as just a continuum view, but also that it's not always the case that you minimize disruption by preserving the status quo because it -- it could be that the status quo is unsustainable,

so that if you saw an industry that was in really dire economic condition, I don't think it would be a reasonable interpretation to say, oh, we're minimizing disruption, let's just keep doing things as they are, because by hypothesis, things are unsustainable and going badly.

But as a general matter, if an industry is economically healthy, I think maintaining the status quo is what minimizes disruption.

Q. Have you reached a conclusion as to whether maintaining the status quo is unsustainable for the 2018 to 2022 rate period?

A. And you're saying maintaining the status quo in terms of streaming services and publishers and writers?

Q. Yes.

A. And, yes, my conclusion is that while the industry is facing challenges, that, in fact, the status quo in terms of -- if the status quo would mean maintaining rates and structures, that, yes, that is sustainable.

Q. And what -- what considerations have you looked at in reaching the conclusion that the status quo is sustainable?

A. Well, as summarized here, there are data

that I cite in my report and certainly the judges are hearing from other witnesses as well, that on the content side, that the Copyright Owners are continuing to create music and to publish musical works, substantial amounts of it. On the interactive services side, though, I'll be discussing the fact that the firms, at least a firm like Spotify, is not profitable. They have been willing to invest and appear to be continuing to be willing to invest for the prospect of future profits, and that they have been a growing and increasingly important source of music distribution.

So we've got music being produced or musical works being produced. We've got firms willing to invest in the distribution. And, as I said, while the industry clearly has challenges, it also shows that it's moving ahead and it's generating a lot of consumer benefits.

JUDGE STRICKLER: Just a question for you, Dr. Katz. You say that the status quo is sustainable. And I know this may be getting ahead of ourselves a little bit because you introduced the mechanical floor issue and you're going to address it, I know, again, in your testimony, but you're really not advocating for the status quo as it

relates to the benchmark; you are advocating for a lot of the status quo but not all of it. Is that a fair statement?

THE WITNESS: That's correct.

JUDGE STRICKLER: And, again, I apologize because this may be getting ahead of ourselves a bit, and I know you're going to get into it in more detail, but do you understand that there was ever a time when the mechanical floor was a reasonable portion of the -- of the royalty structure?

THE WITNESS: So when you say it's a reasonable portion, I don't -- I'm trying to figure the right way to say this so it doesn't sound flippant, but -- so let me say I apologize in advance, if it does come across that way.

I think in some sense what the economics says is it was reasonable as long as it wasn't actually binding.

JUDGE STRICKLER: That does sound a little flippant.

THE WITNESS: Yeah, and that's why I apologize. In fact, I just can't think of a better way to say it. But what I mean by that, and this is jumping ahead a little bit, is that because we're talking about rights that are perfect complements

1 and we've got the same buyers and sellers on the two
2 sides, I think the economics really says it makes
3 sense to think about the combined amount that's
4 being paid for a mechanical and performance license.
5 And so I don't think it makes a lot of sense from
6 the perspective of economics, and I understand there
7 may be separate legal issues and I'm not offering
8 legal opinions, but I don't think it makes sense to
9 separate them out.
10 And so, you know, my understanding from
11 hearing from a Pandora executive who was involved
12 and said, look, we agreed to this, the Services
13 agreed to having the floor, because we thought it
14 wouldn't be binding. And, clearly, the Copyright
15 Owners wanted to have a floor.
16 JUDGE STRICKLER: And when you say it
17 wouldn't be -- they felt it wouldn't be binding, you
18 understood that it would -- it would never be
19 triggered; by "binding," you mean never triggered?
20 THE WITNESS: That's right. It's their
21 interpretation, and what he relayed to me was it
22 wouldn't be triggered, that's right.
23 JUDGE STRICKLER: So -- so you don't see
24 any economic justification for the existence of the
25 mechanical floor in the rates either in the 2012

settlement or if it existed prior or if it were to exist going forward in the new rate period; you can't identify any economic benefit to mechanical floor.

THE WITNESS: I -- I think that's correct, thinking about it purely from the perspective of the economics, yes.

JUDGE STRICKLER: Thank you.

BY MR. MARKS:

Q. I'd like to turn now to your analysis of the appropriate rate structure and rate level. Have you taken a benchmarking approach for assessing reasonable rates and structure for the statutory license at issue in this proceeding?

A. Yes, I have.

Q. And why did you take a benchmark approach?

A. Well, you know, an alternative would be to try to build a model of the industry and then use that model to make predictions about how different structures and rate levels would affect industry performance. And it just -- well, it's certainly beyond my abilities. And I think there's probably an agreement among the economic experts, it's beyond any of our abilities to construct such a model.

And so instead take a benchmark approach, try to rely on the expertise of the industry and what the industry has figured out works.

Q. And what is the primary benchmark that you use in your direct testimony?

A. As I said, the primary benchmark is the 2012 settlement as applies to Subparts B and C.

JUDGE STRICKLER: I have a question for you. It's sort of a high-level type -- type of question, rather than getting into the -- into the details for the moment. Are you saying that the 2012 settlement is a -- is an excellent benchmark because it continues the status quo or because, independent of whether it ever was the status quo, these are the right rates and this is the right structure for this industry?

THE WITNESS: Yeah, it's not because it's the status quo. So to be clear, because I think maybe the slides create a little bit of confusion, the -- the previous slide saying -- about I thought the status was sustainable, I was making the point there in terms of how I would then think about worrying about disruption and saying that it seems to me that maintaining the status quo wouldn't be disruptive.

1 Now, ultimately, I conclude, as you
2 pointed out, that a modified version of the status
3 quo was the right thing to do going forward, but
4 that's in some sense a separate conclusion, which
5 is, as I say, I've looked at the 2012 settlement,
6 looked how the industry has performed under it, and
7 then concluded that, subject to modification, using
8 the 2012 settlement going forward is an appropriate
9 thing to do.
10 JUDGE STRICKLER: Well, here's -- here's
11 my question that follows on that. If the 2012
12 settlement is not a benchmark because it's the
13 status quo, that suggests to me you're saying that
14 if it hadn't existed, somebody would have to have
15 invented it because it's a good -- it's a good
16 structure and it's a good level of rates within that
17 structure.
18 But is there anything in your testimony
19 that explains sort of a buildup, how do we build up
20 to -- to that, how do we create that structure and
21 how do we build up to the rates that are in that
22 structure, other than simply relying on what already
23 exists, which really sounds like it's taking us back
24 to saying it's a good benchmark because it's the
25 status quo?

1 THE WITNESS: So I would say two parts to
2 that. One, I'd say it's a good -- on the second
3 part, it's a good benchmark, like I say, because
4 it's the status quo that's working, okay? If we
5 said, okay, it's the status quo but we saw the
6 industry performing poorly, then I wouldn't conclude
7 that you'd want to continue it.
8 So first off, it's really critical to
9 have the assessment that the industry is performing
10 well. And then the second thing is -- is that it
11 didn't just -- you know, sort of just emerge; there
12 was a particular process. And I do think the fact
13 that it emerged as a settlement and that it -- that
14 happened in the shadow of a potential statutory
15 proceeding, I think the process by which it arose is
16 relevant here.
17 And that is something we will talk about,
18 and I know that's something that has been criticized
19 by experts on the other side. That's something
20 we're planning to address.
21 JUDGE STRICKLER: Thank you.
22 BY MR. MARKS:
23 Q. Okay. Back up just a moment just to make
24 sure that we get a complete record on this point.
25 What is it, in your view, about the 2012

settlement that commends itself as a benchmark?

A. Well, I'm saying there are two parts. One is that -- well, if you say purely as a benchmark before deciding what do we learn from the benchmark, it is the fact that it was created under this bargaining situation where I think there largely was a balance of power; there weren't apparent asymmetries in market power, bargaining power, that would have distorted the settlement. And as I say, I think, you know, a bunch of the credit for that goes to the -- the statutory shadow, but it's -- but that it emerged through a particular process I think is important.

Q. And does the 2012 settlement involve similar parties?

A. Yeah, no, it does. In terms of what makes it -- actually, I'm jumping ahead, I apologize, because of Judge Strickler's question. But, yeah, I mean, the other things it has, it has similar parties and also the fact that it covers an identical set of rights, which is an advantage in looking at a benchmark because it means there's less need to make any sort of adjustments or, as we talked about this morning before I was in the room, need to make conversions.

1 JUDGE STRICKLER: A question. I just
2 want to make sure, first of all -- well, maybe you
3 have it right here. You said -- yeah, it's on --
4 it's on the screen. You said there were no apparent
5 asymmetries in market or bargaining power.
6 Now, I know in your testimony -- and
7 correct me if I'm wrong, because there is a lot of
8 different testimony here, and I could forget and
9 confuse it -- but you talk about the need for
10 effective competition and the fact that the
11 recording or the rights that are at issue,
12 mechanical rights, are must-haves for the streaming
13 services. Correct?
14 THE WITNESS: Yes.
15 JUDGE STRICKLER: Well, if they're
16 must-haves, wouldn't that be consistent with an
17 argument from you that there are asymmetries in the
18 bargaining power; that is, that the licensors have
19 greater bargaining power because of the -- of the
20 must-have requirement of having these?
21 THE WITNESS: So -- so, absent the
22 statutory shadow and particularly if you were
23 talking about negotiations between individual
24 services and publishers, I'd be very concerned about
25 that.

1 And that's actually one of the reasons
2 that the third bullet is so wordy, is I think it
3 matters that we're talking about industry-wide
4 settlement negotiations, and we're talking about
5 negotiations that are taking place in the shadow of
6 the statutory proceeding.
7 So that those factors help offset the
8 possible asymmetries.
9 JUDGE STRICKLER: Thank you.
10 BY MR. MARKS:
11 Q. And can you please explain why the fact
12 that there were no apparent asymmetries makes the
13 2012 settlement an excellent benchmark?
14 A. So I think the thing to do is actually
15 turn, if we could, to the next slide with --
16 summarize that. And as you can see from the title
17 of the slide, it's saying that when we're looking at
18 voluntary settlement, which is what we're talking
19 about with the 2012 settlement, that are evenly
20 matched, and as we've just talked, the evenly
21 matched here comes both because we're talking about
22 industry-wide negotiations and because we're talking
23 about something taking place in the -- the shadow of
24 a potential statutory proceeding, okay, that in that
25 case, that the outcome will tend to reflect the

1 801(b) objectives.
2 Now, let me -- I'll point out the word
3 "reflect" chosen carefully because I'm not saying
4 that the parties will say to themselves: Okay,
5 let's go out and -- and try to achieve the 801(b)
6 objectives. What I'm saying is that the parties'
7 private interest in the shadow of the statutory
8 proceeding will tend to coincide with the statutory
9 objectives.
10 And I also want to be clear I'm not
11 saying that's true regardless of whatever the
12 statutory objectives happen to be. I'm saying it's
13 true of the particular 801(b)(1) objectives.
14 JUDGE STRICKLER: Is it really the case,
15 though, that in voluntary settlements, the parties
16 would try to -- would tend to reflect the 801(b)(1)
17 objectives or would they rather reflect what they
18 think the judges would think are the 801(b)(1)
19 objectives, you know, the average -- what does the
20 average opinion think average opinion is?
21 THE WITNESS: So I think where they have
22 to do the predictions as to what do they think that
23 you were going to think has to do with how people
24 think -- what the parties think -- how they'll come
25 out overall, if they're to go through the statutory

1 proceeding.
2 But it's not a matter of guessing what
3 the judges will say -- I'm sorry, I'm talking in the
4 third person here.
5 JUDGE STRICKLER: That's okay.
6 THE WITNESS: But what you'll say on each
7 individual -- you know, what you'll say about the
8 particular rate structure or something like that.
9 Really what's -- it's affecting their disagreement
10 points and saying here's what happens.
11 So they do need to form a prediction of
12 how well they'll fare overall, because a rational
13 party is not going to agree to a settlement if that
14 party thinks it could do better by going to the
15 proceeding.
16 But after they -- but once they get that
17 and they say, okay, we've got to make sure we're
18 each doing at least as well as we could through the
19 proceeding, they then will set about and say what do
20 we do that's the best for both of us and we'll try
21 to jointly maximize.
22 And what I'm saying is when they think
23 that through, it turns out that those private
24 interests will -- they'll -- well, let me just give
25 you an example. They'll tend to want to maximize

1 availability, all else equal, because if they're
2 more or less evenly matched, they know that neither
3 one can succeed without the other, right?
4 Streaming is important to music
5 distribution now, so if the Copyright Owners got a
6 deal that was so good that it -- you know, good here
7 means the price was so high, the royalty rate so
8 high that it killed off streaming, that would be bad
9 for them.
10 And, similarly, if the streaming services
11 said, oh, we can get this stuff for free and that
12 turned out to destroy songwriting, that would be bad
13 are for them. So what I'm saying here is the
14 parties naturally have incentives to try to promote
15 availability.
16 Now, it's not unlimited, right? We know
17 monopolists can restrict output, and I might say,
18 well, it's true that I'm making the total pie
19 smaller by having a really one-sided agreement but
20 that helps me and so I'm willing to do it to get a
21 higher share. But if we're relatively balanced in
22 terms of our bargaining power, then that's going to
23 push us towards maximizing availability.
24 And that's going to be true regardless of
25 what our particular predictions are about what

you're going to do if -- what you would do if there were to be a proceeding.

BY MR. MARKS:

Q. Are you aware that Dr. Eisenach disputes your conclusion that the 2012 settlement is a desirable benchmark in part because it reflects the 801(b) objectives?

A. Yeah, to be clear about your question, I don't think he's saying -- he's disputing my claim that it will reflect the 801(b) objectives as opposed to he's not objecting because it does. But, yeah, I know he has raised concerns and objects in saying -- I guess, disagreeing with the statement that it will tend to reflect the 801(b)(1) objectives.

Q. Well, let -- let me put the actual language in front of you so we don't suffer from my characterization or mischaracterization of what Dr. Eisenach has actually said.

In your binder, you should have a copy of the written rebuttal testimony of Jeffrey A. Eisenach.

A. Yes.

Q. Could you turn to paragraphs 28 to 30 of Dr. Eisenach's written rebuttal testimony.

A. I'm open to page -- the paragraph 28 on page 15.

Q. Yes. And turning to the point that Dr. Eisenach raises in the first three sentences of paragraph 28, how do you respond to -- to Dr. Eisenach's criticism on this point?

A. Okay. So, first, let me give my interpretation of what Dr. Eisenach is saying. So -- well, he's asserting that bargaining theory -- well, as it says, that you're not going to have a bargain that satisfies the objectives of a third-party arbitrator. And he says, instead, he says what's going to happen, along the lines of what I was just discussing, is that you'll have to ask yourself as one of the bargaining parties: Well, if we can't agree and we go in front of this arbitrator, what's going to happen?

And so then, as he's saying, you have to figure out how well you'll fare overall. And then that will influence our private bargaining because each of us will say, well, I have to get at least as good a deal as if I went to arbitration. Okay?

But then what he's saying is, on top -- he goes, well, that may be true but what does that have to do with the specifics of what people end up

1 agreeing to? Okay? It just says we have to at
2 least do at least as well, but why does that tell us
3 anything about the details of our agreement? Our
4 agreement is going to tend to be what we think is
5 ever best for us.
6 And I agree with that statement, and if
7 -- if his proposition is, as a general matter, the
8 fact that something may go to an arbitrator does not
9 imply that we will necessarily do what the
10 arbitrator wants or the objectives -- I agree with
11 that as a general statement, but that's not what I'm
12 saying.
13 What I'm saying is that, given the -- the
14 arbitrator here being the CRB, and given the
15 specific 801(b) objectives, that then the shadow of
16 the proceeding will lead the parties to meet those
17 objectives, but it's not that they would meet any
18 objectives. Just to make up a silly example to
19 illustrate the logic, you know, if for some reason a
20 statutory objective was that all -- you know, all
21 license contracts have to be -- have to be on purple
22 paper, right, there's no reason to think that a
23 private agreement, anyone would come up with that
24 and say, okay, let's do that. Okay? But that's not
25 what the 801(b) objectives are.

1 They're things like maximizability, which
2 I said there's private incentives to do, and I won't
3 go through the rest of the slides -- the slide
4 there, but it's about specific objectives, and those
5 specific objectives, the parties do have incentives
6 to roll into their private agreement.
7 So it's making a general statement that I
8 think just doesn't apply to the specifics that
9 matter here.
10 JUDGE STRICKLER: Well, the second
11 objective, though, is afford a fair return, fair
12 income, as you correctly describe it in shorthand,
13 but you describe fair in economic terms as
14 effectively competitive. But when parties are
15 bargaining, they don't necessarily want an
16 effectively competitive market; they want to
17 maximize their profits over whatever particular
18 period of time makes sense for them in their time
19 horizon. So they don't really care under economic
20 theory whether the other side gets an effectively
21 competitive rate. If I understood your testimony
22 correctly, what they care about is that the other
23 side survives so that there can be either licensed
24 product to distribute or a licensee to distribute
25 the product. Survival of your bargaining -- your

1 counterparty is important, not thriving of your
2 counterparty.
3 THE WITNESS: I completely agree with
4 that. That's why it is important that this is
5 taking place in the shadow, again, of a particular
6 statutory regime, where -- it's my interpretation of
7 it and my expectation and my belief about what the
8 parties thought is that it's balancing the
9 bargaining power so that, in fact, each party knows
10 that if -- if it sees itself as getting a really bad
11 deal in the private negotiations, it has the
12 alternative to go to a statutory proceeding where it
13 will not get such a bad deal.
14 So in that way, it's -- that's this point
15 about it's important that it's evening out the
16 bargaining power, because I agree if you had one
17 side in a private negotiation that had way more
18 bargaining power than the other and a much better
19 position, say a monopolist, we know a monopolist
20 will sacrifice some availability in order to get a
21 bigger share of the gains. That's why I think it's
22 important that we have this -- the shadow to try to
23 balance those things out because that's what's then
24 getting us to fairness, helping get to fairness.
25 JUDGE STRICKLER: But, again, of course,

1 the shadow gets filtered through whoever the judges
2 are. If you were one of the judges, effective
3 competition might well be the standard. If another
4 economist was one of the judges, effective
5 competition might not be the standard. They'd have
6 a different way of describing fair return or fair
7 income, and you'd get a different result.
8 So, again, it sort of goes back to my
9 other question, which is the settlement is
10 reflecting not just what the 801(b)(1) objectives
11 are, right, but it's reflecting what you -- what the
12 bargaining parties think these particular or those
13 particular judges on the CRB thought of these
14 objectives and how to apply them?
15 THE WITNESS: And so I agree with that in
16 terms of the parties' assessments of how they would
17 fare if they went to -- if they had to go to the
18 proceeding, and I would expect that to affect rate
19 levels, as I suspect I'm going to be asked about in
20 a minute or two.
21 I think, though, those expectations or
22 the predictions about the then sitting judges would
23 not affect -- not necessarily affect things like the
24 rate structure.
25 JUDGE STRICKLER: But it would affect --

well, it would affect disagreement points, threat point in the bargaining, right?

THE WITNESS: That's right. That's what I'm saying, that will tend more -- I'm going to just jump ahead -- yeah, just jump ahead because -- well, one of the other points -- well, let me say this.

Part of what Dr. Eisenach is saying which I agree with in this is where he says, well, look, with these multiple dimensions, that they're going to have incentives to try to optimize what's best for the parties collectively going through the bargaining, okay? And that can be things like the rate structure. And what they do on that can be largely independent of what they expect to happen, if they were to go to what he's calling arbitration, because all arbitration is doing, as he has modeled it, is saying, okay -- as he has modeled it, it's saying here's the -- here are the surplus levels you each get. Right? He's not saying anything about the details of how things have to be done.

So the parties still see themselves, the way he has modeled it, as having the flexibility to set all these other dimensions, and then that won't affect what ultimately would be done by the judges. The only role the judges have is in setting the

1 reservation surplus levels.
2 BY MR. MARKS:
3 Q. If I could direct your attention to
4 paragraph 29 of Dr. Eisenach's written rebuttal
5 testimony and ask you to read the first sentence of
6 that paragraph and let me know how you respond.
7 A. Okay. So what -- well, what he's saying
8 here, I guess, pretty much speaks for itself, that
9 he's saying that -- it is, typically, the judges
10 consider market-based benchmarks. And what I was
11 trying to say, I think, and not particularly well,
12 is that you actually think about his first point,
13 he's saying that, in fact, much of the -- or as
14 logic implies, that much of the 2012 settlement is,
15 in fact, market-based, because when it comes to
16 things like the rate structure, the parties are
17 determining what it is that's in their best
18 interest, given that each has the threat to go to a
19 proceeding, but that proceeding is not -- right,
20 it's just -- again, it's playing the backstop role
21 of setting a surplus level or a reservation level,
22 but it's not telling the parties here's specifically
23 what you have to do in terms of how you structure
24 your agreement.
25 So his first point actually is -- his

first paragraph, paragraph 28, is saying when it comes to things like the structure of the royalties that we see in one of these settlements, that's actually market-determined because that's not based on guessing precisely how if the judges were to impose a structure, what structure they would impose; it's saying given that we're avoiding going to a proceeding, what structure do we think works best for us?

JUDGE STRICKLER: But don't the judges have to set a structure? Isn't that in part what this proceeding is all about? We have a fight over what the structure of the rate will be, whether it will be a per-play rate or whether it will be a percentage with various minima or a floor, perhaps?

So when you're figuring out disagreement and threat points, it's not -- you have to figure out whether or not the judges are going to accept structure A or structure B, which is clearly not theoretical but highly contentious. That's why we're sitting -- one of the reasons why we're sitting here right now.

THE WITNESS: No, that's right. But, again, the way -- and this is the point Dr. Eisenach is making, which I agree with. It's the way it

1 affects what the private parties will do in their
2 negotiation in terms of coming up with a structure,
3 is they say all right, if we don't reach an
4 agreement, we're going to go to the CRB and we're
5 going to get some -- there's going to be some rate
6 structure, there are going to be rate levels.
7 That's going to give rise to certain levels of
8 surplus for each of us.
9 But they then work back and say, okay, so
10 that tells us, each of us, you know, how far am I
11 willing to go before I say no, I'd rather have the
12 proceeding. Given that, now we come to -- it's our
13 turn in our private agreement to say what rate
14 structure we want to have. That rate structure,
15 right, we should come up with the one that we think
16 works best for us collectively, and then figure out
17 how to divide the surplus.
18 And in a sense, it doesn't matter what
19 the judges would say is the right rate structure.
20 The only thing that matters, if you think about it
21 through economics, it's almost like it's a
22 sufficient statistic, all we need to know is what
23 the surplus levels would be. Okay? So we say,
24 look, those are the surplus levels, so we know
25 neither one of us is going to accept a worse deal

1 than that, but now in our private negotiation, let's
2 figure out what rate structure works for us.
3 And that actually -- once you know what
4 the surplus levels are, that's actually independent
5 of what you believe the CRB might do in terms of the
6 rate structure it would put in place. And as I say,
7 I take it that that is Dr. Eisenach's first point,
8 and I think that that point is well taken.
9 JUDGE STRICKLER: Thank you.
10 BY MR. MARKS:
11 Q. If I could turn your attention to the
12 first -- well, it's actually the entire paragraph
13 30, which is one sentence. If I could ask you to
14 read that paragraph and let me know how you respond.
15 A. All right. Well, again, this is -- you
16 know, he's saying -- it's making the point that we
17 wouldn't expect the parties to have a perfect
18 prediction. I certainly agree with that. The
19 parties have to form their best beliefs.
20 But I don't think there's any requirement
21 that they have -- for this approach to be valid,
22 there's any requirement for them to have a perfect
23 prediction, but, in fact, it's one of the reasons
24 why I need to check and why I did spend time
25 checking whether the actual settlement seems to be

working.

I mean, first off, it could be that -- I mean, whether or not the prediction was accurate, it could be that based on their predictions, the parties agreed to something that turned out really didn't perform well and that the industry was starting to fail and that consumers' interests weren't being met.

And if we saw that, I would say then it's not a good benchmark; it's something that was -- going to have to be changed. And so I agree that predictions can be wrong, but that's one of the reasons we've got to then look and see how did it actually perform.

Q. And did you do such an analysis?

A. Yes, I have.

Q. If we could go to the next slide, please.

Perhaps with reference to the next two slides, can you just briefly summarize for context of our discussion today the structure and rates called for in the 2012 settlement that you use as a benchmark?

A. Okay. And I alluded to some of this in, I guess, what was my second slide. So what I would point to here is that -- a few sort of key elements

of the -- of the structure of the 2012 settlement. So one is that, starting with just Subpart B, that there's a headline rate, which you can see reading across the, I guess, the third row is the same, the 10 and a half percent, and that's the same for several different products.

And I will try to be clear, when I say products, when I mean things like the difference between a stand-alone non-portable subscription or something that is portable. And I'll try to use "services" to mean different companies. I just apologize that in my written testimony, I used "services" both ways. I used "services" sometimes to distinguish between, say, Spotify and Pandora, and sometimes used the term "services" to mean what I'll try today to call different products.

So here we see they all have the same headline rate within Subpart B, and that that rate, the headline rate, applies to both the performance and mechanical royalties. Then we see there's a second component, which is the minimums, which, again, apply to the sum of the mechanicals and performance royalties.

And there we see, if you go across, that the minimums can vary by the particular product.

1 And also within the minimums, it's a multipart
2 formula, at least in three of the five cases.
3 And then lastly, what's shown there is
4 there's a floor, which, again, varies by the product
5 type, and that floor is the one that applies just to
6 mechanicals.
7 Now, if you look at, if we could, the
8 next slide, the Subpart C, you'll see there's, you
9 know, largely a similar structure. The things I
10 would point out here are that the headline rates
11 vary across products. And you see several of them.
12 They have different headline rates than the Subpart
13 C rates were.
14 But, again, we have the structure of
15 product-specific minimums. And notice here that one
16 difference is for Subpart C, you don't have the
17 floor that applies purely to mechanical royalties.
18 So that's in a nutshell the overall
19 structure of the licensing under Subparts B and C in
20 the 2012 settlement.
21 Q. In your view as an economist, is having
22 different rates for different product categories
23 within Subparts B and C reasonable?
24 A. Yes, I think it -- I mean, it does make
25 sense because there can be differences both in

consumer demand or willingness to pay for different products, and also there can be different costs, including opportunity cost, for the different products. So it can be sensible then to have -- in the interest of both the Copyright Owners and the Services and consumers to have rates that reflect those differences and vary across products.

Q. Let me ask you about some of the rate structure components that you've just identified. From an economic perspective, is it appropriate to have a single all-in rate that covers mechanical and performance rights?

A. So I've concluded that it is because I think I mentioned already today, the mechanical rights and the performance rights of musical work are perfect complements from the perspective of an interactive service, which is to say you need to have both rights, sets of rights. Either one alone is going to be worthless. You're buying them from the same party. You know, the buyer is the same.

And so really, in thinking about the values of these things and willingness to pay, I think economics really says you have to think about them together. And, again, I make up unrealistic numbers, but if you think of the package as worth 15

1 dollars to you, if you have to pay 10 dollars for
2 one set of the rights, then the other rights are
3 only going to be worth 5 dollars to you. If you
4 have to pay 7 dollars for one set of rights, the
5 other rates are only going to be 8. So they're
6 pretty much inextricably linked.
7 And so I think it does make sense to talk
8 in terms of the headline rate because it's the
9 overall value that's going to matter to you.
10 Q. Is it economically reasonable to have the
11 headline rate be expressed as a percentage of the
12 revenue of the interactive service?
13 A. In this case, I think it is, yes.
14 Q. And why is that?
15 A. Well, I mean, the -- the biggest thing, I
16 guess, would be -- I would say, that the parties
17 have seemed to determine that, in fact, that it
18 works for them and that it's something they've come
19 to in their agreement. And that we also see that in
20 other agreements, for example, between the Services
21 and record companies.
22 And so it's a structure that people in
23 the industry have decided works. I would say that's
24 the Number 1 reason.
25 Q. On whose behalf did you testify in the

Web IV proceeding?

A. The National Association of Broadcasters.

Q. In your Web IV testimony, what rate structure did you conclude was reasonable for calculating the royalties payable by non-interactive services to record labels?

A. A per-play rate.

Q. Why did you conclude that a per-play structure in that setting was more reasonable than a greater of formula with both a per play and a percentage of revenue prong?

A. Okay. So what was -- what was happening, I remember this, in Web IV is the existing structure was a per-play rate. And then the record companies were proposing to add on top of that a percentage of revenue prong.

And I raised several economic objections to that. As you all know, ultimately, you didn't -- CRB did not put in the -- did not add the revenue prong.

I was concerned with effects it would have on risk sharing by adding that, the revenue prong. I was concerned with effects that it would have on innovation. I know -- I guess those are the biggest. And then just generally creating

disruption, because, again, we were adding a percentage of revenue there where it's something that at the time did not exist, and I also expressed concern that there would be measurement issues.

Q. Would continuing the use of a percentage of revenue structure create disruption in this proceeding?

A. So, I -- I mean, what you're pointing out is a big difference here, as there the industry was using per-play, and the question was did it make sense to add a percentage of revenue prong to it?

And here we're talking about an industry where they're already using percentage of revenue, so it's not disruptive in that way in the sense that it's not changing the status quo.

Q. Have interactive services continued to invest and innovate under the current percentage of revenue royalty structure?

A. Yes. What I've seen indicates that they have been innovating and that they are continuing to invest.

Q. Do you have any reason to believe that there would be more investment and more innovation under a per-play rate structure?

A. And you're talking about a per-play rate

structure particularly for interactive services?

Q. Yes, exactly.

A. Is that correct?

Q. Yes.

A. Yeah, so -- yeah, for interactive services, and this is something that I think is really different between interactive and non-interactive services, so what it really comes to is a difference between subscription services and ad-supported.

And in the case of interactive services, we're talking about primarily having subscription services. And with subscription services, I mean, I do have a concern, as an economist, or economics identifies the concern that a percentage of revenue royalty can have effects -- can have adverse effects on the incentives to innovate because if a service figures out a way to get more value out of -- by investing, more value out of existing music, it's going to have to share some of those gains. And that's going to attenuate its incentives.

But the thing is with subscription services, that's also going to be true if you do it on a, say, per-subscriber basis or per-play basis because the way -- my understanding of the way the

industry works is what firms do to innovate and compete is they try to figure out how to make their services more attractive to consumers, to get more customers, get more engagement. And so whether you look at things, look at royalties based on plays or subscribers or revenues, all of those things, if you innovate, you're going to have to share some of those gains, and that's going to attenuate your innovation incentives. So there's really -- there's no -- there's no silver bullet here.

Now, in contrast, if you go back to Web IV, the main -- the main revenue model is an advertising-based one. And there, if you have a -- the thing about with a per-play rate, if the way -- the way you innovated to get more revenue there was to figure out how to make your product more attractive to advertisers.

And if you did that and then you could get more advertising revenue, you would keep all of that at the margin because it wouldn't be -- it wouldn't affect the number of plays. It's all happening in your relationship with advertisers. And so there you actually have a solution that gets rid of the problem of attenuating the investment incentives.

So this distinction between whether we're talking about an ad-supported service or a subscription service is important in thinking about these issues.

Q. Are you aware that Dr. Rysman -- is it Rysman or Rysman?

MR. JANOWITZ: It's Rysman.

THE WITNESS: Rysman.

BY MR. MARKS:

Q. Rysman, I apologize. Are you aware that Dr. Rysman has criticized your written direct testimony in his rebuttal report in this proceeding?

A. Yeah, I have noticed that.

Q. You should have a copy of Dr. Rysman's written rebuttal report in your binder. And when you get there, if I could direct your attention to paragraph 49 on page 29.

A. Okay, I'm there.

Q. Paragraph 49 of his written rebuttal testimony, Dr. Rysman quotes you as stating in Web IV that there is no direct link between a webcaster's revenue per play and the record company's cost of licensing to that webcaster.

Do you stand by that statement?

A. Yes. And I mean just to make sure we're

clear, you're talking about, I guess, in the long quotation of me, what he's saying in the third paragraph that rolls across from page -- from 29 to 30?

Q. Yes, exactly right.

A. Yeah, and I do stand by that. I mean, again, think about this in the context of -- and, you know, this comes back to Judge Strickler's question about opportunity cost. Okay?

So opportunity cost here from the point of view of a licensor is asking, well, if a consumer is using these particular services, does that mean they're not buying music in some other form? That's a consumer-side phenomenon.

Now, think about what's happening, though, with an ad-supported service. Okay? What's affecting your revenues per play is how well you're appealing to advertisers. Okay?

And as far as I've been able to discern, how well you appeal to advertisers and how much money you can get from advertisers, I just don't see a link between that and the record company's costs, who are generally to a copyright owner costs, because it's really about the advertising side of things, not about the music consumption side.

1 So I think when you're talking about an
2 advertising-supported service, you know, I really --
3 I just don't see a link there. Now, I notice that's
4 somewhat different when you're talking about a
5 subscription service because with a subscription
6 service in part the subscription rate is going to
7 have to reflect consumers' willingness to pay.
8 And so when you see some where consumers
9 have very low willingness to pay, that may also
10 suggest to you that the -- the opportunity cost is
11 low because those consumers were likely not to have
12 been buying music anyway, and so there, there may be
13 some linkage.
14 But what I was really addressing here is
15 the lack of a linkage for advertising-supported
16 services because that's what really matters for
17 non-interactive services.
18 Q. In the next quoted paragraph at the top
19 of page 30, Dr. Rysman quotes your comments about
20 the differences in sellers' costs and the -- the
21 relevance of that or the potential relevance of that
22 to pricing in an effectively competitive market.
23 Do you see that?
24 JUDGE STRICKLER: Which paragraph are you
25 on?

MR. MARKS: It's the first full paragraph on the top of page 30.

JUDGE STRICKLER: Within the quote?

MR. MARKS: Within the quotes, yes.

JUDGE STRICKLER: Thank you.

THE WITNESS: So, yes, I do see that. If you could just repeat the question.

BY MR. MARKS:

Q. Yeah. The -- he is quoting your written rebuttal testimony, the paragraph beginning "Dr. Rubinfeld's proposed revenue prong."

A. Yes.

Q. Do you see that --

A. Yes.

Q. -- that paragraph? Do you stand by the statements in that paragraph?

A. Yes, I do.

Q. Has Dr. Rysman, in his written rebuttal discussion of your Web IV testimony, captured in your view all of the necessary context to understand the point you were making in your rebuttal testimony in Web IV?

A. I don't think he has because what I was doing was responding to some particular claims Dr. Rubinfeld was making that he was asserting were

1 benefits of adding the proposed revenue prong. And
2 I was saying I didn't believe -- at least as I could
3 understand what he was saying, that I didn't believe
4 that he was making an economically correct argument.
5 And as I said, I stand by that and it
6 relates back to some of what we were just talking
7 about.
8 Q. Is there a mechanism for reflecting
9 differences in the rightsholders' cost in the 2012
10 settlement?
11 A. So there are two. As I said, there may
12 be this indirect one, because we're talking about
13 subscription services, that when you have a
14 percentage of revenue basis, that that's going to
15 tend to reflect consumer willingness to pay, which
16 could then be linked to opportunity cost.
17 But the other one is more explicit and
18 direct, which is as we saw when we -- well, in fact,
19 the slide is still up there, that you've got the
20 product-specific terms so those can potentially --
21 if the private parties want to, those can reflect
22 differences in costs or other factors that they
23 think matter across. And that contrasts with what
24 Dr. Rubinfeld was proposing, which was a single
25 percentage of revenue that would apply to all

1 services and products.
2 Q. Let's turn now to the second component of
3 the 2012 settlement structure that you mentioned,
4 the minimums.
5 Did you reach an opinion as to whether it
6 is economically reasonable to have minimums as an
7 alternative to the headline rate that covered both
8 mechanical and performance rights?
9 A. Yes, I did.
10 Q. What did you conclude?
11 A. I concluded it is reasonable to have the
12 minimums and to keep them. And the primary reason
13 for that is because of the measurement issues that
14 can come up when having royalties based on a --
15 based on a percentage of revenues because there can
16 be issues about how to appropriately assign revenues
17 to a service.
18 And so I think the minimums can play an
19 important role when those -- you know, when those
20 measurement problems are severe, you can turn to the
21 minimum instead.
22 Q. And do the minimums also protect
23 Copyright Owners from services with low rates of
24 monetization?
25 A. Yes. And think about protecting

1 services, what I have in mind, right, is that what
2 would happen if you could imagine an entrepreneur
3 coming along and saying we want to have a service
4 and have some incredibly low price and not a very
5 good monetization model, where a copyright owner
6 would say -- in an effectively competitive market,
7 would say, wait a minute, I don't want to license to
8 you on those terms. It's -- I just think the
9 possibility of getting a return is so low, I'm not
10 going to do it, even though you, as an entrepreneur,
11 are willing to try this. I as the copyright owner
12 want some sort of, you know, return on it. And
13 that's what the minimum also helps to do.
14 JUDGE STRICKLER: With regard to your
15 previous point, Dr. Katz, about the benefit of the
16 minimum, that there can be confusion or disagreement
17 as to what is -- what it is or is not in the revenue
18 base, so the minimum constitutes protection, if the
19 revenue is too low, but it -- but it doesn't solve
20 that problem, it just sort of puts a floor on that
21 problem?
22 In other words, until you hit the floor,
23 you could have all sorts of gaming of the revenue,
24 but as long as the revenue, percentage of revenue
25 rate that's paid is higher than what the floor would

1 be, you still have the gaming problem. It's just at
2 some point, we say that's all we can stand or we
3 can't stand no more. There's -- there's no more
4 fooling around with the rate; we're going to have --
5 you've hit the floor and all the gamesmanship is
6 over at that point.
7 So the problem persists, in other words,
8 above the floor?
9 THE WITNESS: That is -- well, I think
10 another way of saying what you're saying is it's
11 important to get the level of the floor correct.
12 And you can think of -- think of the floor as an
13 alternative way of -- of collecting the revenues.
14 And so I think you would want to take
15 that into account. I mean, you could even -- look,
16 you could imagine a system that all you had was,
17 say, a per-subscriber amount and you had nothing
18 else. And then I think we wouldn't -- wouldn't
19 think of it as people are gaming the system. We
20 would just say that's the way we're collecting the
21 royalties.
22 But I agree with you that if you have --
23 you have the combination of the minimums and the
24 percentage of revenues, there could -- certainly
25 could be cases where somebody -- if you -- if you

did it based on revenues, they might pay more than they will under the minimum, and that may be too hard to measure, so they pay less. That certainly could happen.

JUDGE STRICKLER: Thank you.

BY MR. MARKS:

Q. And, Dr. Katz, just so that we have a clear record, in your last answer you used the -- you referred to both floors and minimums.

A. Oh.

Q. If I could just ask you to clarify whether you were talking about the same thing or different things?

A. No, I apologize, as I -- as I said that. I meant to say minimums, because I'll try to use the term "floor" to mean a minimum that applies just to mechanical. So I meant there to be talking about minimums that applied to the sum of mechanicals and performance.

Q. And have you reached an opinion as to whether or not it is economically reasonable to continue to have the mechanical-only floor in Subpart B?

A. So as mentioned in the introduction, I think it's reasonable to no longer have the floor.

1 Q. And can you explain why you have
2 concluded that the mechanical-only floor should be
3 eliminated?
4 A. The slide will summarize it, but in
5 particular, it's the concern that the fragmentation
6 of performance rights licensing can threaten to
7 raise royalty rates and it would do so -- and the
8 reason it matters that it's through the
9 fragmentation is it's saying it would raise
10 performance royalty rights -- rates because of the
11 exercise of market power and the Cournot complements
12 problem.
13 So to step back or to talk about what are
14 some of the relevant developments since 2012, we've
15 got -- we have -- at the time, we had the three
16 performance rights organizations, right, the two big
17 ones, ASCAP and BMI, and they're subject to a
18 consent decree. And then since then, we've a fourth
19 one come in, so that has been a form of
20 fragmentation and -- and GMR. And while they're
21 small, you know, in terms of the number of writers
22 who are members, they have some very important
23 writers such as the estate of John Lennon, and I
24 believe also Bruce Springsteen is with them. So
25 they have emerged, so there's another PRO you have

1 to deal with. Music publishers have threatened and
2 continue to threaten to withdraw from the PROs, and
3 there have been issues about transparency and the
4 possibility of fractional licenses.
5 Now, if you put all of that together,
6 what it's saying is there's a threat that what's
7 going to happen is you're going to have to go to
8 more and more entities, so some combination of the
9 four PROs and plus publishers as they pull out, and
10 that all of those entities are going to end up being
11 must-have. Okay? They're going to be must-have for
12 a combination of -- well, they have, in many cases,
13 large portfolios of songs, and so as you've heard a
14 lot about in Web IV, that's going to matter to an
15 interactive service because they need to offer their
16 customers a wide -- you know, a broad catalogue of
17 music. But then these issues of fractional licenses
18 and issues of transparency then make -- make that
19 worse and make it more must-have because you can't
20 be sure you're not incurring all sorts of liability
21 unless you go to all the parties.
22 Now, why is that a problem? Well, as you
23 start having more must-haves from whom you have to
24 license, each of them is going to have a degree of
25 monopoly power. So you're going to be paying more.

1 And then also you can even run into this because
2 they're must-have, that they're complements. And so
3 we're going to run into the Cournot complements
4 problem, which is to say that each one charges a
5 higher price, ignoring the fact that that may be
6 sort of suppressing what's happening in the industry
7 overall because you care about your share of what
8 goes on in the industry.
9 And, again, something we know, heard a
10 lot about in Web IV. And so this fragmentation
11 then, if it occurs, would be expected to lead to
12 higher prices, and we've seen a little bit of that
13 already with GMR now charging people, but that that
14 would lead to higher prices which then could
15 potentially trigger the floor -- and here I do mean
16 the floor -- because you'd end up -- as the
17 performance royalty rights go up, right, there's
18 going to be less and less left over for mechanicals.
19 And so my concern is it's going to
20 trigger the floor. That will then have the effect
21 of raising the overall rate, the total amount you're
22 paying for the sum of performance and mechanical
23 royalties, and it will be raising it because of the
24 exercise of market power, not because music is
25 making a bigger contribution or anything like that.

1 JUDGE STRICKLER: When you analyze --
2 Dr. Katz, when you're analyzing the mechanical-only
3 floor, separate and apart from the issue that you
4 just described about the must-haves and the
5 fragmentation and the withdrawals, did you consider
6 whether there was any economic importance as to the
7 fact that the mechanical royalty flows through music
8 publishers and the performance royalty flows through
9 the performance rights organizations that you --
10 that you just spoke of, and that each one might have
11 different contractual relations and rights and
12 duties with regard to songwriters and lyricists, the
13 artists, if you will, and that that was an important
14 economic factor that went into the bargain that
15 created the mechanical-only floor in the 2012
16 settlement that is your benchmark?
17 THE WITNESS: So I have thought about
18 that in the context of advances because my
19 understanding is that a common practice in the
20 industry is that when publishers give advances to
21 songwriters, that the advances, I think, are
22 recoupable -- I guess they're not -- in relevant
23 part not recoupable against performance royalties
24 that go straight from the PRO to the web --
25 JUDGE STRICKLER: Right.

1 THE WITNESS: -- collection agent. In
2 fact, goes straight to the writer, and so that is
3 something that would be affected.
4 And that's something that if that's, you
5 know, an important change, then you would expect to
6 see the contracts change. But, yes, it is something
7 they would have to adjust. And that's something
8 I've thought about.
9 JUDGE STRICKLER: When you say that was
10 something they would have to adjust --
11 THE WITNESS: Meaning the --
12 JUDGE STRICKLER: -- I don't understand
13 that.
14 THE WITNESS: That's a -- that was a
15 choice made by the songwriters and the publishers in
16 terms of what they said was -- goes into the base of
17 what's recoupable and not. Right?
18 JUDGE STRICKLER: But that's not really
19 before us. That is either a fact that there is that
20 recoupment process with regard to mechanical
21 royalties or there isn't.
22 And if it is there, isn't that an
23 economic value to the music publishers that they get
24 -- get to recoup some or all of their advances as
25 long as there's a mechanical royalty rate -- that

flows through them, and the floor provides that it won't disappear in the event of fragmentation, in the event of withdrawals, or in the event of any other reason that would cause the performance royalty rate to go up? So if that's an -- assuming, now -- I'm not saying it is, because there's a whole lot more of this proceeding to go on -- but if that's an economic basis in this case, why would -- and you seem to suggest that -- you're the one who raised the point about advances, why is that not in your analysis?

THE WITNESS: So, I mean, it is part of my analysis in terms of thinking that they could -- the publishers and the songwriters, if it's important going forward for advances, to -- you know, they're worried about recoupment, they could write a contract, as far as I understand, that they would -- could also recoup against performance royalties, for example.

Now, I take the point that in existing contracts, it would matter to them because those contracts are there. But on a going forward basis, in terms of thinking about what it means to the performance -- the industry, they have alternatives, contractual alternatives that would let them adjust

to that.

JUDGE STRICKLER: You're not aware of any -- any restrictions that exist in the industry as to preventing that kind of a recoupment through the performance royalties as opposed to the mechanical royalties?

THE WITNESS: No, I'm not aware of that. I guess my experience is more as a textbook author, and there I think they had the right if they wanted to go after my house, but it may be -- it may be that's something I'm not aware of in the music industry, that songwriters are treated better than economics textbook writers.

JUDGE STRICKLER: Thank you.

BY MR. MARKS:

Q. Dr. Katz, switching gears, you note in your written testimony that the fact that the 2012 settlement is relatively recent commends itself as a benchmark.

But have you looked at whether or not the music marketplace has changed significantly over the past five years?

A. Yes, I have.

Q. And what have you concluded about changes in the marketplace since 2012?

A. Well, I mean, there have been significant changes, what we might think of as big changes, particularly, you know, between the rise of music consumption and the rise of the importance of streaming, but ultimately I've concluded that those changes do not point to a reason to either change the rate structure or the rate levels, that, again, subject to challenges, that the -- the industry is performing well under the -- the current settlement.

Q. Did you consider expressly whether there had been changes in the amount of music consumption during the current rate period?

A. Yes, that's certainly something I took into consideration. And I think it's one of the maybe few points where there's probably agreement among everybody in the room, that music consumption has increased.

Q. And should -- shouldn't Copyright Owners receive additional compensation from interactive services as a result of the increase of interactive streaming?

A. I think as a general matter, that they should and, in fact, they have. The royalty payments have gone up.

Q. If we can go to the next slide, please.

If I could just ask you to walk us through your understanding of the various changes that have taken place in the industry since 2012 with reference to the prior periods?

A. All right. So what this slide is showing, to provide some context, is looking at overall industry revenue. So this is including revenues earned by record companies, for example, and streaming services. This is as calculated, the fine print will tell you, by RIAA.

And -- you know, and this is -- these are figures for the U.S., but I should say the global figures are similar in terms of trends. And the reason I mention that and the relevance of that is if you think about the returns to songwriting, right, you're writing one song and it can be listened to or sold anywhere in the world, so the global trends are also relevant. And the global trends are also relevant somewhat for streaming services as well, to the extent that especially a company like Spotify is multinational.

But, again, looking at the U.S., the biggest trend, the one everyone is aware of is, beginning in 1999, there was a significant decrease in the revenues for U.S. music industry and that

that's attributed by people in the industry, by academics, by the trade press, as being largely from digitization, which allowed for the unbundling of albums, and unbundling turned out to be a bad way for the industry, and the bigger one, I think, though, everyone agrees, is piracy or unlicensed file sharing.

Okay. So that's a big trend. And one thing to note from that is that -- you know, that big decline, right, is not from streaming. Streaming, you see, is -- in this light purple -- just isn't showing up, and it doesn't even show up in the RIAA figures in the early years. I think before 2005. Okay?

But streaming was not the cause of the problem. We see that streaming now is part of the solution in terms of stabilizing industry revenues because if we look in the more recent years, you can see that the decline slowed considerably and, in fact, in the most recent years, it has actually reversed. So -- but I don't want to make too much of it, of going up. I think the bottom line is that it has stabilized things.

And then what has happened is that -- you can think of intuitively is that streaming is

1 replacing piracy, and that's a good thing for the
2 industry.
3 Q. Have you reviewed any information that
4 speaks to how industry revenues are likely to change
5 going forward?
6 A. Yes. I mean, the analyst reports I have
7 seen and, I guess, industry commentary suggest that
8 people do believe that this is a turnaround. It's
9 not just, though, you know, a one-time slowing but
10 that this is going to help stabilize the industry,
11 and that going forward, it can actually grow.
12 Q. This slide is focused on changes in music
13 industry revenues, but have you looked specifically
14 at publisher revenues or profits over the 2012 to
15 2015 period? And I'll ask you just to answer that
16 yes or no, since we're in open session.
17 A. Yes.
18 Q. So that we can remain in open session, we
19 won't go into the details, but do you address those
20 topics in paragraphs 58 and 59 of your written
21 direct testimony?
22 A. I'll assume you have the numbers correct,
23 yes.
24 Q. If I could ask, without turning to the
25 public display of the slide, but for people who have

1 paper copies, are the results of your analysis of
2 changes in publisher revenues summarized in the next
3 slide, which is restricted, in your slide deck?
4 A. Yes.
5 Q. Have you given any consideration to the
6 profitability of interactive streaming services or
7 lack thereof since the 2012 settlement was entered
8 into?
9 A. Yes, I have.
10 Q. What have you concluded?
11 A. Well, I've concluded, I guess, a couple
12 things. One is that looking at Spotify's financial
13 statements and the level I'll talk about them is
14 public, that to date, they've been suffering losses,
15 and they are the largest, you know, stand-alone
16 service. And that also -- so they've been suffering
17 losses. They've shown a willingness to continue to
18 invest. So, clearly, they have some optimism that
19 the future will be different.
20 And then I've also observed that several
21 streaming services have gone out of business and, in
22 particular, have gone bankrupt are or were sold in
23 distress.
24 JUDGE STRICKLER: Just a question before
25 you go on, just for clarification. The slide that

we still have up on the screen, which was figure 1 from your written direct testimony, the industry that you're referencing, is that the sound recording industry or is that publishing industry or what?

THE WITNESS: So I believe this is based on, largely -- sorry. And there's a detailed footnote in my report, but I'll give you my overall understanding.

It's primarily, I think, the retail revenues. And when I say "primarily," if I understand it correctly, for -- for non-interactive ad-supported services that RIAA, I believe, uses royalty revenues paid through SoundExchange, but in mostly other cases what they're doing is they're looking at the -- the consumer prices, the retail value of music.

So embedded in that, then, would be, you know, what everybody in the industry ends up getting.

JUDGE STRICKLER: I asked about -- in fact, looking at where it says sources in the footnote, it says, now that I look at it, U.S. recorded music revenue by format. So it's total -- total revenue in the industry, and it's in the next chart that we're not seeing because it has

1 confidential restricted material where you've
2 limited the analysis or you've carved out publisher
3 revenue only?
4 THE WITNESS: That's right. And as I
5 say, the one thing I was saying and the footnote
6 goes on, there's some, I don't quite understand why
7 they've done it, quirk in the way that -- at least
8 looks to me like a quirk -- the way they deal with
9 certain advertising revenue for non-interactive
10 services.
11 JUDGE STRICKLER: Thank you.
12 BY MR. MARKS:
13 Q. If I could ask you to turn back to
14 Exhibit 885, which is your written direct testimony,
15 and turn your attention to footnote 76 on page 47.
16 Is that the footnote to which you were
17 referring?
18 A. Yes.
19 Q. Now, Dr. Eisenach and Dr. Rysman both
20 assert that the fact that there are firms entering
21 the interactive space demonstrates that interactive
22 services must be earning economic profits.
23 Are you familiar with that testimony?
24 A. Broadly, yes.
25 JUDGE STRICKLER: Can you cite to a

1 paragraph number from Dr. Eisenach's testimony?
2 MR. MARKS: I don't have it, but I can
3 supply that at the break.
4 BY MR. MARKS:
5 Q. How do you respond to that point?
6 A. So there are a couple of different
7 things. First off, the fact that firms are entering
8 doesn't imply that they're earning economic profits
9 on a flow basis. In fact, that's a point I suspect
10 you're going to hear from Dr. Rysman about
11 considerably, that it -- but it does suggest that
12 the firms are expecting that, overall, it will be
13 profitable to enter. They might lose money now but
14 they expect eventually to make money.
15 It does tell us that, but I don't think
16 that tells us that they're earning excess profits or
17 doesn't say anything or imply that the royalty rates
18 are too low.
19 I mean, you could have -- for example,
20 you could have entry into an industry, even though
21 one of the suppliers to that industry had a
22 monopoly. I just think they're trying to draw too
23 tight a link between entry and the nature of the
24 input prices.
25 And then the other thing I would say is,

1 well, yes, there has been entry and clearly there
2 are firms that are optimistic about their prospects
3 of streaming services. There has also been exit.
4 And seeing entry and exit is all consistent with
5 having a -- the functioning of a competitive market.
6 And I don't think it by itself is
7 indicative of there being excess profits or economic
8 profits.
9 Q. Have you given any consideration to how
10 the numbers of songwriters and musical works has
11 changed since the 2012 settlement was entered into?
12 A. Yes, that's something I considered.
13 Q. What did you conclude?
14 A. So I conclude from the data that are
15 available to me is that there continue to be, you
16 know, many people as songwriters. I looked at the
17 memberships, I guess, in ASCAP, and BMI and then, I
18 guess, as recently provided through interrogatories
19 membership in another organization for songwriters.
20 But overall that those organizations collectively
21 are growing and that also the numbers of songs that
22 are -- ASCAP and BMI have grown very substantially
23 in the last few years. And just generally have
24 found an absence of -- of any evidence that the
25 supply of music has become diminished and that it's

1 anything other than vigorous at this point.
2 Q. In the interest of time, we'll skip over
3 the details, but are the bases for your conclusions
4 in these regards set forth in paragraphs 60 and 61
5 of your written direct testimony?
6 A. Again, I will assume you have the right
7 numbers.
8 Q. What is the relevance of the increases in
9 the numbers of musical works and songwriters to your
10 assessment of the probative value of the 2012
11 settlement as a benchmark for rate setting here?
12 A. Well, I was -- I was looking at those
13 because I was looking for evidence that the market
14 was not functioning well under the 2012 settlement,
15 either because you'd see investment in streaming
16 services cease or that you would see the production
17 of musical works cease.
18 And I didn't see evidence of either of
19 those things.
20 Q. And if we could skip slide 11 and go
21 straight to slide 12. Thank you.
22 Can you give us your overall assessment
23 of the industry changes and whether they counsel in
24 favor of rate increases for the 2018 to 2022 period?
25 A. All right. And maybe what I will do,

when we get -- have the slides, just touch on a few of these things, but in terms of, you know, maximize availability, we see that, as I say -- and I guess at broad level, I mean, it's from their public statements, so the publishers are profitable, certainly the leading ones are because you can see that in their public financial statements. So it's not confidential.

As we've said, music revenues have stabilized. And the Services are unprofitable. Now, you know, as -- I take from that that, again, the Services are unprofitable, but they're still continuing to invest. As I said, the status quo is sustainable. But it suggests that anything you'd want to do is you would want to -- sorry, I thought I made a typo. I didn't see the 9 there. If anything, it suggests you'd have lower rates or continuing the current rates, but it doesn't -- it certainly doesn't suggest that we need to raise rates in order to improve availability, that we see both sides doing what they need to do to make the music available to consumers.

In terms of the fair return and fair income and also let me say on the -- on the relative roles, you know, one of the things, I think, you're

1 going to be hearing a lot about is saying, well,
2 streaming has become much more important since 2012.
3 It's a much bigger deal. And that's clearly right.
4 I mean, it is a bigger deal. And I think, if
5 anything, that would argue for saying that its role
6 has become more important since 2012 and that could
7 actually argue for why streaming services should get
8 more of the surplusage, if they have lower
9 royalties.
10 So, again, as you walk through each of
11 these, I think where they come out is it suggests
12 that either you keep the rates the same or I think
13 generally suggests that the rates could be lowered,
14 if you apply all of them. Again, I won't walk
15 through every single one. That's the bottom line
16 conclusion.
17 MR. MARKS: At this point, Your Honors, I
18 have a short series of questions that will get into
19 restricted information and require clearing the
20 courtroom.
21 JUDGE BARNETT: Okay. We're going to
22 take our morning recess at this time, 15 minutes,
23 and when we reconvene, if there is anyone here in
24 the courtroom who is not privy to confidential
25 information, if you will please wait outside the

hearing room, we'll invite you in when this restricted material is completed.

(A recess was taken at 10:50 a.m., after which the hearing resumed at 11:12 a.m.)

(Whereupon, the trial proceeded in confidential session.)

1 O P E N S E S S I O N
2 CROSS-EXAMINATION
3 BY MR. JANOWITZ:
4 Q. Good morning, Dr. Katz.
5 A. Good morning, counsel.
6 Q. I'm going to ask you some questions about
7 your -- your benchmark analysis, in particular, the
8 2012 settlement. Now, I understand that you feel a
9 benchmark analysis is helpful because it avoids
10 having to build up a model, correct?
11 A. Yeah, certainly it avoids having to build
12 a ground-up structural model of the industry.
13 Q. Exactly.
14 A. Yeah.
15 Q. So -- so we're avoiding that kind of
16 ground-up, you know, structure. And are there other
17 ways that you could do that? Are there other kinds
18 of analyses that you could use that would not
19 involve building a model from the ground up?
20 A. You're saying aside from benchmarks?
21 Q. Exactly.
22 A. I'm not sure. I mean, if you use that
23 term expansively enough, it may cover everything. I
24 mean, you could certainly have different ways of
25 building models. People try to build up from costs.

1 You might actually try to have a model of the whole
2 industry and the demand for services and everything
3 else. So, I mean, when I say building a model, it
4 could mean a lot of things.
5 Q. I understand. Well, let me give you an
6 example. For example, some of the experts have used
7 Shapley values. Is that a way of getting at some of
8 these issues without having to build a model from
9 the ground up?
10 A. I would say actually those are models of
11 the industry. They are highly stylized. And it's
12 something I, you know, talk about in my written
13 rebuttal report, but they are -- those are modeling
14 the industry.
15 Q. Okay. So you look at it that way.
16 JUDGE BARNETT: Forgive the interruption.
17 I don't think we got your name on the record --
18 MR. JANOWITZ: Oh, I'm sorry.
19 JUDGE BARNETT: -- in connection with
20 this cross-examination.
21 MR. JANOWITZ: Of course. James
22 A. Janowitz for the Copyright Owners.
23 JUDGE BARNETT: Thank you.
24 MR. JANOWITZ: I'm with Pryor Cashman
25 LLP.

BY MR. JANOWITZ:

Q. And you testified earlier that -- and I think you were addressing Dr. Eisenach's report, that prior settlement may not be perfect, but in this case judged against the performance of the industry, which is healthy, you think that prior settlement is a valid benchmark? Is that correct?

A. Yeah. I guess -- and I'm not sure of the exact words I used. I would say in some sense healthy enough. There are clearly challenges for the industry, but -- and, you know, for streaming, things that -- that better change for them at some point, but I think it's on a trajectory that's sustainable.

Q. Okay. So it's not healthy; it's healthy enough?

A. Yeah.

Q. Would be accurate?

A. You could say that.

Q. Okay.

JUDGE STRICKLER: Could I ask you, healthy enough for what?

THE WITNESS: That it's sustainable, that I believe -- and certainly investors believe that the situation in streaming at some point will change

so that they'll become profitable on a flow basis.

And clearly the industry, and this is both the Copyright Owners and streaming services, continually have to deal with the -- the threat of piracy.

So I just mean factors like that, that there's still -- they face headwinds.

JUDGE STRICKLER: Well, if -- if the rates are -- allow them to be healthy enough where they will become profitable, why aren't they profitable now? How would one know what's going to change if the rate stays the same and they'll go from not profitable to profitable?

THE WITNESS: So I think that the Services are banking on or their investment -- investors are banking on is thinking that there's -- part of it is that they'll benefit from economies of scale at some point.

And, I mean, again, as I say, I have to speak to expectations of the investors. Personally, I'm probably not as optimistic as their investors are, but that's what I think has to be their biggest hope, that they -- some combination of they'll benefit from economies of scale at some point and also that there may be an additional industry

1 shakeout so that competition will become less
2 intense.
3 JUDGE BARNETT: So they're taking a loss
4 but they're going to make up for it in volume, is
5 that it?
6 THE WITNESS: You and I may have similar
7 investment strategies. Yeah, I mean, it sometimes
8 looks like that could be what the -- the risk is.
9 But clearly they're expecting something to change in
10 the future.
11 JUDGE STRICKLER: When you say they may
12 -- they may also anticipate that there's a shakeout
13 in the competition, does that suggest that there's
14 also a competition for the market, various type of
15 competition, as well as this kind of competition on
16 the basis of price and differentiated product?
17 THE WITNESS: So that's not something
18 that I've done a full analysis of, but I would say
19 off the top of my head that I -- I would say that
20 there are network effects present here, but there's
21 also significant product differentiation across
22 services, so that I would think this is an industry
23 where we would expect multiple streaming services to
24 survive, and so it could be that there are fewer
25 than we see now, but that it's something I would

expect. I would -- I wouldn't expect it to tip to a monopoly.

But there would still be elements of what you're saying, but I don't think it would go all the way to do that. I think there's enough differentiation.

JUDGE STRICKLER: Thank you.

BY MR. JANOWITZ:

Q. Dr. Katz, you're looking to some point in the future where the industry may become profitable; is that right? That it becomes more healthy?

A. Well, I'm saying that appears to be the expectation of industry participants who have chosen to enter, that they think it will become more profitable.

Q. Right. So -- so entry is a token of optimism with respect to the economics of the industry?

A. Yeah, at a broad level, yes.

Q. And do you expect -- do you think that -- that optimism is based on any analysis or is it just, you know, Panglossian optimism?

A. My experience with a lot of industries would suggest it's a combination of both, but I would certainly hope some people have done analysis.

Q. And have you done an analysis?

A. Of the future of the industry?

Q. Yes.

A. In terms of my own from the ground up, no, I've, you know, read some financial projections and things like that, but I have not constructed my own prediction of the industry.

Q. Now, with respect to the -- let's take the existing rate, because you think that the rate should be lower, if anything. With respect to the existing rate, have you done any analysis of the impact of that rate on the profitability of one or any of the Services?

A. I have not conducted such an analysis myself. You know, Pandora -- as Pandora witnesses have testified to that in writing. I've reviewed that, but I haven't conducted my own studies.

Q. And so you don't know whether it affects -- whether it delays profitability or eliminates the possibility of profitability yourself?

A. I mean -- I mean, no, I think as a matter of arithmetic that it would reduce it and delay it, but I couldn't quantify the amounts.

Q. And you can't -- and you can't quantify the impact on the survival of any of the streaming

services, correct?

A. That's correct. That's something that I would leave to the fact witnesses for the streaming services.

Q. Okay. And in terms of the -- the lower rate, assuming that the rate that you -- that your client is suggesting be adopted, do you have any idea how that would impact the profitability of any of the Services?

A. Other than your point saying a lower rate would generally improve the profitability, either making it less negative or more positive, but, again, I haven't done a quantitative assessment of that.

Q. And so you haven't done a sensitivity analysis, either, as between what Services are proposing versus what exists versus what the Copyright Owners are proposing, correct?

A. Sensitivity with respect to --

Q. Their -- their individual impacts relative -- and relative to each other on the profitability and sustainability of the industry.

A. That's correct, beyond what's in my report which, again, citing other sources of doing it, but I have not done a direct analysis myself.

1 Q. And you testified earlier that the
2 parties have agreed that the 2012 settlement works
3 for them. Do you remember saying that?
4 A. I don't remember. Well, I mean, they --
5 certainly at the time they reached the settlement,
6 they agreed to the settlement.
7 Q. That's kind of my point. But I think the
8 -- I think the point you were trying to make was
9 that we have some confidence in that settlement
10 because the parties have agreed that it works for
11 them. Or perhaps I misunderstand your testimony and
12 it's not that the parties have agreed that it works
13 for them.
14 A. So -- well, let me state it now because
15 I'm not completely recalling which thing you're
16 referring to. So at the time they reached the
17 agreement, I mean, it was a voluntary agreement, so
18 that in that sense in which it works for them, and
19 then my statement about how the industry has
20 performed since then was based on an observation of
21 what's happening.
22 I -- if I said that -- or what I seemed
23 to say was everybody is happy with how things are
24 going, there are certainly songwriters who complain
25 a lot about streaming, but what my analysis was

1 based on is not whether there are anecdotes of
2 songwriters complaining but to look at how the
3 industry is performing.
4 So if I said something about works at
5 that point, I was talking about broader measures of
6 industry performance, and I don't recall saying it,
7 but I didn't mean to be implying that necessarily
8 every individual is happy with how the 2012
9 settlement has gone. Clearly, Copyright Owners
10 would like something different. That's why you're
11 here.
12 Q. Precisely. And in terms of -- and in
13 terms of, you know, the comment about how it works
14 for them, so now you're saying you were referring to
15 the 2012 agreement at the time that it was entered
16 into?
17 A. No, what I'm saying is I don't recall the
18 testimony you're quoting, so I was trying to just
19 put on the record so we can have the discussion that
20 at the time they reached the agreement, clearly both
21 sides thought it worked for them. That's -- it's a
22 voluntary agreement. And then I'm also saying that
23 subsequent to that, when we look at industry
24 performance, I think the performance shows that the
25 2012 settlement is meeting the statutory objectives.

1 I don't recall saying at any point that
2 people -- that necessarily the Copyright Owners were
3 happy with it. If I did, I misspoke because, as I
4 said, I realize we're here because you'd like
5 something different.
6 Q. Right. And in terms of what was going on
7 in 2012, again, it's not necessarily that they
8 thought it worked for them, that it worked for them,
9 but perhaps they hoped or expected that it would
10 work for them in the future because at the time that
11 they agreed to the 2012 settlement, they had no idea
12 how it would work in the future; isn't that right?
13 A. I'd be pretty surprised if they had no
14 idea --
15 Q. Well, I'll take a step back. They didn't
16 know how it would work in the future, correct?
17 There was no crystal ball at the takeoff?
18 A. I would assume that that is correct, that
19 there was no crystal ball.
20 Q. And so looking at the factors that you
21 were taking into account in relying on the 2012
22 settlement, let's just go through them.
23 One, that it was a relatively recent
24 negotiation, correct?
25 A. Correct.

Q. And I notice you say "relatively." So it is four years. And this is a -- this is an industry in which things happen pretty quickly, isn't it?

A. Certain people have a perception of that. I mean, there are certainly people who characterize it that way.

Q. You disagree things happen quickly in this industry?

A. My view actually, and a view I've had for a lot of years, is that people talk about things happening in the Internet time and -- and network effects and everything else, and there tends to be an exaggeration with how -- how quickly things happen, but I will agree that lots of people characterize it that way.

Q. Okay. And you also rely on the fact that these are similar or the same parties, which --

A. That's correct.

Q. -- which I understand, and that they were negotiating over an identical set of rights?

A. That's my understanding.

Q. Right. So this is -- that was a 115 proceeding, settlement. This is a 115 proceeding. The parties knew that the alternative to settling was that the CRB proceeding under the 801 standard

1 might occur?
2 A. That is what I say.
3 Q. Okay. And you say that there were no
4 significant asymmetries between the parties' ability
5 to litigate. I understand that. And that there was
6 no exertion of market power by one party on the
7 other.
8 I'd like to ask you about other factors
9 that might affect whether the 2012 --
10 A. One thing --
11 Q. Go ahead.
12 A. When you said no exertion of market
13 power, whether you're quoting something or is
14 that --
15 Q. I'm -- I may not -- I don't have
16 quotation marks in my notes, but as best as I can
17 remember, that's what you said. If you have --
18 A. I just don't remember talking about
19 exerting market power. Certainly, it says that I
20 didn't see -- I mean, if you look at my written
21 testimony, I believe it says that I didn't see an
22 imbalance of bargaining power or market power that
23 favored the Services, because I was trying to take a
24 conservative approach.
25 And in my testimony orally earlier today,

I believe I said that -- that things were roughly balanced and I didn't see it that way.

So --

Q. Okay.

A. It just struck me because that's not something I recall having said it that way.

Q. That's okay. I may not have remembered it precisely myself.

So let me ask you, in addition to the things you've mentioned, what if the economics or business circumstances relating to streaming changed materially between 2012 and now? Is that something that would affect the 2012 settlement as a benchmark?

A. It would depend on how it would change.

Q. Of course. But possibly those kinds of economic or business environment changes might affect whether or not the benchmark is appropriate, correct?

A. Yes.

Q. What if one or more of the parties to the 2012 settlement based its -- its decision in entering into that settlement on materially faulty or incomplete information? Could that affect the usefulness of the benchmark?

A. Potentially, it could. Again, part of it is even if people went in with the wrong expectations, that it turns out that the benchmark is performing well and meeting the statutory factors, it could still be okay. So I -- I think you could imagine situations where people's beliefs were so far off they did things that turned out to work really badly, but you can also imagine situations where people's beliefs were off but it nonetheless worked well.

Q. Sure. It could fall into the category of dumb luck, right?

A. That's a possibility.

Q. Okay. What about the -- the shadow of the compulsory license? Page 54 of your statement, and this may jog more with your recollection.

A. You're asking my written direct testimony?

Q. Your written direct, yes. As long as --

A. I'm sorry, could you tell me --

Q. Please go ahead.

A. -- where it is?

Q. Page 54.

A. No, I'm saying starting -- if you could tell me where in my binder where is my testimony.

Q. Oh.

A. Am I 883?

Q. Let's see.

A. It's not labeled. These are labeled by trial exhibit names, not by --

JUDGE BARNETT: 885, I think, is your testimony.

THE WITNESS: I'm not sure that I --

JUDGE BARNETT: You might have to look at the other binder.

THE WITNESS: Yeah, I don't think you gave me that. Okay.

BY MR. JANOWITZ:

Q. It's -- it's tab 1.

A. Mine is -- my first tab is Google trial Exhibit 695, testimony of Greg Leonard.

Q. I think you're looking at perhaps -- take a look at the other binder you have.

JUDGE BARNETT: The smaller binder?

THE WITNESS: This is -- this is the only binder you gave me. This is the binder from this morning.

MR. JANOWITZ: All right.

JUDGE BARNETT: Right. That's the one that has your testimony.

1 THE WITNESS: Yeah. Okay. You want me
2 to look at our binder, not yours?
3 BY MR. JANOWITZ:
4 Q. Yes.
5 A. Okay. I'm sorry, if you could then tell
6 me the page number again, please.
7 Q. Page 54.
8 A. I'm there.
9 Q. Okay. Before we get to that, just
10 talking about the nature of the information that the
11 Copyright Owners had, wasn't it also part of the
12 agreement in 2012 that the rates would be determined
13 de novo in this proceeding, should it occur?
14 A. That's my understanding from what I've
15 read by -- statements of one or more of your expert
16 witnesses, and I may have gone back and looked at
17 the language, but, yes, roughly, that's my
18 understanding.
19 Q. So -- and so the Copyright Owners might
20 have relied on that term in agreeing to the other
21 terms in the settlement, correct?
22 A. Yes.
23 Q. And so the -- the possibility of
24 correcting mistakes to the extent that they were
25 made in five years could -- could very well have

been something that was important to the Copyright Owners in entering into that settlement, correct?

A. I would -- I would think actually that both sides would be interested in having the ability to correct what they saw to be mistakes.

Q. I agree with you. So now looking at page 54, you say that "as long as neither party has excessive market power or benefits from a governmental policy that 'tips the scales in its favor,' economic principles of bargaining indicate that negotiated settlements will reflect relative contributions." Correct?

A. Yes, that's what it says.

Q. Now, the compulsory statutory rate, the shadow of the -- of the rate as we refer to it, is the embodiment of a governmental policy, isn't it?

A. Yes.

Q. Okay. And so it would fit into this analysis of whether there is a governmental policy that tips the scales. And -- and the compulsory rate has an impact on bargaining between the publishers and the Services, doesn't it, when they bargained with one another?

A. Yes, as I talked about earlier this morning during my oral direct, I think it serves as

a backstop, and so people take it -- would take it into account as part of bargaining what their alternatives are.

Q. Right. Interesting that you mention that.

So you did, you testified to the fact that it was a backstop, and just before that, I think you said that the way it works is that if a party is getting a really bad deal, it can go to the CRB. Correct? Do you remember saying that?

A. Something to that effect, yes.

Q. So that it would seem that the -- the impact, the protective impact of the shadow is -- is limited; in other words, the way you're describing it, you need a really bad deal to get there?

A. No, that --

Q. To take advantage of the fact that there's a compulsory and that there's a proceeding looming?

A. No, I didn't say that. There's a difference between saying if you thought you were going a really bad deal, you would do something, and saying you would only do something if you thought you were getting a really bad deal.

Q. Well, can you determine at what point in

getting a bad deal, you know, it would affect your ability to negotiate, not just a really bad deal, it's a fairly bad deal, or how does it work?

A. You would have -- the party involved would have to make the calculation of saying what's on the table as a potential private settlement and agreement and form expectations about what would happen in a proceeding, look at the difference in the expected values of those outcomes, and also take into account bargaining costs, both in the private negotiations and potentially in the statutory proceeding.

Q. So it would be a very complicated analysis?

A. It could be complicated. You might -- some people would do that in a simple way. It would be up to the person conducting the analysis.

Q. But if you were going to do it rigorously with the hope that you would get it right, it would be very complicated, correct?

A. I'm not so sure. But if it -- I mean, it's a small number of numbers involved. It would depend on how people did it. I mean -- it would depend -- it would depend on how the particular company formed its expectations.

1 Q. So going back to your statement about,
2 you know, the factors that affect using a benchmark,
3 isn't it true that in this case in 2012, given the
4 nature of the compulsory, given the nature of the
5 shadow, given the fact that it is an expression of
6 governmental policy, weren't the scales tipped
7 against the publishers?
8 A. No, I don't believe so. As I said, my
9 opinion is that it -- well, let's be careful. If
10 you're saying did it tip it against them in the
11 sense that absent the intervention, if they -- had
12 they done things individually, they could take --
13 take advantage of having monopoly power, in that
14 sense you could say it tips, but as I was using the
15 term here -- and maybe I shouldn't use terms when I
16 put them in quotation marks because it shows they're
17 too loose and that's why I put them in quotation
18 marks.
19 I think of the shadow as balancing the
20 bargaining power between the two parties.
21 Q. I understand that. And so my -- but my
22 question is does it balance it perfectly?
23 A. You shouldn't ask me that in front of the
24 judges, but, now, look, there's -- they're human and
25 there's no reason to believe that it will be

1 perfect, and even if they are perfect, it's not
2 clear that that would be recognized by the parties.
3 So as I said before, I mean, this is a matter of
4 people's expectations. And it's not going to be
5 exact.
6 Q. But you can't -- you can't measure the
7 offsetting effect of the shadow of the compulsory
8 against what you consider to be market power on the
9 part of the Copyright Owners, can you?
10 JUDGE STRICKLER: Counsel, can you
11 clarify in your question when you say the shadow,
12 are you referring to the shadow of the compulsory
13 license that exists or the shadow of the compulsory
14 license that might exist if there's no deal or
15 something else?
16 MR. JANOWITZ: I am -- it's the latter,
17 Your Honor.
18 JUDGE STRICKLER: Thank you.
19 THE WITNESS: I'm sorry, if you could
20 just repeat your question.
21 MR. JANOWITZ: Could you, please?
22 THE REPORTER: "Question: You can't
23 measure the offsetting effect of the shadow of the
24 compulsory against what you consider to be market
25 power on the part of the Copyright Owners, can you?"

1 THE WITNESS: I'm not sure what you mean
2 by "measure" or even whether -- I think, there would
3 be a need to do the measurement in order to reach
4 the conclusions I have because let's -- and I
5 realize you don't accept this, but take as
6 hypothetical that, in fact, it does perfectly
7 balance and perfectly offset market power.
8 That would be sufficient information for
9 me, regardless of whether I knew how much market
10 power was offsetting, so there would be no need to
11 measure it.
12 BY MR. JANOWITZ:
13 Q. Right. But you don't know whether it
14 perfectly balances, correct?
15 A. As I said, my expectation is that it's
16 not perfect because, you know, as people are
17 imperfect, but it's the best we have got.
18 Q. So it could -- it could, in fact, tip the
19 scales against the publishers, correct, net, the net
20 outcome?
21 A. The publishers could -- I mean it's
22 certainly possible publishers could have believed
23 that.
24 Q. Right. And so that could have affected
25 their negotiating, correct?

A. Yes.

Q. And you don't know whether that was something that did, in fact, affect their negotiating?

A. Well, I would expect that their beliefs about what would happen -- as an economist, my expectation would be that their beliefs about what would happen if there was a proceeding would affect their decisions.

Q. Of course, but you don't know whether they perceived a disadvantage, a tilting against them at the time that went into their thinking about how they should settle that 2012 proceeding?

A. Yes, and I just -- I just want to be clear about one thing. When you say about how they perceived a tilt, what they would consider a tilt and what I consider a tilt as an economist might be different things. But -- but certainly, if you're just asking did their perceptions of what would happen in the proceeding affect their bargaining position, the answer is yes.

Q. Okay. And so let's -- let's take a look at who the participants were. Was Pandora a participant in the 2012 settlement?

A. I -- I don't believe so.

Q. You don't know? How about iHeartRadio?
A. I don't believe so.
Q. Now, Spotify launched in the U.S. in 2011, but I think they weren't really too effective until 2012. Did they participate?
A. My recollection is they did not, but I'm not sure.
Q. Okay. How about Google Play Music?
A. That one, sorry, I just can't do from memory because I think not Google Play, but I can't remember whether Google -- I thought Google was involved, but I may -- I just -- I mean, I'd have to look.
Q. You don't know?
A. Yeah, I don't know.
Q. Sitting here. Amazon Prime launched in 2014, so it's fair to assume they were not a participant, correct?
A. If by "they" you mean the specific Prime service, yes. If you're asking about Amazon broadly, I don't know. I don't recall their being part of it, but I don't know as I sit here.
Q. Okay. And TIDAL wasn't launched until 2014, so presumably they were not a participant?
A. I believe that is so, given it's a narrow

company.

Q. And Apple Music, the streaming service, I believe was 2015. So it's fair to -- to assume they were not a participant, correct?

A. Again, if you're referring specifically to the streaming service, correct. I don't know if Apple -- I don't recall, as I sit here, if Apple was involved in some other way. It's a multi-service firm.

Q. Right. But -- but certainly with respect to this settlement which related only to streaming, probably not, correct?

A. Yeah, look, if you represent to me that they weren't involved, I have no reason to doubt you. But I don't remember as I sit here.

Q. All right. And -- and you did consider, didn't you, whether the entry of all of these companies responsible for the vast amount of streaming after 2012 affected the suitability of this benchmark?

A. Yes.

Q. That's something you took into account, didn't you?

A. Yes.

Q. But, ultimately, you decided to ignore

that fact, correct?

A. False.

Q. Okay. Tell me -- tell me how it's false.

A. I mean, I didn't ignore it. Wait --

Q. Well, I'm not saying that you ignored it.

A. Yes, you did, that is what you said.

Q. No, let me -- let me rephrase it. I'm not saying that you didn't consider the issue. But my question is, ultimately, did you conclude that the entry of these companies after 2012 was something that affected the suitability of the benchmark?

A. Yes.

Q. You did conclude that?

A. Yes.

Q. Okay. Tell me how it affected the suitability of the benchmark in your analysis.

A. It was part of my analysis that indicated that the industry was optimistic that given the -- the current structure and their views about going forth -- and here by industry, I mean the streaming services -- that the market was functioning on that side and that we were seeing sufficient investment. And so it was one of the indicators to me that the 2012 settlement was working.

Q. So are you telling -- are you telling us that the participants to the settlement in 2012 foresaw this entry?

A. I haven't offered an opinion on whether they foresaw the specific entry or not.

Q. So then how did it affect their bargaining?

A. I wasn't --

Q. Sorry.

A. Are you asking me differently? Because I -- I want to make sure I didn't misunderstand your question.

I thought you had asked me how the entry affected or if it did affect my assessment of the 2012 settlement as a benchmark, and I was answering that question.

And I'm wondering if I misunderstood your question because you seem to be asking something different.

Q. Perhaps. What I'm trying to get at is you -- you take the 2012 settlement as a suitable benchmark. There were many companies that entered into the business after 2012 that didn't participate in the 2012 settlement.

I asked you whether you considered that.

1 And I think you said that you did.
2 A. That's correct.
3 Q. Okay. So --
4 JUDGE STRICKLER: I'm sorry. I don't
5 want to cut off your flow. Do you have another
6 question on this?
7 BY MR. JANOWITZ:
8 Q. So I'm just trying -- but it was my
9 understanding, reading your report, that having
10 considered it, you rejected it as something that
11 affected the suitability of the 2012 benchmark.
12 A. No.
13 Q. That's where we seem to be --
14 A. No, I rejected it as a reason to conclude
15 that you should raise the rates.
16 Q. Okay.
17 A. I didn't reject it as something to take
18 into account.
19 Q. Okay.
20 JUDGE STRICKLER: A question as it
21 relates to the entry and the particular entry that
22 we've seen as represented by some of the parties
23 here who were not parties to the 2012 settlement.
24 And I'm speaking particularly of -- of Apple and
25 Amazon and Google. And tying it back to your

1 testimony on direct, Dr. Katz, where you talked
2 about the problem of defining revenue, the need,
3 therefore, for a per-subscriber floor.
4 In your analysis, did you consider
5 whether the nature of the businesses, of the three
6 entities that have subsequently gotten into
7 streaming in the manner they are now, created an
8 issue that you needed to consider about defining
9 revenue that did not exist at the time of the 2012
10 settlement?
11 THE WITNESS: So I did not think -- yeah,
12 I didn't think of it as an issue that didn't exist
13 at the time of the 2012 settlement, but I thought of
14 it as an issue that the parties addressed with the
15 minimums and measurement -- I just -- or the
16 definition of revenues, took to an issue the whole
17 time, so I didn't think of that as a brand-new
18 issue.
19 JUDGE STRICKLER: Even though you didn't
20 think of it as a brand-new issue, did you consider
21 whether or not the minimum needed to be changed, not
22 the definition of the minimum, but the value of the
23 minimum or the percentage of revenue rate needed to
24 be changed or anything else within the structure
25 itself needed to be changed in light of the fact you

had -- that we had new entities in the marketplace that have what has been colloquially called ecosystems beyond simply the system of streaming of music?

THE WITNESS: No, the level at which I did my analysis was to take the structure of the 2012 settlement and ask how is the industry performing under that structure, and I didn't conduct a separate -- and then concluded that it was performing satisfactorily and then -- and subject to the one modification, that it made sense to retain it, but I did not do an analysis of asking what would happen if you adjusted specific rates. It was a more global analysis of the overall package.

So I have -- I have not conducted an economic analysis, say, for one of the particular products, should the minimum be increased.

JUDGE STRICKLER: Thank you.

BY MR. JANOWITZ:

Q. Dr. Katz, just following along on that and trying to understand the mind-set of what the participants in the settlement were thinking, do you believe that the Copyright Owners were in a position to understand the nature of the ecosystems, as Judge Strickler refers to them and many other people as

well, that -- what the impact of those ecosystems and the complementary goods and services that the companies entering the field would employ?

A. I can't speak to the specific individuals. I certainly know there are plenty of people who would have thought of those things, and talked to, you know, my colleagues who work on some of these issues and network effects. And, certainly, the issues of ecosystems and platforms, it has been one of the -- maybe the leading object of study in industrial organization, and it has certainly been a topic within many of the Internet industries.

So, again, I can't speak to the individuals, but the issues of ecosystems and how the things fit together has been one of the big developments in U.S. and global business of the last decade.

Q. And -- and are you aware of any studies or articles that were written specifically with respect to the use of complementary goods by service -- by Internet service providers prior to 2012?

A. I'm sorry, you're asking -- you're using the term "Internet service provider," which is a

1 term of art.
2 Q. I'm sorry, interactive service providers.
3 I misspoke.
4 A. Okay. Now, as I sit here, I couldn't
5 point to articles specifically about interactive
6 services.
7 Q. Can you think -- without having the
8 citation, can you think of one that stands out?
9 A. No, I'm saying I can't think of one.
10 Q. Okay. Can you -- can you point to
11 anything else that -- that would demonstrate that
12 this issue of measurement of complementary goods and
13 services was something that was in front of the
14 participants to the 2012 settlement?
15 A. As I sit here, I can't.
16 Q. Okay.
17 JUDGE BARNETT: Is this a good place for
18 us to break?
19 MR. JANOWITZ: Sure.
20 JUDGE BARNETT: All right. We will be at
21 recess until 12:04 on that clock.
22 MR. JANOWITZ: Oh, yes, my goodness. I
23 -- I thought it was going to be a very long day,
24 Your Honor.
25 JUDGE BARNETT: Well, it still might.

We'll probably have to keep it light. 12:04 on that clock.

(Whereupon, at 12:10 p.m., a lunch recess was taken.)

1 A F T E R N O O N S E S S I O N

2 (1:12 p.m.)

3 JUDGE BARNETT: Please be seated.

4 Because over the weekend -- I don't know

5 this, maybe I shouldn't make it a cause and

6 effect -- over the weekend I began sending out

7 missives to ask about no closures, and so over the

8 lunch hour I was woodshedded, sort of, to be told

9 that if the building is closed, we can't come in, it

10 is closed. That much we knew.

11 There are some other permutations. There

12 is something called liberal leave, which means

13 anybody who can't get in can take unscheduled leave

14 and anybody who can telework, can have unscheduled

15 telework.

16 There are two kinds of late. There is a

17 late opening, which is when the building opens late,

18 and there is a late arrival, which means the

19 building opens at the normal time but employees are

20 permitted to arrive late.

21 All of these permutations could affect

22 us, but for the fact that Mr. Marks has already

23 asked if we could start late tomorrow to accommodate

24 witness travel schedules and so forth. Travel could

25 be a problem. I was shown Weather Maps. I think it

is real now. It is not fake news. And the snow is supposed to start in this area at about 9:00 p.m. tonight and continue through maybe 2:00 tomorrow afternoon. It is going to be freezing temperatures. There might be some sleet, which would be worse than snow.

So if you have a pen handy, please write down this number. 202-707-0972. That's the Library hotline. So you can figure out where we are.

There also, my tech savvy colleague tells me there is an app for that. It is the OPM alert, the Office of Personnel Management. They call the shots. So the OPM alert app is reliable and generally up-to-date.

If we have some permutations of absent employees, we can't update our own web site, so you can't count on us, but you could count -- you can count on the OPM alert app. And if I were a betting woman, I'd say we're closed tomorrow, but I can't promise that. It is D.C. The most likely is five inches, which is most likely closed, but we will soldier on. We maybe have an update at 5:00, film at 11:00.

Mr. Janowitz, I think you were cross-examining?

1 MR. JANOWITZ: Yes. Thank you, Your
2 Honor.
3 JUDGE BARNETT: The courtroom -- the
4 hearing room is open, so if you get to restricted,
5 just let us know.
6 MR. JANOWITZ: I will. I will do my
7 best, anyway.
8 BY MR. JANOWITZ:
9 Q. Good afternoon, Dr. Katz.
10 A. Good afternoon.
11 Q. Dr. Katz, I want to continue talking
12 about the 2012 settlement. And I'd like to focus
13 right now on the calculation for standalone portable
14 subscriptions, mixed use.
15 Are you familiar with that calculation?
16 A. It depends on what you mean by "familiar
17 with the calculation." Are you asking could I
18 recite the numbers off the top of my head? No way.
19 Q. Okay.
20 JUDGE STRICKLER: Category or
21 calculation? You asked him if he was familiar.
22 Were you asking him --
23 MR. JANOWITZ: With the calculation for
24 standalone portable subscriptions, mixed use. Let's
25 put it up.

THE WITNESS: Is this in the packet you gave me as well?

BY MR. JANOWITZ:

Q. It is in the -- I think it is in the slides, yes.

A. That's what this is?

Q. Yes. And it is also up. So whatever is easier for you. Okay?

A. Just because these got separated, you said -- basically standalone --

Q. Standalone portable subscriptions, mixed use.

A. Thank you.

Q. We're on the same page?

A. Yes.

Q. So looking at the, what I think is sometimes referred to as a headline rate, A, that's 10.5 percent of service revenue. And that -- that percentage actually was the same as 2008. There was a 2008 fixing of the royalties, and I believe that's the same headline rate; is that correct?

A. It sounds right. I mean, if you represent to me that it is, I don't have a reason to doubt it.

Q. Do you know if since this has been

1 continued on from 2008, do you know what the basis
2 was for selecting 10.5 percent in 2008?
3 A. No.
4 Q. And the 10.5 percent, do you know what
5 the basis was then -- well, withdraw that.
6 Was there any debate in 2012 as to that
7 headline rate?
8 A. As I recall, as I sit here, I don't
9 recall if I'm aware of whether there was debate on
10 that or not. It would have -- if I knew about it,
11 it would have been from conversations with Pandora
12 personnel, and I don't recall any such
13 conversations.
14 Q. Okay. And then looking at this
15 calculation 1, there is a calculation and a
16 comparison that you have to do in which you compare
17 the 10.5 percent of revenue and see whether it is
18 greater than another calculation that takes place in
19 part B of this calculation, correct?
20 A. That's correct.
21 Q. And in part B you determine the lesser of
22 80 cents for each subscriber per month and a
23 21 percent of the service payment to the record
24 companies for sound recordings.
25 And there is another alternative for

that, correct, the 17.36 percent?

A. Yeah, depending on the nature of the pass-through.

Q. Correct. So we have to calculate -- and, by the way, that 21 percent of service payment of record company, that's known as the TCC, correct?

A. I thought the acronym was slightly different, but it is something -- I will take your word for it.

Q. Have you heard TCCI? Does that --

A. That's what I am thinking of, but I don't usually -- I don't think of it in terms of the acronyms.

Q. Okay. Do you know what the difference is between the TCC and the TCCI?

A. Not based on the acronyms.

Q. All right. Do you know on any other basis?

A. No. If you told me what the concepts are, I might know. I am saying I don't recognize the acronyms, other than I have heard them.

Q. I get it. So you have to compare -- you have to, first of all, make the calculation of the TCC, compare it to the 80 cents, see which one is lower, pick that one, right, and then compare it to

the 10.5 percent of music service revenue, correct?

A. That's my understanding, yes.

Q. Okay. And the TCC is the prong that measures the mechanical royalty pool by reference to the amount that is paid to the record companies for sound recordings, correct?

A. As you are using it, as I said, I didn't remember the -- I have seen the acronym, but if you are saying it is representing the part of the formula with the 21 percent and the 17.36, yes, what it is doing.

Q. Yes, I am. And do you know how the 21 percent number or the 17.36 percent number came to be selected in 2008 or 2012?

A. So the relationship between the two has been explained to me as it was trying to make those numbers comparable because they were on a different base because, one, there was -- well, as it says, when there is the pass-through, so that is trying to make an adjustment so you are not essentially collecting royalties on something that is just being passed through.

And the specific number, you then asked about the overall level, actually I believe I have talked to somebody at Pandora about that, but as I

sit here, I don't recall what the basis of those specific numbers was beyond what I just told you.

Q. Okay. So you don't have an understanding of how 21 percent was arrived at?

A. Not as I sit here.

Q. And how about the 80 cents for each subscriber per month, do you know how that was arrived at?

A. No.

Q. Did you ever know?

A. I think, again, I may have heard some things about thinking about what its relationship was with the 10.5 percent and how it would apply to an average service, so I think I heard some things about the relationships between those numbers.

Q. All right. And that's the best you can do for us today?

A. That's correct.

Q. So I take it doing this comparison between the A calculation and the B calculation, that under certain circumstances; namely, where the 10.5 percent prong is lower, you believe it is appropriate to measure the amount paid for mechanical royalties as a percentage of the sound recording payments, correct?

A. Could you repeat that? I think I may have misheard you. I wanted to make sure I get the arithmetic straight.

Q. I will do my best. So under certain circumstances, in other words, where the 10.5 percent -- well, just strike that.

Under certain circumstances you believe it is appropriate to measure the amount paid for mechanical royalties as a percentage of the sound recording payments, correct?

A. Yes.

Q. Okay. And do you know why this alternative calculation was selected?

A. There was concern -- my understanding is there was concern that otherwise might not -- that applying it to the revenues, that it would get less money than the Copyright Owners were willing to bargain for, so they wanted to have -- are you asking why there is a minimum?

Q. Why was this calculation of the alternative between the A calculation on the headline rate and the B calculation, the lesser of, why was that agreed to by the parties?

A. As I say, I think in general, and by "general" I mean across the Subpart B and C services

or products, there was concern that the revenue base might result in a royalty that the Copyright Owners considered to be too low, and so they wanted some protection against that.

And then specifically as to the standalone portable subscription, why they did it a particular way, I don't recall something specifically about that.

Q. And as for the reason for the calculation, that's something that you are speculating on, correct?

A. You know, my recollection is that, again, talking to Pandora personnel, that that was one of the reasons they were doing it, but as I say, it is at a high level. I don't have -- these specific numbers, I don't have a basis.

Q. And apart from this conversation you had with somebody at Pandora, do you have any other information on how this calculation was selected?

A. I mean, you are saying in terms of what was said or done at the negotiations?

Q. Yes.

A. Not that I recall.

Q. Okay. And do you understand the economic basis for this calculation?

A. I am not sure I understand what you mean by that question.

Q. Okay. How does it serve, you know, on an economic basis to advance the calculation?

A. I mean, I guess I am still not sure. Are you saying what's the benefit of having a greater of formula to the parties?

Q. I will withdraw the question. Do you agree that it provides some theoretical protection against revenues that do not provide a fair return to the Copyright Owners? I am talking about this calculation on the TCC.

A. Yes, it is protection on the downside for Copyright Owners.

Q. Okay. And looking at the 80 cent per subscriber per month, that effectively works as a cap on the TCC, doesn't it?

A. On the -- on the TCC itself, so you are saying within box B --

Q. Yes.

A. Yes. As it says, because it is the lesser of, it is the lesser of.

Q. Right. Right. So you get the TCC until you reach 80 cents, and then you are out, you don't get any more?

A. That's my understanding, yes.

Q. Okay. Do you know how the 80 cent per subscriber per month was negotiated?

A. No.

Q. If the TCC protects the Copyright Owners, then it would appear that capping it favors the Services, would you agree?

A. Actually, let me amend something. When I was answering -- sorry, the use of the TCC. When I was answering the earlier question about the protection, I was referring to everything collectively in box B, just to clarify that.

Now, in terms of your question, you are asking me would Copyright Owners be better off if box 1 were eliminated, and the only -- and only box 2 remained, yes, they could potentially be better off.

Q. Okay. Do you know if the cap, the 80 cent cap was an offset or compromise to the TCC prong in the negotiations?

A. I don't know if it was explicitly called out as an offset or a compromise. I mean, overall in the negotiation, everything they are doing is a compromise, but I don't have information specific to that.

Q. And do you know whether any other number besides the 80 cents was proposed during the 2012 negotiations?

A. Not that I can recollect. Again, it may have been something that I had a discussion with from somebody from Pandora, but I don't remember -- certainly as I sit here, I couldn't tell you what the range of numbers was, if any.

Q. And do you have an opinion on whether the cap should be a different number?

A. My opinion is, as I stated, that the collection of numbers would be reasonable for the reasons I have stated in my report. So the 80 cents is part of that overall conclusion.

Q. Right. But specifically have you done anything to analyze whether 75 cents would be better, whether 90 cents would be better, what the impact would be of changing the 80 cents?

A. No. As I actually answered earlier in response to a question by Judge Strickler, I have not done separate analyses of the individual components. What I have done is assess the effects of the overall package.

Q. But notwithstanding the fact that you haven't done any analysis, you accept these numbers,

correct?

A. Yes. My conclusion is that the overall package -- well, it has the benefits I have talked about.

Q. And once you have computed what is called the all-in royalty pool, that's the top half of the calculation, you deduct the amount of performance royalties, correct?

A. That is correct.

Q. If you are following this calculation.

A. Yes.

Q. And you do that to identify what's left over, which would be the mechanical royalties, correct?

A. Yes, if you find the total to be the sum of those two, yes.

Q. So at this point after the deduction, you have got the amount of mechanical royalties and so you could theoretically be done, correct?

A. That's correct.

Q. Okay. But you are not done, correct, at least not under this calculation?

A. Not for this one.

Q. Okay. So you need to make another calculation to compare the mechanical royalties to

1 50 cents for each qualified subscriber per month,
2 sometimes known as the mechanical-only floor,
3 correct?
4 A. Yes.
5 Q. You mentioned this floor in your report,
6 as I recall, and you suggest that it be removed in
7 the future, correct?
8 A. That is correct.
9 Q. But you don't address why it is there in
10 the regulations that were arrived at as a result of
11 the 2012 and 2008 settlements, correct?
12 A. I'm sorry, can I ask one clarifying?
13 When you say why it is there in the regulations, I
14 mean, my understanding is it is in the regulations
15 because the parties agreed to it.
16 Q. Correct.
17 A. Are you asking me am I aware how the
18 parties came up with that specific thing?
19 Q. Yes.
20 A. The answer to that question is I'm not
21 aware.
22 Q. And you haven't talked to anybody about
23 that?
24 A. How -- about the --
25 Q. About how the 50 cent mechanical floor

1 came about.
2 A. Actually I believe I talked to Adam
3 Parness about the concept of the floor. I don't
4 recall discussing the 50 cents in particular, but
5 did discuss where the floor came from or the idea of
6 the floor.
7 Q. But, in any event, it is clear, isn't it,
8 that the floor protects the Copyright Owners from
9 being paid mechanical royalties that are
10 unreasonably low or nonexistent, correct?
11 A. You are reading several things in, with
12 the unreasonably low and non-exist -- it is
13 certainly the case that the mechanical royalties
14 calculated by this couldn't fall below 50 cents.
15 Q. Right. And so there was an assumption,
16 there is an assumption that this is for the
17 protection of the Copyright Owners, correct?
18 A. You used the word "protection." It
19 certainly is my understanding that that clause was
20 put in because the Copyright Owners sought to have
21 it. And it would be the case that if the only thing
22 you did, if you held everything else fixed and you
23 removed it, you would potentially have lower
24 royalties. So in that sense it is protecting them.
25 JUDGE STRICKLER: Excuse me, counsel.

1 Dr. Katz, you have testified as counsel
2 has taken you through each of the elements of the
3 2012 settlement rate that you were unaware of how
4 the particular number was arrived at in
5 negotiations.
6 Did you attempt to find out how they were
7 arrived at in the course of doing your expert work
8 in this proceeding?
9 THE WITNESS: No. I mean, I did ask some
10 questions about negotiations and the particulars you
11 heard about, the floor, to understand why it was
12 there, but my overall approach, again, has been just
13 ask the question and we take this as a benchmark.
14 Is it reasonable to take the structure? And I
15 didn't seek to try to fine-tune the breakout to
16 different parts.
17 JUDGE STRICKLER: Did you think it was
18 important to do a breakout of the individual parts
19 and find out why they were set at the levels they
20 were?
21 THE WITNESS: No. I mean, if it could be
22 done easily and get out, so to have the information,
23 it could potentially be useful but, again, in trying
24 to rely on the benchmark, I am trying to say, okay,
25 well, the industry decided this, let me ask, is it

working overall?

And I thought it would be beyond my expertise to start analyzing the effects of each of the individual components separately but --

JUDGE STRICKLER: Is it fair to say then that you treated it as you would treat any other benchmark that you considered to be a market benchmark, in the sense that you didn't want to analyze the particulars but just try to figure out how the particulars applied?

THE WITNESS: Well, I, mean, I did do some analyzing the particulars, given the end concluded the point about the floor itself, but I was largely relying on this is what the industry has done and take it at a high level, so I didn't get into most of the particulars.

And, yeah, I guess in some sense, that's what I would tend to do with any benchmark. That's why I am using it as a benchmark to avoid having to model things and build it from the ground up.

JUDGE STRICKLER: Thank you.

BY MR. JANOWITZ:

Q. Dr. Katz, you are proposing on changing the 50 percent -- the 50 cent mechanical-only floor, correct?

A. That is correct.

Q. And potentially that could be disruptive to the publishers; isn't that right?

A. If by disruptive you mean that they could get less revenue, that's correct.

Q. Okay. And if we look up to the part 1 of the calculation, we see what you referred to as a minimum before, we're making the distinction between minimums and the floor, right?

A. That is correct.

Q. And you have referred to the minimum and we see the minimum there, which is capped, right, at 80 cents, but the 50 cent mechanical-only floor provides an additional layer of protection to the Copyright Owners, correct?

A. Yes, in the sense that I talked about before, yes.

Q. And it protects them from the performance royalties eating into the total payments such that the mechanical royalties are less than the 50 cent per subscription per month amount, correct?

A. Yes, I will accept that as a mathematical statement, yes.

Q. So the regulation protects the Copyright Owners at least in some situations from a rise in

the performance royalties eating into the mechanicals, correct?

A. Yes. My only hesitation is when you are saying protects, because it extends the same people getting the mechanicals and performance royalties, the total is staying the same, but I agree that it keeps the number that is calculated as a mechanical royalty from falling below that level.

Q. Well, if the performance royalties were high enough they could reduce the mechanical royalties to next to nothing or nothing, correct?

A. Yeah, I guess under this formula, they go high enough -- well, to think about the lesser part but, overall, yes, they could push it down.

Q. So let's look at part 3 of the calculation. You need to divide the total royalties by the number of plays. That gives you the royalties per play, correct?

A. Yes.

Q. And royalties per play is a measure of revenue by usage, isn't it?

A. Yes, it is a measure of usage.

Q. Okay. So as a result of these calculations, if I write a song and I get a million plays, and you write a song and you get only 100,000

plays on the same service during the same month, I will get ten times the amount that you will get because my song was listened to more, correct?

A. I believe that's correct.

Q. And that's fair, isn't it?

A. It certainly is consistent, I think, with what you could see coming out of an effectively competitive market, so in that sense it is fair. Again, we have talked about there are different perceptions of fairness, but I wouldn't say it is unfair based on the notion of fairness that I put forth.

Q. All right. And the basis for this is the more my song is played, the more I get, right?

A. Yes. I mean, it is your hypothetical, yes.

Q. Yes. And the payments under this calculation should increase in direct proportion to the usage, correct?

A. In this calculation, that's what happens, correct.

Q. Okay. Now, I understand from your earlier testimony that the settlement provides a benchmark that meets the objectives of 801(b)(1), correct?

A. Yes.

Q. And the second objective is to afford the copyright owner a fair return for his or her creative work and the copyright user a fair income, correct?

A. Yes.

Q. I am going to refer to a slide, but it is restricted, so I think perhaps the easiest thing is for everybody, if that's okay, Your Honors, to look at it on the paper.

JUDGE BARNETT: Certainly.

MR. JANOWITZ: That way we don't have to clear the courtroom.

JUDGE BARNETT: I think we can do that.

BY MR. JANOWITZ:

Q. And you have it there, correct? It is the slide called Mechanical Royalty Per Play?

A. Yes. Sorry, I was just reorganizing. Somehow demonstrative 9 got mixed with demonstrative 1. Yes, I have that.

Q. We can help you with it if it got messed up.

MR. MARKS: This is demonstrative 2? I want to make sure we're on the right page?

MR. JANOWITZ: It is.

MR. MARKS: Thank you.

BY MR. JANOWITZ:

Q. Okay. So what you are looking at is a slide that shows the mechanical royalty -- royalties per play as of December 2015, and it shows that data for seven interactive services, Deezer, Apple, Amazon, TIDAL, Rhapsody, Spotify --

A. I'm sorry, can I interrupt? When you say this is December 2015 or that is December 15th of the year?

Q. I do not believe it is December 15th.

A. It is December of the year 2015?

Q. Correct.

A. Okay. Thank you.

Q. Sure. And you can see by looking at this that a stream on Deezer is worth almost ten streams on Spotify ad-supported, correct?

A. Yes.

Q. Yes, you agree with that?

A. Yes, I agree with that.

Q. Okay. So the same song can be played about ten times on Spotify ad-supported to generate the same royalty as one play on Deezer, correct?

A. That's correct.

Q. I am going to show you another slide also

1 restricted. This is demonstrative 3. And this is a
2 slide that was actually prepared by Spotify's
3 expert, Dr. Leslie Marx.
4 And this slide shows that the mechanical
5 royalties for play on a weighted basis, weighted by
6 Dr. Marx, has declined by almost 50 percent between
7 2012 and 2015 at a time that the amount of streaming
8 has increased dramatically, correct?
9 MR. MARKS: Object to the question.
10 THE WITNESS: You are asking me if the
11 figure shows that?
12 JUDGE BARNETT: Excuse me.
13 THE WITNESS: I'm sorry.
14 JUDGE BARNETT: What is the basis of the
15 objection?
16 MR. MARKS: Well, I don't believe that
17 Mr. Janowitz has accurately described what this
18 chart depicts, which is not -- which is not weighted
19 basis across all services, but, rather, is only a
20 select number of services, so I don't think it is
21 fair to question the witness about this.
22 JUDGE BARNETT: Okay. Did you want to
23 respond, Mr. Janowitz?
24 MR. JANOWITZ: Well, this is based on
25 data from Harry Fox. It is a select number, but it

is a number. It was not selected for the purpose of adverse selection to show a particular result.

MR. MARKS: This isn't his chart. I think it is beyond the scope of his direct examination. And we don't even know, the record is not clear on which Services are in, which Services are out. I don't think it is particularly meaningful or a fair game for this witness.

MR. JANOWITZ: You know, I don't really need the chart.

MR. MARKS: Okay.

JUDGE BARNETT: Thank you.

BY MR. JANOWITZ:

Q. You have been studying this area now for some time, correct?

A. Yes, I have, that's correct.

Q. And you have done, for example, that calculation showing that the effective per play rate has declined?

A. There have been a lot of those calculations going around, but --

Q. You are familiar --

A. I believe that's right, that overall look at the industry average to the effective per play rates have been declining.

Q. So do you have any doubt that the mechanical royalties per play have been declining?

A. In terms of -- you are saying in terms of the industry averages?

Q. Yes.

A. No, my understanding is that's what's happened, and that's, I believe, what my calculation showed.

Q. Right. And given the amount of the increase in streaming, it wouldn't surprise you to learn that that's a pretty severe decline in the per -- in the royalties per play, would it?

A. I mean, it wouldn't surprise me because I don't think there is much of a relationship in terms of what you just talked about. There is no reason -- you could have a dramatic increase in streaming and have the opposite happen, so it doesn't surprise me because I think they are unrelated, largely.

Q. I'm sorry, I didn't hear the rest.

A. I think they are largely unrelated. I mean, you have more people streaming. My understanding is what is driving these trends is not the total amount of streaming, but it is the intensity or the level of engagement of consumers who are streaming.

1 And that level of engagement could well
2 go down as we start having more and more people
3 stream, in which case you could see the trend
4 reverse. So I just don't see a tight linkage
5 between overall amount of streaming and what you are
6 talking about, but in that sense, as I said, I am
7 not surprised if it happened.
8 Q. But you are not surprised to see that the
9 mechanical royalties per play are declining at the
10 same time as the streaming activity is increasing?
11 A. No. In fact, there is a sense in which
12 they could be related, not that the one has to drive
13 the other, but the other way around is the extent to
14 which consumers are seeing that streaming is more
15 and more attractive because in terms of economics,
16 working our way down the demand curve and trying to
17 expand the market, you could then see that the
18 average revenue per play would be falling. And
19 given it is a percentage of revenue of royalty, you
20 then would see the royalty per play also falling.
21 Q. Right.
22 A. So there is -- so I just want to be clear
23 about the linkages because there are a lot of
24 different possible ones. So there could be
25 something where these have the same cause, which is

the industry is figuring out how to bring more consumers in at lower prices and then that has this effect.

Q. But just the math would lead you to conclude that given the number of streams that are -- that we have got going up, and the fact that we have got -- I'm sorry.

Given the fact that the number of streams are going up, it doesn't surprise you to see the royalties per play decline?

A. Again, what it is driving at, though, is not the streams overall but it is a question of the streams per subscriber.

Q. Yes, I am actually not asking you for the causal relation, just the --

A. Again, if you want to say -- so, yes, it wouldn't surprise me if it went up and mathematically it wouldn't surprise me if it went down.

Q. Is it your understanding that it has been going down?

A. Yes.

Q. And taking a look at demonstrative 4, this may not be restricted but it is safer probably to look at it in the paper anyway.

JUDGE BARNETT: Okay. Thank you.

BY MR. JANOWITZ:

Q. Do you see a chart showing the increase in streaming activity roughly 2012 to the present, correct?

A. I guess that's what it says. I don't know exactly what it is measuring, but it says streaming activity on it.

Q. Okay. And this is a sharp incline in streaming activity, correct?

A. There are certainly times in which one could characterize it that way, yes.

Q. Okay. And does this conflict with anything you know about what is actually happening with regard to streaming?

A. No, not at the level -- I mean, I can't read the numbers, but in terms of broad trend, it is consistent.

Q. Seems right, okay.

And despite more streaming and, therefore, greater usage, the payments to the Copyright Owners are not increasing proportionately, are they?

A. Proportionately to what?

Q. Proportionately to the increase in

streaming.

A. I mean where you are measuring streaming by physical numbers of streams?

Q. Correct.

A. In that case it is not rising proportionately.

Q. Okay. So the proposition that we established before when we looked at the distribution of revenues under Subpart B of the more the song is played, the more I get paid, that's not at work here, is it?

A. I mean overall --

Q. With respect to streaming?

A. No, it is still at work there because in terms of if you have, in your example before showed if you had two songwriters and one song was played ten times as much, that person would be getting ten times the royalties the other one would. So there is an element of that.

Q. Yes. But if respect to if I am a songwriter and my song is being streamed ten times as much, my revenues are not going to rise proportionately, correct?

A. Well, no. You are going to get an increased share of the pool, so your revenues are

1 going to rise when your songs go up.
2 Q. They are going to rise but they are not
3 going to rise in direct proportion to the streaming,
4 are they?
5 A. Well, actually, I think from the point of
6 view of an individual songwriter out to a lot of
7 decimal places, I think maybe I am wrong, but I
8 think it does rise in proportion to your streaming.
9 Yeah, I am actually sure of that.
10 Because if you go back to your
11 calculation, you take the royalty pool, divide by
12 the total number of streams, and that's going to
13 give you that per play amount that is using -- it is
14 the mechanism for allocating the pool among
15 songwriters. And I suspect for all but maybe there
16 are very few, if any, songwriters, so that their
17 number of songs actually changes that calculation,
18 so it is rising proportionately.
19 Q. I think you are talking about it as the
20 calculation under the standalone portable
21 subscription calculation. Is that right?
22 A. No, it is any of the calculations. If in
23 the end there is a royalty pool and then it is
24 divided by the total number of plays to get an
25 amount per play, that amount from the perspective of

any given songwriters is essentially a constant at that point, so then it is going to scale proportionately with the number of plays.

Q. If I were a songwriter getting royalties based on streaming three years ago, and I had the same number of streams now, would I be getting the same revenues on the same song, all else being equal?

A. My guess is you would be getting less now.

Q. Okay. Now, do you see the decoupling of usage for payment as a positive feature, don't you, in the context of this proceeding?

A. When you say usage for payment, you are talking about in terms of what is happening with the retail prices? Are you asking do I think that all-you-can-eat pricing has benefits for the industry, yes. I mean, part of it is, when you say usage, exactly what you mean, because I am testifying, and so have some of your economic experts, there is the option value, which you can think is part of the usage of the service, if you want to use it that way and then the actual consumption.

Q. All-you-can-eat pricing does not provide

an increase in payments to the Copyright Owners proportionate to the amount of use, correct?

A. If you are saying you have more subscribers and that's how use is changing and you are keeping the subscription rate, then it is proportionate. If you are talking about a change holding fixed the number of subscribers but changing the intensity or degree of engagement --

Q. Correct, that's what I am talking about.

A. Then in that case it would not rise proportionally.

Q. And you say in paragraph 35 of your rebuttal report that the revenue base structures facilitate retail pricing "because the service does not pay additional royalties solely because a user has listened to more streams."

And that's your position, correct?

A. I am wondering if I can see my rebuttal report, because it is 170 some pages, and I did not review my rebuttal report preparing for today because I had not anticipated being asked questions about rebuttal.

Q. Would you accept a representation?

A. Sorry to be peevish but just given some of the --

Q. That's okay. Why don't we -- rather than take the time, let's move on.

Now by 2015, three years after the settlement of 2012, mechanical royalties from interactive streaming amounted to less than 2.7 percent of total music publishing revenues, correct?

A. That sounds right. I mean, I gave a number. It may be what you are reading from the number in my report.

Q. That's the number you gave.

A. Yes, based on NMPA data.

Q. Did you consider the fact that the amount of revenues from interactive streaming in 2012 and for years thereafter was insignificant compared to the total publisher royalties in deciding the suitability of the 2012 settlement as a benchmark?

A. I mean, the pattern is something I took into account. It is something I thought about. I don't know what to say beyond that.

Q. Did it have any impact on your opinion?

A. Well, to answer that question, you have to say relative to what? I mean, had there been a different pattern, I might have had a different opinion.

Q. I am not giving you a hypothetical. I am asking you whether that fact was something that you considered in your opinion and how you took it into account, if you did?

A. I am saying it is something I took into account but if you are asking me did it make any difference --

Q. Yes.

A. When you talk about difference, then you have to have a basis of comparison. I mean, that's a logical thing.

Q. I agree. But you would have the basis, not me.

A. No, and I am saying if I had seen something very different, conceivably I could have reached a different conclusion, but I saw what I saw and I built my analysis on that.

Q. Do you have an opinion on whether interactive streaming is a substitute for other types of consumption of music, such as CDs and PDDs?

A. My belief is, my opinion at the aggregate level is that it is a substitute.

JUDGE STRICKLER: You say it is a substitute?

THE WITNESS: Is a substitute.

BY MR. JANOWITZ:

Q. When you say on an aggregate level, what do you mean by that?

A. Well, one of the things that has come up is, and as made reference to the paper before by Aguiar and Professor Waldfogel is that when they did their econometric analysis, they actually got different answers to that question depending on whether they were looking sort of song by song and getting the questions about whether having songs being streamed had a promotional effect.

And, again, taking back to something you have heard a lot of in Web IV, saying like terrestrial radio is said to have. And I think there their econometrics suggested it was promotional.

But when they did their aggregate analysis, which I think is the more appropriate one here, they concluded that they're substitutes. And that's how I was answering the question, and my belief just generally is that at a broad level that they are substitutes.

Q. But I take it what you are saying is that the Aguiar and Waldfogel analysis also considered the possibility and looked at data that suggested

that the stream was actually promotional and not substitution?

A. That's right. When they did their, I think they called it their song level analysis, they found that, the econometrics.

Q. And did you look at that song level analysis?

A. I mean, I took it into account. And the thing is that the song level analysis would suggest then that the opportunity cost is very low or even negative because if it is promotional, then it is saying that the publishers and songwriters are benefitting from it.

So I took it into account, but they expressed doubts themselves. And I took the more conservative approach of saying let me assume that it is a substitute and that there is some opportunity cost.

Q. Why is the substitutional approach more conservative?

A. Well, when I say conservative, more conservative in the sense that it is a more favorable assumption to take in terms of its implications for having a higher royalty -- if it were promotional, I think that would counsel towards

1 having a lower royalty rate.
2 So by assuming that it is not
3 promotional, that actually tends to pushing them
4 having a higher royalty rate than otherwise. I took
5 that to be conservative given that I have been
6 retained by the licensees, rather than the
7 licensors.
8 Q. So you mean conservative from your
9 perspective, not from the Aguiar and Waldfogel
10 perspective?
11 A. That's right, conservative from given
12 that they were saying -- well, some of it says that
13 it is promotional and some not. I said let me take
14 the assumption that gives rise to lower royalty
15 rates and take that as the working assumption.
16 Q. Do you know whether the participants to
17 the 2012 settlement considered the issue of
18 substitution?
19 A. I have not heard from them. I would be
20 extremely surprised that they didn't, given that
21 certainly people in the industry have been worried
22 -- and partly I think they saw from the rise of
23 downloads -- that they have a history of new formats
24 coming in and replacing old ones, but I don't know
25 if somebody -- I have not heard from anyone

specifically saying I'm worried about that, but I have to say I would be quite surprised and at some level disappointed in them, if they didn't think of that.

Q. This is purely speculation on your part, correct?

A. Yeah, Well, I would say as an expert, it is a statement about that it would be economically rational for them to take that into account, and that information about that would have been available to them at the time, which should have led them to conclude that that was a possibility.

Q. Do you know what information was available to them at the time?

A. So based on looking at trade press and Internet, I mean, there was a view at the time that streaming, it was wide -- held by a lot of opinions that streaming was going to be the next big thing and it was going to be important in the future. So I understand that at that high level.

Q. Is there anything in your written direct report that is cited to indicate contemporaneously as of 2012 what people were saying about the impact of substitution?

A. You asked if it was mentioned

incidentally. And as I sit here, I don't recall anything cited that would be in that category.

Q. Do you know whether the participants to the 2012 settlement considered that the rates under Subpart B were satisfactory given substitution?

A. From reveal preference, they would have concluded it was satisfactory enough that they agreed to the settlement, but I don't have access to their specific thinking about it.

Q. And specifically you don't know whether they were considering substitution when they approved the rates, correct?

A. That's right. I don't know what was in their heads when they were doing it.

Q. Right. Do you know what the rate of substitution was in 2012?

A. I just need a minute to think about the data. No, there are some of the -- just give me a minute to think about the timing. I think the things I looked at are not for 2012.

Q. Okay. Do you know whether given the small amount of interactive streaming in 2012, the participants to the settlement had adequate data to calculate a rate of substitution?

A. I don't know whether they had adequate

data or not.

Q. Okay. Given that streaming today involves billions of streams, it is important to get that rate of substitution right, assuming it exists, because it will be multiplied by very large numbers, correct?

A. If you are asking me does the royalty rate matter, given there is a lot of streaming, the answer is yes.

Q. Okay. So if you were thinking about this in 2012, you would have had at hand very little data to do this piece of analysis, correct?

A. It depends on your characterization of "very little data." Particular private parties might actually have -- they might have a lot of data actually on what was happening to downloads and CD sales, and if you were saying the aggregate amount of streaming is low, that I would agree with, but that's a different question than the amount of data.

So I am not sure how much data or how detailed data they would have access to, with respect to streaming.

Q. I am talking about data on streaming. I am not talking about data on the change in the video business or the change in CDs or anything else. I

am talking about data on the streaming business.

A. I'm sorry, I thought you were asking about substitution. Maybe I misunderstood you.

Q. Yes.

A. Well, in substitution you have to substitute something for something else. So that's why I was answering your question about if you are going to look at the substitution and the amounts of data you need, at some level the amounts of data also were substitutes because you have -- if you have a very good understanding of what is happening to CD sales and digital downloads and things like that, that will help you get a better understanding of the effects of the streaming.

And it is potentially the case that there could be a small amount of streaming that you had the right data and you had detailed data enough on your sales that, in fact, you could get a good idea of substitution.

Q. And that's -- I'm sorry. I didn't mean to cut you off.

A. I guess what I am disagreeing with, I think is implicit in your question is the notion that if there is only hundreds of millions of streams or something and not billions, that that

means you don't have very much data. It is a more complicated question than that, what it means, whether you have enough data because it also depends on the nature of the data themselves.

JUDGE STRICKLER: Excuse me, counsel. Just apropos to this discussion about substitution, potential substitution, the Aguiar and Waldfogel study that you referenced, page 82 of your direct testimony, was -- apparently has a working paper dated 2015, and it was apparently published in 2016.

Do you know what time period was covered by the data they analyzed?

THE WITNESS: So they looked over -- I tried to do this from memory -- over some different time periods. They had what they considered to be better data for the U.S., I think for 2013 to 2015. So their preferred specification and the one that gives rise to the 137 -- 147 number --

JUDGE STRICKLER: 137.

THE WITNESS: 137 number, I think that is 2013-2015. Whatever it is, it was a smaller time period than the full set of data they had.

JUDGE STRICKLER: But you recall that it was after the 2012 settlement period?

THE WITNESS: Yes, it is more recent.

1 That's earlier when I was pausing trying to
2 remember, when I was asked did I have anything about
3 2012, I was trying to remember their data went early
4 enough. And it may be that some of their data do
5 overlap with 2012, but their preferred
6 specification, in my recollection, is certainly --
7 it started after 2012 and certainly the period
8 finished after 2012.
9 JUDGE STRICKLER: Thank you.
10 BY MR. JANOWITZ:
11 Q. Dr. Katz, the Waldfogel and Aguiar paper,
12 that was a working paper?
13 A. My understanding is it was a paper
14 commissioned by the European Commission and put out
15 in a series of theirs, and I guess we call it a
16 working paper.
17 Q. That's what they called it, isn't it?
18 A. I don't recall, but something like it. I
19 just don't remember the name they had on it.
20 Q. And they said in the paper that it wasn't
21 a complete, completed study, didn't they?
22 A. My recollection is they said there was
23 more work to do, which is pretty much always true
24 with econometric stuff.
25 Q. And when you have a working paper, is it

in a peer-reviewed journal?

A. No, not -- the working paper itself is not a peer-reviewed journal.

Q. Tell me what a peer review means in this context?

A. Well, I assume you are asking about peer-reviewed journal, you are asking about academic journals where authors would submit a paper in hopes of publication. And then it would be reviewed by other experts in the field to determine whether it merited publication.

Q. So it didn't go -- this Waldfogel or Aguiar paper didn't go through that process, correct?

A. Not in an academic journal. And I don't know, to anticipate your next question, whether or not there was some sort of internal peer review at the series or whatever, the working paper series they used, but it certainly, as far as I know, didn't go through an academic journal peer review.

Q. And when the paper was published, were you aware of its existence?

A. Yeah, I don't recall seeing the published version of that paper. I think the ones I have reviewed have been the working paper version.

Q. And did you -- have you seen that paper prior to your being engaged in this proceeding?

A. I am not sure because, I mean, I know Joel and I have read his work. And I have been interested in seeing him give seminars, so I don't know if I have seen that before or not. I certainly had not read it with the care I have read since then, but I might or might not have seen it.

Q. Doesn't the rate of substitution depend on what other forms of consumption a consumer is foregoing?

A. I am not sure what you mean by -- I mean, the rate would specify -- I am not sure I understand your question.

Q. Let me try it again.

A. You would say the rate at which I substitute A for B, would depend on A and B both.

Q. Exactly. In other words, if a consumer used to listen to only pirated music and now listens to an interactive streaming service, that would not be a substitute for CDs or PDDs, correct?

A. You are saying -- if you are asking would that be an active substitute -- if you amend it that way, that would not be the active substituting for that. It would be what you are saying, you are

1 substituting the streaming service for piracy.
2 I just want to be careful when you say it
3 wouldn't be a substitute because that's a property
4 of the good, it could well be a substitute for other
5 things at the same time people were switching but --
6 the act --
7 Q. I am talking about the act of
8 substitution.
9 A. The act, I agree with you.
10 Q. And do you think that participants in the
11 2012 settlement considered the issue of what was
12 being substituted for what, in other words, what
13 alternatives there were to streaming and what the
14 impact on streaming would have with respect to each
15 one of those alternatives?
16 A. Again, I have not interviewed or read
17 interviews with the people involved in that, so I
18 don't know what they were thinking. You know, in
19 terms of what would be economically rational, they
20 should have been thinking about those things, but I
21 can't rule out that they were economically
22 irrational.
23 Q. Was piracy still an issue in 2012, 2011,
24 2012?
25 A. Yeah, I believe it remains an issue

today.

Q. So is it possible that the participants to the settlement thought that the principal impact of streaming would be to reduce piracy and increase the pie of music revenues?

A. Actually I think that has -- you actually showed data, I think that view is possible, because it turns out to be that is what was true, it has increased the pie.

Q. And you know that it has increased the pie how?

A. I guess looking at the data and that it stabilized industry revenues and that if you ask industry sources or look at -- see what people said, streaming has been the thing that has generated the increase in revenues, and then if you look at Aguiar and Waldfogel, one of the things they say there is streaming, in addition to displacing music sales, is also displacing piracy, so you are going from a situation where Copyright Owners are getting no royalties to one where they are getting royalties.

So there are several different sources, but I think streaming is widely attributed with being responsible for staunching the erosion of revenues.

Q. Well, you have used two words. You said stabilizing the revenues and staunching the erosion of revenues. How did that actually increase the pie, increase the amount of revenues?

A. Stopping the decline, in the perspective of economists or from arithmetic, if you are stopping something from declining, it then means as a result of that, it is at a higher level than it otherwise would have. Then you are responsible for that difference or the delta is an increase.

It is also the case, I believe, in the last couple of years, it has not just stopped the decline, but has actually reversed it so there has been an increase.

Q. Do you know what that increase is?

A. I think I report it in my report, but it is --

Q. When you talk about the delta of decline that it is preventing, how do you measure that delta of decline?

A. Well, conceptually you are asking the question what would have happened absent streaming, and it is trying to project the trends. And there is obviously risks in trying to project trends, but project how much the downward trend would continue

in the other sales or, I'm sorry, the other formats, and then you are asking how much is it different than that.

Q. Have you done that?

A. And sort of quantitative assessment? No, I have not.

Q. Do you think that the rate of substitution might change with scale, in other words, the amount of streaming?

A. Let me make sure I understand the use of scale. So you are not asking -- you are asking as more and more people engage in streaming and we bring new consumers in -- I'm sorry, I apologize. You asked what would change? It just slipped my mind. It is my fault. I'm sorry.

Q. That's all right.

I am asking whether the rate of substitution --

A. Okay, yeah, so the rate of substitution could change as you bring new consumers into the market. And in particular you might think if you start bringing in -- if you bring out new services, for example, that have lower prices than past services and are getting more and more attractive, you might think that increasingly I am going to be

taking people away from piracy because it is a better alternative. And that could actually shift over time, as the set of streaming and offerings changes and brings in different types of consumers.

Q. And do you know whether Aguiar and Waldfogel took that into account in their paper?

A. I don't recall their doing something in terms of the econometrics. They may have discussed it. I just can't remember as I sit here whether they talked about that possibility.

Q. And have you done such a study yourself?

A. To look at changes in -- no, I have not.

Q. Okay. And if you were negotiating the 2012 settlement, you would want to consider as best you could the impact of an increase in scale, wouldn't you?

A. When you say, again, meaning --

Q. More streaming.

A. And, I mean, in general, I would want to form some sort of view of the future and what I thought was going to happen with streaming, and it would, might help me think about the future of my industry and my bargaining positions, so yes.

Q. And one of the reasons you think about that, if you had thought about this issue in 2012,

was how it would affect substitution, correct?

A. Yes. And to take it back to something we were talking about earlier this morning, the rate of substitution would factor into thinking about opportunity costs. So it is something you would think about, if you were economically rational, you would think about it.

Q. But in 2012 you wouldn't know, would you, how much would be streamed in 2016, even by order of magnitude, correct?

A. If you are asking if I would know, I doubt if I would know. If you are asking what did the people who were industry experts at the time, how correct or how far off they are, I haven't done any sort of assessment of overall how well people did in predicting.

Q. So in 2012 there were at least two variables that were unknown, the rate of substitution and the future levels of streaming, correct?

A. No, the rate -- I don't know if it is correct about the rate of substitution was unknown because as we talked about, I don't know what access to data they have. They may well have had a sense in 2012 of what the industry participants thought

1 the rate of the substitution is. I don't know.
2 Q. And the basic answer is I don't know,
3 correct?
4 A. That's correct.
5 Q. You don't have any information. And yet
6 you think that the entry into the field after the
7 settlement in 2012 of companies that today account
8 for over 95 percent of interactive streaming does
9 not affect the suitability of the 2012 settlement as
10 a benchmark; is that right?
11 A. Again, if what you mean by does not
12 affect the suitability is that I took that factor
13 into account and having seen that concluded that the
14 2012 settlement, subject to modification, is an
15 appropriate benchmark, yeah, that's true, but, I
16 mean, again, there were changes. I took them into
17 account but the bottom line is I have concluded it
18 an appropriate benchmark.
19 Q. Okay. In your deposition you considered
20 the issue of substitution as between interactive
21 streaming and CDs, correct?
22 A. The topic may have come up in my
23 deposition, sure.
24 Q. I believe you testified that in
25 considering the rate of substitution, you had to

consider not only what you were substituting in, but also what you were switching from?

A. That's a statement I agree with.

Q. So as I understand your testimony, in trying to establish this rate of substitution, you need to know whether a consumer of interactive streaming used to listen to CDs or radio or perhaps nothing at all before you can calculate a substitution ratio; is that correct?

A. Well, what you need to know is how the -- you don't actually need to know the basis -- you need to know what the change is in those different formats, the different forms of music consumption, you need to know how those changed.

Q. So you are basically agreeing with my question, correct?

A. Subject to -- I will agree with you in the broad level of English. In terms of technically, I don't think I am, but, yes, in the broad English usage, I will agree with you.

Q. I don't speak technical. I only speak English.

In other words, if aggregate revenues of CDs and PDDs go down and aggregate revenues of streaming go by up the same amount, you can't say

that streaming was a substitute for CDs and PDDs unless you can establish who switched and why, correct?

A. Yeah, if you just said -- if you just told me those first two numbers, you said one went up and one went down, that by itself is not going to be enough.

Q. Let's talk a little bit about rate structure.

At page 59 of your direct report you address rate structure. And you conclude that "My analysis has identified no changes in industry conditions since then" -- meaning 2012 -- "that would require changing the fundamental structure of the percentage-of-revenue prong," is that correct?

A. This is paragraph 80? Anyway, that sounds right.

Q. Yes, it is paragraph 80. Now in 2012 Spotify had just entered the U.S. market, correct?

A. In 2012? I think they had come the previous year.

Q. Yeah, but sort of later in the previous year. And the other Services represented here, Amazon, Pandora, Apple, and Google had no interactive offerings, correct?

A. When you represented here, you mean in this proceeding?

Q. Yes.

A. When you are saying they had no representatives at --

Q. No, I'm sorry. Let me do it again.

A. Okay.

Q. What I was saying was that these interactive services who are represented in this proceeding, Amazon, Pandora, Apple, and Google, they had no interactive offerings at the time of the 2012 settlement, correct? Say, Spotify, we understand with Spotify.

A. No, I understand. I am trying to think again with being multi-service companies, but I don't think so.

Q. Okay. Now, when you talk about the structure of the royalty you note that the judges in Web IV rejected calls to adopt a percentage of revenue structure, and you cite Web IV in footnote 121 of your report as follows: Do we have a slide with this? "Percent of revenue rate would create uncertainty and controversy regarding the definition and allocation of revenue."

That's from your report, right?

A. That's correct.

Q. And, in fact, in Web IV the Court adopted a royalty for non-interactive streaming on a per-play basis, not on a percent-of-revenue basis, correct?

A. That is correct.

Q. And that solution and rationale accorded in Web IV, could also be applied here, couldn't it?

A. Actually if it is feasible, yes, I believe it is.

Q. Okay. But you don't adopt that analysis, you don't follow that analysis and the concerns expressed by the CRB in Web IV because, as you say, the situation here is markedly different in critical respects, correct?

A. That's correct.

Q. And you say that the key difference is that there exists an industry-wide settlement whose signature has been successfully adopted by the industry participants, correct?

A. I didn't see where I said that, but, yeah, I agree with those words. I said those words.

Q. You said those words. And you didn't say anything else, you said that's the key difference, correct?

A. Actually, if you are going to parse the exact words, could you point to where in your --

Q. Sure.

MR. HARRIS: 81.

BY MR. JANOWITZ:

Q. So let's look at paragraph 81 of your written direct report. First you identify the decision in Web IV at the beginning. Then you say, "The situation in the present proceeding is markedly different in critical respects."

Then you say, "perhaps the key difference is that there exists an industry-wide settlement whose structure has been successfully adopted by industry participants." Correct?

A. Yes.

Q. You don't say any other reason that you should draw a distinction between what was done in Web IV and in this proceeding, correct?

A. That's incorrect.

Q. Okay. Show me where you say something else.

A. Paragraph or footnote 125.

Q. Okay. But obviously you made the determination that what you said in paragraph 81 was the key factor, correct?

A. Again, if we're going to parse words, I said it was perhaps the key factor. Clearly I thought it was an important one, but I didn't think it was the only one.

Q. Right. But you thought it was the most important one, otherwise presumably you would have put the others in the paragraph, correct?

A. Not necessarily because it depends on the exposition. Look, I think the sentence stands for itself. I said perhaps it is the key difference and it is the one I identified first.

Q. Okay. I agree with that.

So let's look at successful adoption. Now, obviously the Copyright Owners are not in agreement with continuing the settlement, correct?

A. That's my understanding of why we're here, yes.

Q. So in that sense it has --

A. Actually, I should take that back. It is actually not true because we're here. You actually might think it is good, as a logical matter, Copyright Owners might love it and the problem is the Services, but my understanding is the Copyright Owners are not happy with the 2012 settlement.

Q. Do you have any information to suggest

that the Copyright Owners love it?

A. No, that's what I just said but as a logical matter, we could have been in, even if you did, but the fact is you don't, as I understand.

Q. But here reality trumps logic, correct?

A. Actually I don't agree with that statement, but they are both relevant.

Q. By "here" I mean Washington, D.C.

A. The reality in Washington are completely in line with each other. But they are both consistent with each other.

Q. Now, I notice -- let's go back to paragraphs 81 and 82. Practically in the next sentence after you explain how successfully this structure has been adopted, you go to paragraph 82 and you say, "There are, however, revenue measurement issues that arise in the present proceeding." Correct?

A. Modular the tone, yes, correct.

Q. So that you are observing that all is not completely well with this rate structure, correct?

A. Yes.

Q. In Web IV, the issue came up -- well it was decided that revenue-based royalties are not suitable. Correct?

A. I am just -- if we're going to talk about this, I want to be a little more precise and perhaps more precise than I was in the report.

My understanding is that the issue in Web IV actually was adding a percentage of revenue prong to the per-play one. So it wasn't a question -- sometimes my report sounds like -- it wasn't just you have percentage versus per play.

Q. I understand. I get that.

A. So I understand the decision is that the judges decided not to add a percentage-of-revenue prong.

Q. Right. And what you acknowledge in paragraph 82 is that there are measurement issues, correct?

A. Yes.

Q. And in Web IV, the question of measurement issues came up too, didn't it?

A. That's right. I raised the issue, as did others.

Q. Okay. So it was an issue there; it is an issue here.

Now, you go over the circumstances under which measurement issues might appear, correct?

A. Yes.

Q. And in paragraph 82, you talk about a situation where a service is operated at least in part to generate other economic benefits for the parent company, for example, to foster broader and deeper relationships with customers that facilitate the profitable sales of other goods and services or incorporates non-music offerings to a significant degree.

Correct?

A. Yes, that's correct.

Q. And do you see that issue arising in this proceeding with these parties?

A. Yes.

Q. And the second issue you identify is when the service is sold as a part of a larger bundle of services, correct?

A. Yes.

Q. And do you see that issue arising in this proceeding with these participants?

A. Yes. And, in fact, I think that is an issue that came up -- I mean, it is inherent actually in the structure of the 2012 settlement too because some of those services there even are parts of bundles that it is explicitly addressing. So yes.

1 JUDGE STRICKLER: I don't want to lose
2 this point. You just pointed out that in the 2012
3 settlement, some of the subpart -- some of the rates
4 in Subparts B and C are bundles, mixed bundles, what
5 have you.
6 And has the nature of the bundle, the
7 various bundles that exist in the marketplace given
8 the entry of Amazon, Google, Apple, and to some
9 extent the way Spotify has changed, according to the
10 evidence in this case, given you pause and made you
11 think that we have new and different bundles and new
12 and different aggregations into ecosystems, the
13 things you are talking about in paragraph 82, that
14 would require us to have, if we were going to go
15 along with the structure of Subparts B and C, that
16 we would need to have new categories of bundles to
17 reflect the changing bundles from 2012 to the
18 present?
19 THE WITNESS: So a couple of things on
20 that. There are -- we do see streaming services
21 being bundled with other service or as you saying
22 being part of ecosystems in a way that I don't think
23 we saw then. I think they are more standalone
24 services.
25 And then that does raise issues for

1 thinking about how to do the minimum. Thinking
2 about it off the top of my head, I would not think
3 that that would call necessarily for having -- well,
4 I wouldn't try to have the same sorts of definitions
5 of bundles and products that you see in B and C
6 because I think there is too many different ways it
7 could happen, but I could imagine having some sort
8 of more generic treatment of a minimum but taking it
9 into account.
10 Now, in my own analysis what I did was
11 the say, well, the structure we have, from what I
12 can see of industry performance is working, but one
13 could in principle do an analysis of saying well, do
14 we want to have another term for handling that with
15 a different set of minimums.
16 JUDGE STRICKLER: But as you understand
17 it, the proposal by Pandora does not create any new
18 types of bundles in Subparts B or C, it is
19 maintaining the same bundles that existed back in
20 2012?
21 THE WITNESS: That's correct. That is my
22 understanding of what Pandora has proposed.
23 JUDGE STRICKLER: Is it also your
24 understanding that none of the Services have
25 proposed -- I guess we excluded -- well, I am not

1 going to say that.
2 That none of the other Services have
3 proposed any changes to subpart -- bundles within
4 Subparts B and C in terms of the definition of what
5 constitutes a bundle?
6 THE WITNESS: As far as I'm aware they
7 haven't. I may be missing something, since my focus
8 really was on the 2012 settlement and whether that
9 structure would be reasonable, but I am not aware of
10 anybody having proposed different bundles.
11 JUDGE STRICKLER: And you think that the
12 rates are still appropriate to use within the
13 existing bundles, notwithstanding the new entrants
14 who have ecosystem value and ecosystem concerns and
15 bundling of the devices together with streaming in
16 ways that did not exist back in 2012?
17 THE WITNESS: So, yeah, what I have
18 concluded is that looking at how the industry has
19 performed under the 2012 settlement, that within the
20 bounds of the ability to judge these things, that
21 the industry is performing satisfactory under it
22 and it is meeting the statutory objectives.
23 Now, that doesn't mean you couldn't,
24 somebody couldn't come in, add something else onto
25 it, but I haven't analyzed that. I just asked take

1 the package we have, does it appear to be working,
2 and concluded it does.
3 JUDGE STRICKLER: When you say it is
4 working satisfactorily, if the evidence were to
5 show, if the evidence were to show that one or more
6 Services were able to conceal or disguise or shift
7 revenue in such a way that revenue that might
8 arguably otherwise be appropriately viewed within
9 the revenue base is not within the revenue base,
10 would you still say the market is working
11 appropriately under the 2012 settlement?
12 THE WITNESS: That's where I would say
13 that -- what it would say is you wanted to make sure
14 that the minimum -- the minimums are set at a level
15 then that captures the amount they are paid because
16 given the measurement problems.
17 JUDGE STRICKLER: But isn't that a moving
18 target? If you don't know how much revenue is being
19 disguised or improperly attributed to another
20 category, you don't know where to put that minimum
21 until you know how much revenue is being improperly
22 attributed outside of the royalty base, right?
23 So how could you possibly use the minimum
24 to be able to figure out how to cure a problem when
25 you don't know the dimensions of the problem?

1 THE WITNESS: No, I am not saying that --
2 well, you are right, you have to assess what you
3 think is an appropriate minimum to capture it. And
4 if what you are saying is we have no way of
5 measuring at all or having any sense of the
6 revenues, then I would be concerned.
7 And, look, as I said in Web IV, I
8 expressed concern about measuring revenues. And it
9 is a hard problem, but the industry seems to have
10 concluded that they can solve it. It is also not
11 just in the 2012 settlement. We also see it in the
12 contracts with the record companies.
13 JUDGE STRICKLER: Well, they certainly
14 proceeded under the 2012 settlement because that is
15 the settlement they entered into and they are
16 duty-bound to do that. But isn't one of the points
17 of this proceeding is the Copyright Owners are
18 saying: Wait a minute, we think there is revenue
19 here. It is supposed to be in the revenue base.
20 And you do a percentage of revenue-based
21 calculation, and, therefore, that revenue-based
22 formula, that game is not worth the candle because
23 we can't figure out easily how revenue is being
24 disguised.
25 So even in a perfect world if the revenue

1 base arguably, arguendo, was the right way to go, if
2 you have got a measurement problem that is
3 insuperable, do you have to, therefore, default back
4 to a per-play rate simply because you can't
5 calculate revenue well?
6 THE WITNESS: So I guess what is implicit
7 in my approach, I should say it explicitly is
8 whatever the measurement issues are, if you look at
9 what has happened with the streaming industry and
10 also with the continued production of musical works,
11 that it suggests that the actual amounts being
12 collected and paid are leading to satisfactory
13 industry performance.
14 And so it is not saying -- so the
15 approach I am taking is not saying that this is what
16 you are supposed to be getting, this amount of
17 revenue for sure or this percentage.
18 It is asking given how the system is
19 working and the actual amounts being paid, does the
20 industry seem to be performing satisfactorily?
21 JUDGE STRICKLER: It takes me back to an
22 expression, somebody used, I don't remember if it
23 was you or your counsel said a Panglossian type of
24 thing, you are saying we're living in the best of
25 all possible worlds anyway, everybody is getting --

1 the Services are paying revenue that they can live
2 with and the Copyright Owners are getting revenue
3 they can live with, so even if revenue is being
4 concealed it still works, so let's have a little
5 imperfection in the system and we can keep on going.
6 And the Copyright Owners obviously are
7 saying: No, we think that's a real problem, there
8 is money that is supposed to be in this royalty
9 base, and it is not. And it is not enough to just
10 say: Well, we're all surviving. We're not getting
11 the revenue that is properly attributable, as I
12 understand their argument.
13 And there is no good way to measure it
14 because of the complexities of the bundling and the
15 money that moves throughout the ecosystem. I
16 understand that might not necessarily be Pandora's
17 concern, but it is the concern as it relates to
18 other, particularly, other Services?
19 THE WITNESS: But I would separate that
20 into two parts. So one is there could be an
21 argument, arguendo that the Copyright Owners say:
22 Look, we agreed to this in 2012, we thought we were
23 going to get paid a certain way, and we didn't get
24 paid that way because people were hiding revenues,
25 left, right, and center, and we regret having

1 entered the agreement.
2 And I would agree with that, that if
3 that's what they thought would happen, that's an
4 unfortunate outcome, but I am actually asking a
5 different question, which is given how we have
6 gotten where we are, does it appear that it works?
7 So if what you are saying is if in this
8 hypothetical, well, it turns out they concealed lots
9 of revenue sort, it is sort of cold blooded, but
10 what it would say is: Well, but, okay, the
11 resulting royalties rates, the ones after all the
12 concealment turn out to be reasonable royalty rates.
13 And, again, I can understand the argument
14 that Copyright Owners said: Look, we don't like
15 that that's what happened, but in the end what I am
16 asking is are the effect -- the effective rates in a
17 very broad sense of the word effective, are the
18 effective royalty rates working?
19 JUDGE STRICKLER: There was something
20 circular in the way you explained that, Dr. Katz,
21 because I think you are saying as long as the rates
22 turned out to be fair, then what's the problem? But
23 you defined earlier on direct testimony that fair
24 rates are rates that are done through a fair
25 process.

1 But if rates -- if royalties are
2 concealed -- and I hesitate to use the word
3 concealed because I am not trying to say anything
4 pejorative -- reasonable people might even differ as
5 to where revenues should go, but the point is that
6 it may not be a reasonable process because the
7 Copyright Owners don't have any good input into how
8 they go about determining where the revenue -- that
9 is just too hard a process, too complex a process
10 and therefore -- which is the point you made among
11 others in Web IV.
12 That's just a hard thing to do when you
13 are dealing with percentage-of-revenue rates. And
14 maybe you get to some sort of a tipping point, if
15 you will, where you say, again, this game is not
16 worth the candle, we need to go to per-play rates.
17 Don't we have to examine that and see
18 whether or not we have got a problem that we can't
19 overcome with regard to measurement?
20 THE WITNESS: I certainly think you
21 should examine it. Again, I have reached the
22 conclusion how it comes out, but I certainly agree
23 that you should take that into account and think
24 about it and think about how the market has or has
25 not used the percentage-of-revenue rates.

1 JUDGE STRICKLER: Thank you.
2 BY MR. JANOWITZ:
3 Q. Dr. Katz, I think we can move on from
4 this topic. Let's talk about the mechanical floor.
5 The one adjustment that you referred to
6 earlier was that you want to eliminate the
7 mechanical floor, correct?
8 A. Yes.
9 Q. The mechanical-only floor.
10 A. Yes.
11 Q. And this is an elimination that you
12 considered to be a minimal adjustment, correct?
13 A. I may have used that word in my report,
14 but it is the single adjustment.
15 Q. Would you like to take it back?
16 A. It is a single adjustment.
17 Q. Okay. Because from the perspective of
18 the publishers, do you consider this to be minimal?
19 A. I think publishers care about, to
20 pushback, using Dr. Eisenach's calculation, it would
21 be something like a half a percent of their
22 revenues. So I think they care about that.
23 Q. Have you done an analysis of the impact
24 of removing the mechanical-only floor?
25 A. No, the number I -- well, I wouldn't call

it analysis. What I have done is looked at Dr. Eisenach's calculations of the effects of it.

Q. We will let Dr. Eisenach address his own calculations.

You state in your report that the mechanical-only floor was considered by the Services to be a concession without economic impact because the Services perceived it as highly unlikely that the mechanical-only floor would ever get triggered.

But it has been triggered in the past, hasn't it?

A. That's my understanding, it has been.

Q. And going back to 2012, putting yourself in the position of the people who were negotiating, isn't that something that they should have thought about, that it would be triggered?

A. They certainly should have thought about the possibility and tried to model it, again, if they are economically rational, yes.

Q. And do you think they would have had any difficulty assessing whether it would be triggered?

A. As I have said in my report, they -- I think they did not anticipate what was potentially happening with fragmentation. Sorry, I should be clearer, the fragmentation of the licensing and

performance rights.

Q. But they should have, just like you say the Copyright Owners should have anticipated things, right?

A. No, I say -- what I say is people should attempt to anticipate them and they should form beliefs. I am not going to say that people -- you say should be right. It would be nice if they are right, but it is not like some moral fault if you are not correct.

JUDGE STRICKLER: Earlier on you described, as I think appropriate and common in these proceedings and economics that when you look at a real marketplace agreement, you are looking at revealed preferences.

THE WITNESS: Yes.

JUDGE STRICKLER: You used that phrase. Why isn't the mechanical floor in the 2012 settlement an example of a revealed preference? In other words, maybe nobody knew about the potential for fractional licensing or withdrawals from the PROs, but this is one of those sort of unknown, unknowns.

It is like: Well, we don't know what else could happen, but no matter what, we're going

to keep this 50 cent minimum or he could have said floor.

So does that not reveal a preference among the negotiating parties that this is what we're going to have, we don't know why it would be triggered, we don't know if it is going to be triggered, but should something happen that we can't predict, because after all we have got a five-year term, we want this in here, that's an allocation of risk that both parties were able to reveal a preference for in the context of the negotiation.

THE WITNESS: Yes, I certainly agree with that. And over the term of the 2012 settlement, I mean, I think the Services have to live with, that's what they agreed to, and as you are saying that's the risk they bear.

The question I am asking is going forward, is this something that we want to have built in? And I am saying given what we know now, and I am thinking now taking this perspective of the statutory objectives, et cetera, given that we know what is triggering it and that it is an increase in market power that would potentially trigger it, it is not saying it has been triggered yet, but it would potentially trigger it going forward, that is

1 something to be concerned with in that that is going
2 against the 801(b) factors.
3 Now, there was some other reason that it
4 turned out to be triggered that had nothing to do
5 with market power, suppose somehow something
6 happened that songwriting just got way better and
7 that suddenly the performance royalties went up
8 because they are getting their contribution and that
9 triggered it, then I would have a different answer.
10 I would say okay, it has triggered it, but there is
11 a reason the rate should go up.
12 So it is important in my analysis that if
13 this is to happen, and again this is prospective, if
14 it is to happen through fragmentation it would be
15 resulting in the exercise of market power. So it is
16 not just anything that goes against the Services is
17 bad. Sometimes it is just tough luck for them.
18 JUDGE STRICKLER: And just to be clear
19 when you used the phrase "market power" in the
20 context of fractionalization, you are talking about
21 Cournot complements, probable complementary
22 oligopoly, you are not talking about any other type
23 of market power?
24 THE WITNESS: Well, it would be the
25 Cournot complements problem and also just, related

to that, the individual rights provider must have and therefore would have substantial market power as an individual seller, and then that feeds into Cournot. So that constellation of things is what I am talking about.

JUDGE STRICKLER: Thank you.

BY MR. JANOWITZ:

Q. In terms of the fragmentation and the changes in the performance royalty, you point out that a new U.S. PRO by the name of GMR emerged, correct?

A. Yeah, it is a new PRO that covers the U.S. I think the G is for global but, yeah, there is a new PRO that affects the U.S.

Q. Right. And it is not subject to rate quote oversight; is that correct?

A. That's my understanding that it is not.

Q. Do you know what percentage of compositions used by the Services is licensed by GMR?

A. No, I would be guessing a ballpark.

Q. Isn't it true that ASCAP, BMI, and SESAC license over 95 percent of the compositions used by the interactive streaming services?

A. Again, if you represent that number, I

would have no reason to doubt it. That sounds in the ballpark.

Q. And in 2012 ASCAP and BMI were in business, functioned pretty much as they function today, subject to rate court oversight, correct?

A. Yeah, at the broad level. There have been a bunch of developments and interpretations and consent decree, but at a broad level they are still under the consent decrees as far as I know and subject to rate court review.

Q. Right. And there has some to'ing and fro'ing which we will get into, but it is not really that complicated.

You talk about the next fact you cite is a music publishers began to threaten withdrawal from the PROs, thereby further increasing the number of entities from which streaming services might potentially have to secure licenses. I think you were just talking to Judge Strickler about that.

In fact, a number of the publishers did partially withdraw, in other words, the digital rights in 2011, didn't they?

A. As I said, I am not going to remember the timing. I know there were partial withdrawals and it stopped.

1 Q. I can tell you that EMI partially
2 withdrew in 2011.
3 A. For some reason I thought EMI had been
4 the only one, but I might be misremembering the
5 facts as I am sitting here.
6 Q. Well, I am focusing on 2011 because it
7 was before the settlement of 2012 was entered into.
8 There are others that also withdrew in 2012, but my
9 point is that at least one of them withdrew in 2011.
10 So shouldn't the Internet streaming
11 services have been aware of this so-called changing
12 landscape when they entered into the 2012 agreement?
13 A. Yes, it is something that I would expect
14 that they would have knowledge of and would take
15 into account.
16 Q. And with considerable amount of activity
17 going on in 2012, this should have been, you know,
18 in their minds, correct?
19 A. Again, I will stick to as being
20 economically rational actors, and without
21 information available, they should have taken it
22 into account.
23 Q. And in terms of the withdrawal by certain
24 of the publishers, there were, in fact, withdrawals,
25 correct?

A. You said the EMI one earlier. I can't remember what the timing was, whether there were other ones, but my understanding, my recollection is there were partial withdrawals that then ended.

Q. Right. We also know, don't we, that there was a decision on that on whether or not they could partially withdraw, given the consent decree and there was a holding by Judge Cote that they could not; isn't that correct?

A. I may get the ones between Judge Cote and Stanton backwards, but again if you represent that I have no reason to doubt it.

Q. Yes. And then in May of 2015 there were, that holding was affirmed by the Second Circuit, correct?

A. Again if you represent those are the dates.

Q. And lastly in August of 2016, the Justice Department, which was reviewing the matter, decided to stand pat and leave things the way they were and not to support partial withdrawal; isn't that correct?

A. That date sounds right. Certainly the Justice Department -- I'm sorry. I am going to mix up partial withdrawals and fractional licensing.

1 That sounds right.
2 Q. Right. So the issue of the withdrawal,
3 at least the partial withdrawal, is really at this
4 point pretty much a non-issue, correct?
5 A. Partial withdrawal as opposed to full
6 withdrawal?
7 Q. Yes.
8 A. I think that's right. I tend to think
9 about withdrawal generally. I don't -- I know you
10 were saying it is simple, but my sense has been that
11 sort of all of these things are disputed and people
12 keep pushing on it, but it may be that the partial
13 withdrawals have been resolved.
14 Q. Well, if you have some basis for telling
15 me that, please do, because I am not aware of it.
16 Now, in terms of the complete withdrawal,
17 are you aware of any plans by any major publisher to
18 completely withdraw from BMI and ASCAP?
19 A. I think you have heard testimony that
20 publishers have talked about it or raised the issue
21 with Pandora. You asked plans, have I seen
22 documents or have they shared their intentions with
23 me, the answer is no, I haven't seen documents or
24 heard their intentions.
25 Q. Have you seen anything that makes that a

credible threat, an imminent threat at this point?

A. A credible threat for them would be, yeah, I think is yes, in that they see that there can be economic benefit from them. They can do it and their large enough that they're must-have, and I think there are reasons to believe that the largest publishers would be must-have.

It seems to me for them to threaten it and be credible because it could be economically rational for them to do it.

Q. But you don't have any basis for testifying that there is actually anything at work along those lines, do you?

A. Meaning that they have put any sort of plans or actions in motion?

Q. Correct.

A. I don't have a basis for that.

Q. And you have talked about fractional licensing is a problem as well, correct?

A. I think that the language is something about how it can amplify the problem or can reinforce the must have nature, yes.

Q. Right. But the fractional licensing is something that has been going on for some time; isn't that correct? I mean, there are writers who

are ASCAP writers and there are writers who are BMI writers and, you know, like Romeo and Juliet, sometimes they get together, right?

A. So my understanding is there is a lack of agreement on what the history of fractional licensing is and whether it has or has not been going on for a long time and that while there are those who say it has always been fractional license, I thought other people in the industry said there hasn't been and that it is, yeah, that that's disputed.

Q. So what you have to testify to today is not any knowledge on this, but simply your ability to report that some people disagree on this issue; isn't that right?

A. No, it is more than that. If you look in the citations, for example, the Department of Justice has expressed concerns that fractional licensing can do, is lead to the exercise of market power and disrupt the operation of the market.

Q. That's theoretical, though. You don't have any knowledge on this. In fact, you have testified in your deposition that you don't know if the situation regarding fractional licenses has changed since 2012; isn't that correct?

A. I think it could well be what I said in deposition because as I was just saying, there is this dispute about what the history is, and I have tried to stay out of that, given that people whose full-time jobs are to argue about that don't seem to be able to agree.

What I have said, though, is the possibility of fractional licensing and there has, I think, there has been the change in the sense of probably Judge Stanton -- I may have gotten this backwards, or actually I may be mixing it up -- I thought had said that the consent decree was silent on fractional licensing. I may be failing the memory test here. And that would be a change.

Q. In your report you state that the fragmentation in the performance rights market threatens to increase performance rights license fees to the point that the mechanical floor is triggered, having nothing to do with the increase in the intrinsic value of the performance rights or mechanical rights.

What is your understanding of the intrinsic value of the performance or mechanical rights?

JUDGE BARNETT: Mr. Marks?

MR. MARKS: I would ask if he is going to quote from the report that we be given a paragraph citation so we can make sure quotations are accurate, same with respect to deposition testimony.

JUDGE BARNETT: Thank you.

MR. JANOWITZ: Paragraph 94, page 69, of the written direct statement.

THE WITNESS: So --

JUDGE BARNETT: Is there a question pending?

BY MR. JANOWITZ:

Q. Yes. I believe the question was what is your understanding of the intrinsic value of the performance or mechanical rights?

A. So the way I am using the term here is just to say, and I am looking at it, I should probably not have used the word intrinsic, given its -- it turns out to be, I guess, a loaded term in these proceedings, but what I meant by it here is that it is not that the music is becoming more valuable because somehow it has gotten improved or there is a greater contribution being made by Copyright Owners, but instead, rather than it is the value going up, it is the ability to extract surplus that is going up through the exercise of market

power.

Q. And how do you know that this value, whether you call it intrinsic or not, has not been artificially depressed by the prior agreement and the regulation?

JUDGE STRICKLER: Which regulation are you referring to?

MR. JANOWITZ: 115.

JUDGE STRICKLER: The regulation that sprung from the agreement?

MR. JANOWITZ: Exactly.

THE WITNESS: So I guess implicit in what I am doing is taking -- let's see, artificially expressed. It comes back to looking at industry performance and to what the standards are that are applied to -- if it is Section 115, so what the backstop was that the parties had when negotiating the agreement, and if they felt, if one side felt that it had been suppressed and was below levels that would satisfy the statute, and they could have then adjudicated that and brought it to a proceeding.

BY MR. JANOWITZ:

Q. Conscious of our time limitations, I am trying to skip forward a little bit.

JUDGE BARNETT: Would this be a good time to take a break so you could gather your thoughts?

MR. JANOWITZ: Thank you so much.

JUDGE BARNETT: You are certainly welcome. I realize that I raised the specter of a late opening or a late arrival and left the loop open.

I believe that what we're shooting for here, assuming we're open at all, is that we will commence tomorrow at the later of a late opening plus 30 minutes or a late arrival plus 30 minutes. That will give you time to get through what surely will be a bottleneck at the front door, if we have any of those things going on, or 11:00 a.m., which I understand Mr. Marks is when your witness -- is it Mr. McCarthy?

MR. MARKS: No, Mr. Herring.

JUDGE BARNETT: Oh, Mr. Herring, can be available. Let me ask, is Mr. Herring coming from New York?

MR. MARKS: He is not. He is coming from California, but we expect that he will be here.

JUDGE BARNETT: California, okay.

In the event there is some holdup with his flight or his availability, would there be

1 another witness who would be available if we
2 convened tomorrow afternoon or shall we just call it
3 a day? I think, Mr. Steinthal, did you say you
4 might have a witness?
5 MR. STEINTHAL: We have Mr. Joyce, who is
6 here today. Hopefully he will get on today, but I
7 don't know the answer to that question.
8 JUDGE BARNETT: Okay. All right. Why
9 don't you discuss and we will do the same, and we
10 will take a 15-minute recess starting now.
11 (A recess was taken at 2:53 p.m., after which
12 the hearing resumed at 3:13 p.m.)
13 JUDGE BARNETT: I apologize for
14 obsessing. There is no way for you to communicate
15 with us if we're having a late arrival and we have
16 no witness.
17 So when you figure out if we will have a
18 witness, if we are open tomorrow, if you will send
19 an e-mail to the CRB e-mail account, then we can
20 reach -- we can get the information that way.
21 MR. MARKS: I believe that Mr. Herring
22 will have landed in the Washington area before the
23 close of court today, so we should know whether, if
24 this turns out to be a rainstorm, that we would have
25 a witness available to go on by late morning.

JUDGE BARNETT: Great. Thank you.

Mr. Janowitz, would you like to continue?

MR. JANOWITZ: Your Honor, this was a productive intermission. We're finished with this witness.

JUDGE BARNETT: Oh, excellent.

MR. JANOWITZ: Thank you.

MR. MARKS: I'm sorry, I missed that.

JUDGE BARNETT: He has no further questions.

Redirect, Mr. Marks? I will ask, although I have instructed you to let me know, any other questions from other participants? Okay.

REDIRECT EXAMINATION

BY MR. MARKS:

Q. Good afternoon, Dr. Katz.

A. Good afternoon.

Q. Do you recall during your cross-examination that Mr. Janowitz was focused on the key difference language in paragraph 81 of your written direct report?

A. If that's the paragraph that is talking about differences between Web IV and the current proceeding, yes.

Q. But let me just turn your attention here

1 to, to page 60 of your written direct testimony.
2 JUDGE STRICKLER: Which paragraph is
3 this?
4 MR. MARKS: I am reorienting the witness,
5 paragraph 81 on page 60 of the -- of Professor
6 Katz's written direct testimony.
7 BY MR. MARKS:
8 Q. You recall that's the sentence that says
9 perhaps the key difference that was the subject of
10 some testimony during your cross-examination?
11 A. Yes.
12 Q. And do you also recall discussing with
13 Mr. Janowitz footnote 125 with some additional
14 differences?
15 A. Well, I pointed him to it, yes.
16 Q. Could I point your attention to paragraph
17 84 of your written direct testimony and just ask if
18 you discussed other differences between Web IV and
19 the current proceeding in that paragraph?
20 A. I think the other differences, if I am
21 reading it correctly, the other differences I talk
22 about are the ones that are cited in footnote 125,
23 in addition to the text bringing out the different
24 -- I'm sorry, it is a different one, yes.
25 It also brings up the point about that we

have evidence that the -- sorry, we have evidence that the licensees have continued to innovate under the revenue-based royalties, which is a difference from Web IV, because in Web IV we didn't have revenue-based royalties in place, so there was a question of what would happen if they were to be brought into place.

Q. I am going to try to ask the next series of questions in a way that we can stay in open court. If it turns out we need to close it, I obviously want to be sensitive to that.

So let me ask a yes-or-no question for the moment to try to avoid clearing the courtroom. Putting aside direct licenses between interactive streaming services, on the one hand, and music publishers on the other for mechanical rights, are you aware of any other agreements involving interactive streaming that use a percentage of revenue as either the sole metric or the primary metric on which interactive streaming services pay for content?

A. Holding aside agreements between publishers and the Services, it is my understanding that that's a prominent feature or the binding prong --

Q. Let's do this as yes or no, so there are no problems.

A. Sorry, ask your question -- I knew as soon as you said that you were going to ask me a yes-or-no question, that doesn't work with me. I'm sorry, ask the question again.

Q. Are you aware of other agreements outside the context of the mechanical right licenses between interactive streaming services and music publishers that also involve interactive streaming services paying on a percentage-of-revenue basis?

A. Yes.

Q. Let me, so we can stay in open courtroom, are some examples of that discussed in footnote 59 on page 34 of your -- I'm sorry. I apologize. That's his written rebuttal testimony, so let me ask it a different way and maybe we have to clear the courtroom for this. I apologize. I was trying to get too cute with keeping it in open session.

JUDGE STRICKLER: Do you want us to clear it now?

MR. MARKS: Yes, unless they will let me point me to a paragraph in his rebuttal testimony. My only question would be to point to the reference and ask whether it addresses it.

1 MR. JANOWITZ: Go ahead.
2 BY MR. MARKS:
3 Q. Do you, in your binder, is there a copy
4 of Pandora Trial Exhibit 886, which is titled
5 Corrected Written Rebuttal Testimony of Michael
6 L. Katz?
7 A. I don't believe -- not -- I don't think
8 there is in the one that you provided. Are you
9 asking in this binder?
10 Q. May I approach the witness?
11 A. Yeah, it is in this one. I just have the
12 luxury of each attorney is asking about the other
13 attorney's binder. So if you could point me to the
14 page.
15 Q. Page 34, paragraph 59.
16 A. So, again, if you could remind me of the
17 question.
18 Q. The question is does -- are those some of
19 the agreements to which you were referring and which
20 interactive services pay on a percentage-of-revenue
21 basis?
22 A. Yes.
23 Q. Do you have an understanding of the basis
24 on which interactive streaming services compensate
25 ASCAP or BMI for the performance rights used in

interactive streaming?

A. It is my understanding that they pay a percentage of revenue.

Q. If I could turn your attention to demonstrative 4 in the slides that you were shown by Mr. Janowitz.

A. I'm there.

Q. If I could point your attention to the red boxes --

JUDGE BARNETT: I'm sorry. Mr. Marks, I think we treated this as restricted, even though it is not marked as restricted. Is that correct?

MR. JANOWITZ: I think we did, Your Honor.

JUDGE BARNETT: Okay.

MR. MARKS: That's fine. We can go into restricted session, if we need to. I don't think I am going to ask questions that involves restricted testimony but -- yeah, no, we won't bring it up on the screen. Everyone can look along and I don't think my questions -- I will try to be sensitive to that.

And obviously my colleagues here will let me know if I get that wrong.

JUDGE BARNETT: Okay, thank you.

BY MR. MARKS:

Q. What is your understanding of what the red boxes in the bottom right-hand corner of demonstrative number 4 show?

A. It is my understanding that those are streaming services entered at the dates indicated by the blue lines connecting the red boxes to the graph.

Q. Does this -- does demonstrative 4 show any exits by interactive services from the streaming industry?

A. I don't believe so.

Q. Are you aware of whether there have been any exits by interactive streaming services?

A. Yes, there have been.

Q. How did the fact of exits of interactive streaming services during this same time period affect your analysis?

A. Well, I guess, again, as it said earlier this morning, that observed the entry and exit and that was all consistent with a well-functioning, competitive market, that there was rivalries, and some firms are coming in because they believe they can succeed and other firms, either they or their investors have concluded that they can't succeed.

1 MR. MARKS: No further questions.
2 MR. JANOWITZ: Nothing else.
3 JUDGE BARNETT: May this witness be
4 excused?
5 MR. MARKS: As far as I am concerned,
6 yes.
7 JUDGE BARNETT: Thank you, Dr. Katz.
8 THE WITNESS: Thank you.
9 MR. STEINTHAL: Allow me a moment to get
10 my witness, who is standing by.
11 JUDGE BARNETT: I shall. Good afternoon.
12 Could you raise your right hand, please.
13 Whereupon--
14 PAUL JOYCE,
15 having been first duly sworn, was examined and
16 testified as follows:
17 JUDGE BARNETT: Please be seated.
18 DIRECT EXAMINATION
19 BY MR. STEINTHAL:
20 Q. Good afternoon, Mr. Joyce.
21 A. Good afternoon.
22 Q. I'm not sure if this is on.
23 A. It is.
24 Q. Can you please state your full name for
25 the record?

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Shuffle Stations

Jay-Z Radio

Jay-Z Radio

TUNE YOUR STATION

- My Station
- Crowd Faves
- Discovery
- Deep Cuts
- Newly Released
- Artist Only

Love All (feat. JAY-Z)

Drake - Certified Lover Boy (Explicit)

LYRICS

Previously on Ready To Die

Never had a lot, this is all I need

People never care 'til it's R.I.P.

Niggas turned they back on me for no good reason

See All Lyrics

ABOUT THE ARTIST

0:18 | 3:48

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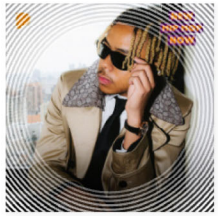

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Station

Smooth Jazz Radio
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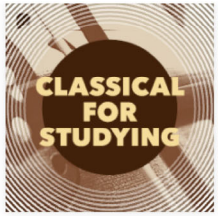

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Christmas Radio
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Symphonic Radio
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Young Money Radio
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Jay-Z Radio
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Drake

2:21 | 3:48

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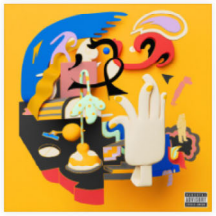
I Like Dat (feat. BIA & Kehlani) (...
T-Pain
Single - Oct 01, 2021



Colors and Shapes (Single) (Exp...
Mac Miller
Single - Sep 15, 2021

Ya Dig (Single) (Explicit)
Lil Wayne
Album - Oct 07, 2021

Poke It Out (feat. J. Cole) (Singl...
Wale
Single - Sep 30, 2021

Yes I Guess They Oughta Name...
Tyler Childers
Single - Oct 01, 2021

Sincerely, Kentrell > (Explicit)
YoungBoy Never Broke Again
Album - 23 songs - Sep 20, 2021

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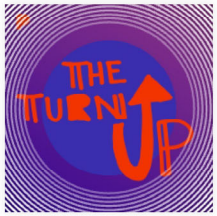
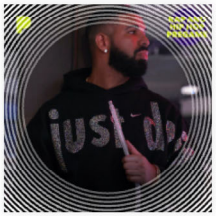
Club Dance Party
3M Listeners



The Turn Up
3.5M Listeners

2000s R&B
14M Listeners



Rap and Hip Hop Pre-Game
26M Listeners

Morning Hip Hop: Rise and Gri...
687K Listeners

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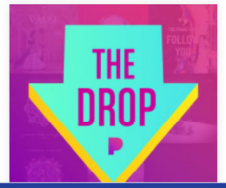

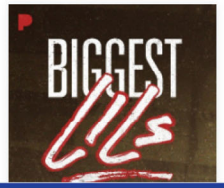

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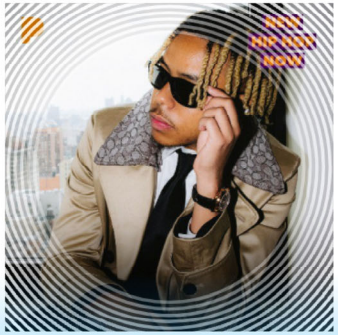

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NERVO

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141 Albums

ALL SONGS

Like Home (Original Mix)	Like Home (Single)	5:32
Reason	Reason (Single)	6:01
Hold On	Collateral (Explicit)	3:00
Alone (feat. Brielle Von Hugel)	Alone (feat. Brielle Von Hugel) (Single)	2:55
You're Gonna Love Again	Collateral (Explicit)	3:21
Lightning Strikes	Neon Future II	3:58
Revolution (Vocal Mix)	Revolution (Vocal Mix) (Single)	5:04
Forever Or Nothing (Feat. Lauren Bennett)	Forever Or Nothing (Single)	3:00
We're All No One (Original Mix) [feat. Afrojack and Steve Aoki] (UK Radio Edit)	We're All No One (Single)	3:30
We're All No One (NERVO Goes To Paris Remix) (feat. Steve Aoki & Afrojack)	Collateral (Explicit)	5:41

Player's Anthem
Junior M.A.F.I.A.

3:43 | 4:55

PAN WDT Ex. 2.002

Now Playing My Collection Browse

Search

pandora D

AutoPlay

Child Of Vision (2010 Remastered)

Supertramp - Breakfast In America (Remastered)

- Collect
- Add to Playlist
- Start Station from Artist
- Start Station from Song
- Share

ABOUT THE ARTIST

Supertramp

Supertramp followed an unusual path to commercial success in the 19
the stylistic ambition and instrumental dexterity of progressive rock with the wi...

See Supertramp's Profile

SIMILAR ARTISTS

2:16 | 7:31

PAN WDT Ex. 2.003

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Nirvana

2.6M Monthly Listeners

21 Albums

Prior to Nirvana, alternative music was consigned to specialty sections of record stores, and major labels considered it to be, at the very most, a tax write-off. After the band's second album, 1991's Nevermind, nothing was ever quite the same, for better and for worse. Nirvana popularized Read More

LATEST RELEASE

Lithium / Breed (Live) (Single)
2 songs
2021

ARTIST RADIO

Nirvana Radio
Station

TOP SONGS

See All Songs

Come As You Are Nevermind (Remastered) (Explicit)	3:38	
Smells Like Teen Spirit Nevermind (Remastered) (Explicit)	5:01	
Lithium Nevermind (Remastered) (Explicit)	4:17	
Heart-Shaped Box In Utero - 20th Anniversary Remaster	4:41	
Dumb In Utero - 20th Anniversary Remaster	2:32	
Heart Shaped Box (2013 Mix) In Utero - 20th Anniversary - Deluxe Edition	4:39	

TOP ALBUMS

See All Albums

Heart-Shaped Box
Nirvana

4:20 | 4:41

PAN WDT Ex. 2.004

Now Playing My Collection Browse Search pandora D

In Utero - 20th Anniversary Remaster
Nirvana

Heart-Shaped Box 4:41

AutoPlay is on
Keep the music playing with similar songs.

Collect
Add to Playlist
Share

Heart-Shaped Box
Nirvana - In Utero - 20th Anniversary Remaster

She eyes me like a Pisces when I am weak
I've been locked inside your heart-shaped box for weeks
Full Lyrics

1:35 | 4:41

PAN WDT Ex. 2.005

PAN WDT Ex. 3

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PAN WDT Ex. 4

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Signed: /s/ Todd Larson