ORIGINAL

Before the
COPYRIGHT ROYALTY JUDGES
Washington, D.C.

In the Matter of	)	
	)	
Distribution of 2004, 2005, 2006, 2007, 2008 and 2009 Cable Royalty Funds	)	Docket No. 2012-6 CRB CD 2004-2009 (Phase II) (REMAND)
	)	
In the Matter of	)	
	)	
Distribution of 1999-2009 Satellite Royalty Funds	)	Docket No. 2012-7 CRB SD 1999-2009 (Phase II) (REMAND)
	)	

INDEPENDENT PRODUCERS GROUP'S MOTION TO AMEND DIRECT STATEMENT

Worldwide Subsidy Group LLC (a Texas limited liability company) dba Independent Producers Group ("IPG") hereby submits its *Motion to Amend Direct Statement.*

On August 22, 2016, IPG submitted its Direct Statement in this proceeding, attaching the report of Dr. Charles Cowan. Dr. Cowan's report, for the first time in any distribution proceeding, attempted to implement the Shapley Valuation analysis expressly sought by the Judges. See 2008-1 CRB CD 98-99 (Phase II), *Final Distribution of Distributions of 1999 Cable Royalty Funds* at p. 14 et seq. (Jan. 14, 2015). Dr. Cowan's report, in turn, identified the proposed percentage allocations amongst IPG and the SDC in the devotional programming category, and amongst IPG and the MPAA in the program suppliers category, for the years and royalty pools at issue in these proceedings.

Immediately following IPG's submission, it was discovered that the percentage allocations identified in Dr. Cowan's report were incorrect. Accordingly, on August 31, 2016, IPG filed an Amended Direct Statement, which was stricken by the Judges' order of October 7,

UNDERSIZED DOCUMENTS

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2016 (the "Order"). In the Order, the Judges rejected IPG's Amended Written Direct Statement ("AWDS") as an amendment of right, but ruled that amendments to direct statements could be allowed as a matter of the Judges' discretion.[1] Consequently, IPG hereby moves for permission to amend its Written Direct Statement, and file the AWDS attached hereto as **Exhibit A**.

A. THE DIFFERENCES BETWEEN IPG'S DIRECT STATEMENT AND AMENDED DIRECT STATEMENT ARE FEW AND OBVIOUS, AND ARE UNRELATED TO THE SUBMISSION OF A NEW DISTRIBUTION METHODOLOGY.

A quick comparison of IPG's Direct Statement and AWDS reflects the differences therein.[2] The aggregate of such differences are as follows:

1) The introductory portion of IPG's Direct Statement indicated that "IPG hereby makes claim to the percentage of royalties set forth in the attached report of Dr. Charles Cowan." *See* IPG WDS at p. 2. By contrast, the introductory portion of IPG's AWDS (which attaches the amended report of Dr. Cowan) simply *repeats* the figures that appear in Dr. Cowan's report. *See* IPG AWDS at pp. 2-4. No other revisions to IPG's introductory pleading are made.

2) Dr. Cowan's amended report remedies two errors. The first erringly referred once to "IDC" rather than "IPG". *See* Cowan report at p.8, para. 34. The second, appearing in

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[1] The Judges' ruling was premised on its rejection of Dr. Cowan's contention that the percentage allocation revisions were not based on a methodological change:

> "Based on the limited factual record before the Judges, the Judges find that Dr. Cowan revised his methodology. Dr. Cowan modified the formulas that he used to determine the relative values of IPG programming and other parties' programming. Those modifications substituted a logarithmic relationship between the dependent and independent variables (*i.e.*, a relationship between percentage changes in those variables) for a linear relationship, and changed the relative shares of satellite royalties produced by Dr. Cowan's model. *See* Gray Decl. ¶¶ 3-4. In the absence of any explanation how this change corrected a data error, the Judges must conclude that it was a methodological change."

Order at ¶ 5.

[2] IPG has already identified the changes in its *Opposition to the MPAA's Motion to Strike Independent Producer Group's Amended Direct Statement*, then subsequently in its *Opposition to the SDC's Motion to Strike Amended Direct Statement of Independent Producer's Group*.

the same paragraph, erringly omitted a parentheses ["( )"] that otherwise appeared in a mathematical calculation identified by Dr. Cowan.[3]

3) Dr. Cowan's amended report substitutes the results of the correct calculations from Dr. Cowan's methodology. *Cf.* IPG WDS at pp. 9-12 *with* IPG AWDS at pp. 9-12. In connection therewith, it was additionally discovered that Dr. Cowan had incorrectly pasted the results of applying a prior IPG methodology, presented as "Alternative Estimates".[4] Specifically, while Dr. Cowan described his application of a prior IPG methodology modified to address the Judges' criticisms thereof, and submitted "Estimates of Relative Distributions for Devotional and Program Suppliers, Using Previous IPG Methods", the pasted tables only included the cable proceeding figures, and were further mislabeled as relating to the devotional programming category even though both SDC and MPAA percentages were identified. Dr. Cowan's amended report remedied this cut-and-paste error.[5]

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[3] The change in the expression of the mathematical calculation resulted in the intended logarithmic relationship in the amended report between the dependent and independent variables rather than a linear relationship.

[4] Notably, the figures appearing as Alternative Estimates are not the percentages sought by IPG in either its Direct Statement or AWDS, but reflect information that the Judges may find significant to their determination.

[5] IPG's counsel did not review or consider Dr. Cowan's report prior to its submission to expressly avoid any allegation that IPG had "straitjacketed" its witness, an allegation twice asserted by the Judges against IPG. In response, the Judges' order of October 7 asserted that IPG misapprehended the Judges' concerns regarding "straitjacketing", claiming that it related to their concerns about Raul Galaz, "an individual with no relevant training or experience in economics or econometrics, a financial stake in the outcome, and a prior history of fraud." Order at fn. 5. With all due respect to the Judges, the prior ruling on the matter was not so limiting as to include reference only to Mr. Galaz, wherein the Judges stated:

> "In any event, the Judges recognize that even a party that does not have such a checkered history has an inherent self-interest in selecting the types of data for use by its expert that is inconsistent with the independence of the expert in identifying his or her own categories of data."

Docket No. 2008-1 CRB CD 98-99 (Phase II), *Final Determination of Distributions of Cable Royalty Funds (Phase II)* at p. 38. Such language made clear to IPG that the selection of data for preparation of an expert report according to the direction of any person without "relevant training or experience in economics or econometrics", including legal counsel, should be equally discouraged.

4) Appendix 2 to Dr. Cowan's report adds an inconsequential observation about the regression formula that was utilized.[6]

As reflected by comparison of Tables 3 and 4 in the Direct Statement and AWDS, significant changes occur in the percentage figures in the program suppliers category, where the percentages attributed to IPG have now been *significantly reduced.* The most significant explanation for this change is not reflected in either the Direct Statement or AWDS, but is due to a problem discovered in the identification of MPAA programming and processing of that information. Specifically, for his initial report Dr. Cowan relied on the MPAA's previously produced list of programming claimed in these proceedings. Notwithstanding, after reviewing the means by which the MPAA-identified programming was matched to data acquired by IPG from Tribune Media, Dr. Cowan realized that legitimate MPAA-claimed broadcasts were not being included in his calculations. As such, while Dr. Cowan still relied on the list of MPAA-identified programming, he endeavored to make certain that MPAA-claimed program broadcasts would be sufficiently identified in his database in order to be included as compensable broadcasts. *Ergo*, this revision did not represent a change in methodology, but rather a change in the processing of the existing methodology, i.e., the manner that MPAA-claimed programming was being matched in Dr. Cowan's database. See **Exhibit B** (Decl. of Dr. Cowan). In light of the foregoing, the mere change in IPG's claimed percentages cannot be attributable exclusively to Dr. Cowan's change from a linear relationship to a logarithmic relationship, or even substantially thereto.[7] See **Exhibit B**, and infra.

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[6] Appendix 2, at p. 21: "A similar result is found when the natural logarithm of Y is used as the dependent variable, except that changes are now expressed as proportional changes."

[7] Despite having contrary information in its possession through discovery, the MPAA's reply brief in support of its motion to strike IPG's amended direct statement (a brief to which IPG

As reflected by comparison of Tables 1 and 2 in the Direct Statement and AWDS, far less significant changes occur in the percentage figures in the devotional programming category, where the percentages attributed to IPG have generally been *increased*.[8] Identical to the program suppliers category, Dr. Cowan discovered errors in the identification of programming in his database. However, such matching errors related to programming of both IPG and SDC claimed programming. Consequently, and again, the revision to the percentage figures were not exclusively (and not even significantly) affected other than by Dr. Cowan's closer matching of program titles.

Notwithstanding, the primary focus of the SDC and MPAA has been to allege that the change in Dr. Cowan's formula from a linear relationship to a logarithmic relationship between the dependent and independent variables constitutes a "change in methodology", and that such change is *exclusively* responsible for the changes in IPG's claimed percentages. Such allegation was made both prior and after receipt by the SDC and MPAA in discovery of Dr. Cowan's databases on which he relied for *both* his initial and amended report.[9] Dr. Cowan disagrees that

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could not respond) falsely asserted that the change in percentage figures attributable to IPG and the MPAA was *exclusively* due to the change in Dr. Cowan's formula from a linear relationship to a logarithmic relationship between the dependent and independent variables. As noted herein, such was not the case.

[8] The cable figures for devotional programming attributable to IPG have risen from an average of approximately 25% to approximately 28% of the respective pools. The satellite figures for devotional programming attributable to IPG have risen from an average of approximately 1.21% to approximately 15% of the respective pools.

[9] Such fact is significant because it demonstrates that the SDC and MPAA either could not have known the cause of the percentage changes (prior to IPG's discovery production), and later knew or should have realized the impact of increased incidents of matching between claimed programming and the Tribune Media broadcasts (after IPG's discovery production). That is, the SDC and MPAA either misled the Judges by suggesting that the exclusive basis for percentage changes was the "linear to logarithmic" calculation, or failed to review the data that was provided to them by IPG and Dr. Cowan. To highlight this point, in his September 22, 2016 declaration, Dr. Erdem asserted that "IPG appears to have only produced the data and

the "linear to logarithmic" change is a change in "methodology", and for the reasons set forth in his attached declaration, explains in greater detail why this is the case. Moreover, the mere fact that claimed percentage figures have changed does not necessarily mean that a "methodological" change has occurred because, as explained above, additional compensable broadcasts of all parties has occurred. In fact, when Dr. Cowan calculated his results after his more accurate matching of claimed programs to the database of compensable programs and broadcasts, the difference between using a linear versus logarithmic scaling was inconsequential, as the variability explanations were *within 2.5% of each other*. See **Exhibit B**.

Regardless, neither the SDC nor MPAA bothered to calculate what, if any, effect the alleged "methodological" change has had on the actual percentage figures set forth by Dr. Cowan. See **Exhibit B.** In fact, if anything, the chart submitted in Dr. Erdem's second prior declaration graphically demonstrated the relatively insignificant consequence of a linear versus logarithmic calculation, an effect which could not exclusively explain the significant changes to Dr. Cowan's cable or satellite figures for the program suppliers category, or Dr. Cowan's satellite figures for the devotional programming category. See *SDC Reply in Support of Motion to Strike Amended Direct Statement of IPG*, Erdem Decl. at p. 6 (Exh.2) (filed Sept. 22, 2016). Again, when Dr. Cowan calculated his results using a linear versus logarithmic scaling, the variability explanations were *within 2.5% of each other*. See **Exhibit B**

In prior briefing, the SDC submitted a declaration of Dr. Erdem that correctly noted that the "logarithmic to linear" change in the corrected formula expression merely changes the *scale* of the same variable expressed in the originally expressed formula. As noted in Dr. Cowan's

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calculations for log-level regression, as described in its Amended Direct Statement, and not a level-level regression, as described in its Original Direct Statement", *even though* the databases for both of Dr. Cowan's reports had been produced on September 15, 2016, a week prior.

prior declaration, "scaling merely reflects how the data is considered by the regression, i.e., how the data is counted then applied - - in absolute terms or in proportional terms." That is, a change in the scaling is not a methodological change, but a change in the means by which the identical data is processed. Quite simply, the SDC and MPAA exaggerate the characterization and import of the correction to the report submitted by Dr. Cowan, for the ultimate purpose of imposing IPG's acknowledged incorrect calculations for correct calculations, even though IPG's revised calculations are predominately due to Dr. Cowan's improved matching of claimed programs to compensable program titles and broadcasts. See **Exhibit B**.

B. EVEN IF A METHODOLOGICAL CHANGE HAD OCCURRED, NO PREJUDICE RESULTED TO THE SDC OR THE MPAA. SUCH PARTIES PROPOUNDED DISCOVERY RELATING TO IPG'S AMENDED DIRECT STATEMENT *AND* TIMELY RECEIVED ALL THE ELECTRONIC BACKUP THEREFOR. THE ADVERSE PARTIES WERE NOT PREJUDICED.

IPG's initial submission of an amended direct statement occurred a mere seven (7) business days after the filing of IPG's Direct Statement, and even prior to the SDC's or MPAA's submission of their initial discovery requests.[10] Having been filed prior to the issuance of discovery, and certainly prior to IPG's response to discovery, no prejudice could have resulted to the SDC or MPAA. Both of these parties expressly sought from the outset the production of documents relating to the figures appearing in *both* IPG's original and amended direct statements, and timely received the electronic backup for *both* IPG's original and amended direct

[10] In its original objection to IPG's filing, the MPAA argued that IPG's amended filing was comparable to the SDC's "trial by ambush" in the 2000-2003 cable proceedings (Phase II), where the SDC submitted a new methodology *12 months* after the filing of their direct statement, and under conditions by which discovery on such methodology was not even afforded, i.e., as part of the SDC's rebuttal statement.

statements. *See* **Exhibit C** (SDC requests) and **Exhibit D** (MPAA requests), at request nos. 1, and throughout. The lack of prejudice is poignantly reflected by the fact that the SDC, after reviewing the database relating to the AWDS, informed IPG that the figures generated by Dr. Cowan's satellite database varied slightly from the figures appearing in Dr. Cowan's amended report, an issue that has been remedied.[11]

In light of the fact that the Judges had already found that a methodological change had occurred to Dr. Cowan's proposed methodology, and that IPG's amendment under Section 351.4(b)(3) of the CRB regulations was foreclosed, the Judges did not consider or find relevant IPG's arguments regarding the lack of prejudice to the SDC or MPAA. Specifically, the Judges held:

> "The Judges need not reach this question [regarding prejudice to the SDC or MPAA]. IPG has not provided a legal argument why a lack of prejudice to other parties would excuse its procedural defect. IPG's assertions regarding prejudice have no bearing in this circumstance."

Order at p. 5.

Although "prejudice" may not be relevant to the procedural bright line rule that exists for amendment as a matter of right under Section 351.4(c), prejudice to an adverse party does affect, and should logically affect, whether the Judges should afford their discretion to allow a party to amend their direct statement. Such is the case *even if* the amending party desired to make a methodological change. Obviously, rules exist for varied purposes, and in the case of the Section

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[11] While embarrassing to acknowledge, the discrepancy was ultimately attributed by Dr. Cowan to another "cut and paste" error that reflected the results of some interim calculation he had conducted. The differences were slight, and although no documents existed reflecting the interim satellite calculations, the SDC nevertheless had an opportunity to issue follow-up discovery requests on that matter. See **Exhibit E**. Despite Dr. Cowan explaining the basis for the confusion in an affidavit provided to the SDC and the MPAA, SDC counsel nonetheless accused both Dr. Cowan and IPG counsel of lying about the lack of interim calculation data. See **Exhibit F**.

351.4(c) bright line rule allowing amendment within a certain time frame,[12] such rule establishes a pre-judged circumstance whereby all parties exist on a level playing field and prejudice is presumed to not exist. Indeed, prejudice to an adverse party should be the *primary* issue as to whether an amended direct statement should or should not be allowed as a matter of the Judges' discretion.

By all appearances, this panel's prior rulings requiring even non-adverse parties to produce all their underlying data to each other, and allowing claimants to rely on and incorporate information produced by non-adverse parties, seeks to reveal the most optimal way to distribute retransmission royalties irrespective of the combined source(s) of such information. By their prior challenge to IPG's previously submitted amended direct statement, the SDC and the MPAA sought to avoid the presentation of improved results, even when due to clear improvements in application rather than methodology (e.g., improved matching of claimed programs with compensable broadcasts). Such proposed limitation on a party's revisions to its results (or even methodology) serves no purpose other than to artificially hamstring a party from correcting changes that improve on their proposed percentage allocations, and to improve the methodology advocated to the Judges. Clearly, if IPG had not revised its percentage claims, the SDC and MPAA would have criticized IPG in the rebuttal portion of this proceeding for not having engaged in the very processes that Dr. Cowan has now employed to reach the conclusions in his amended report. In the absence of prejudice to either the SDC or MPAA, such restriction serves no purpose other than to limit a party from presenting the most persuasive and helpful information available to the Judges.

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[12] Direct statements can be amended as a matter of right under Section 351.4(c) until fifteen (15) days after the end of the discovery period. For this proceeding, according to the time calculations described at Section 350.5(a), that deadline will not occur until November 15, 2016.

C. IPG HAS RECEIVED NO "STRATEGIC ADVANTAGE" BY MODIFYING ITS CLAIMED PERCENTAGES.

In their challenge to IPG's initial filing of an amended direct statement, the SDC argued the existence of some inarticulated advantage that IPG had received by submitting the corrected figures. The SDC also asserted that IPG's amended direct statement was specifically filed in response to the SDC's *Notice of Consent*. The bottom line is that Dr. Cowan has attested that he had no intention of revising his propounded methodology, that he was not even aware of the SDC's *Notice of Consent*, and the purpose of the AWDS was simply to replace incorrect calculations with correct calculations. See **Exhibit B**. Moreover, as the undersigned hereby attests, IPG's preparation of its AWDS commenced *prior* to the SDC filing its *Notice of Consent*, and was initiated only after IPG's counsel questioned the figures appearing in the report of Dr. Cowan. In fact, Dr. Cowan was not even informed about the SDC's *Notice of Consent* until *after* he generated his amended report. Id. Not a single fact suggests that IPG filed its Amended Direct Statement in response to the SDC's *Notice of Consent* and, consequently, not a single fact was cited by the SDC to support the cause-and-effect claim of the SDC.

As IPG's AWDS reflects, IPG revised its claimed percentages in both the devotional *and* program suppliers categories so, again, such fact is inconsistent with the SDC's claim that IPG's Amended Direct Statement was filed solely to dislodge the predicate for the SDC *Notice of Consent* relating to the devotional programming category. As IPG's Amended Direct statement also reflects, only nominal changes were made to Dr. Cowan's description of his propounded methodology. See supra.

Further lacking in the SDC's prior briefing is any rational explanation as to why IPG would object to the SDC *Notice of Consent* and instead opt to litigate the 1999-2009 satellite proceedings for the devotional category if IPG sought effectively the same distribution.

Specifically, the SDC asserted that IPG "retroactively manufacture[d] disagreement". The only proffered explanation is for IPG:

> "to prolong unnecessarily these proceedings in spite of the SDC's consent to IPG's original satellite proposal – possibly for the purpose of obtaining settlement leverage in other proceedings, or for other ulterior motives."

SDC motion at p. 2.

The SDC also claimed that the IPG Amended Direct Statement:

> "[provided] IPG an unfair advantage in this litigation by inducing the SDC to consent to figures that it then changed."

SDC motion at p. 8.

IPG is unaware of what possible "leverage" or "advantage" could have been received by IPG. The SDC statements are so far-fetched that even the SDC's imagination cannot contrive a reason why IPG would submit revised claim percentages, all of which will be immediately validated or invalidated by submitted data, to delay the distribution of royalties for which IPG otherwise would not take dispute. Such a "strategy", if such description can even be used", would only unnecessarily require litigation of matters that are not in issue. The more obvious and simple answer is that already offered by IPG and Dr. Cowan – Dr. Cowan's methodology remains unchanged, but the presented results were simply in error and were being corrected.

D. IN THE ABSENCE OF ACCEPTANCE OF IPG'S AMENDED DIRECT STATEMENT, THE IDENTICAL ISSUE WILL BE ADDRESSED IN THE REBUTTAL PHASE OF THESE PROCEEDINGS.

Dr. Cowan has already indicated that his recalculations were predominately due to his improved identification of program claims and broadcasts, for *all* parties. A revision to the claimed percentages based on such processing of data is clearly not a "methodological" change, and even in the event that IPG's AWDS is not accepted for filing by means of this pleading

process, Dr. Cowan will have no alternative other than to calculate his results under a "linear scale" and submit such revised calculations as a matter of right under Section 351.4(b)(3) of the CRB regulations.

Ironically, the issue as to whether Dr. Cowan utilized a "linear" versus a "logarithmic" scale has, as a result of the SDC and MPAA pleadings, already become an issue of contention, wherein the SDC and MPAA expert witnesses have critiqued Dr. Cowan's use of a linear scale in his initial calculations. Even if not already sufficient to qualify IPG to modify its claimed figures in response thereto, this fact foretells the raising of such issue in the rebuttal portion of these proceedings, whereby parties are allowed to modify their claims in order to respond to criticisms raised by adverse parties. Consequently, absent the SDC and MPAA *both* electing not to further critique Dr. Cowan's initial use of a linear scale, the recalculations utilizing a logarithmic scale will nonetheless be presented, making the flurry of pleadings initiated by the SDC and MPAA "much ado about nothing".

CONCLUSION

For the foregoing reasons, the Judges should grant IPG's *Motion to Amend Direct Statement*, and accept filing of the Amended Written Direct Statement attached hereto as **Exhibit A.**

Respectfully submitted,

Dated: October 17, 2016

_____/s/_____

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CERTIFICATE OF SERVICE

I hereby certify that on this 17th day of October, 2016, a copy of the foregoing was sent by electronic mail to the parties listed on the attached Service List.

/s/
Brian D. Boydston

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EXHIBIT A

Before the
COPYRIGHT ROYALTY JUDGES
Washington, D.C.

In the Matter of Distribution of 2004, 2005, 2006, 2007, 2008 and 2009 Cable Royalty Funds	))))))	Docket No. 2012-6 CRB CD 2004-2009 (Phase II)

In the Matter of Distribution of 1999-2009 Satellite Royalty Funds	)))))	Docket No. 2012-7 CRB SD 1999-2009 (Phase II)

AMENDED DIRECT STATEMENT
OF INDEPENDENT PRODUCERS GROUP
(REMAND PROCEEDINGS)

Worldwide Subsidy Group LLC, dba Independent Producers Group ("IPG"), hereby submits an original and five copies, and an electronic copy, of its Direct Statement, including the amended written testimony of Dr. Charles Cowan and the accompanying exhibits, setting forth the direct case of IPG, in connection with Phase II of the consolidated 2004-2009 Cable and 1999-2009 Satellite Royalty Distribution Proceedings.

On May 4, 2016, the Judges issued its *Order Reopening Record and Scheduling Further Proceedings*, wherein the Judges directed the parties to present new evidence regarding allocation issues. In presenting new evidence the parties

were allowed to introduce additional data and expert testimony to improve upon the methodologies they have already presented, or present new methodologies. IPG has elected to present a new distribution methodology other than was initially presented in this proceeding.

The value of IPG's claim, which is more fully explained in the testimony, is dependent on the identity and value of program claims submitted by adverse claimants, and the royalties allocated to the Devotional Programming, and Program Suppliers categories. As a result thereof, IPG hereby makes claim to the percentage of royalties set forth in the attached report of Dr. Charles Cowan, as follows:

Relative Split in Cable Retransmission Royalties, Devotional Programming Category:

Year	IPG	SDC
2004	30.67%	69.33%
2005	23.05%	76.95%
2006	31.98%	68.02%
2007	34.60%	65.40%
2008	28.76%	71.24%
2009	23.79%	76.21%

Relative Split in Satellite Retransmission Royalties, Devotional Programming Category:

Year	IPG	SDC
1999	1.11%	98.89%
2000	0.00%	100.00%
2001	8.78%	91.22%
2002	11.23%	88.77%
2003	10.39%	89.61%
2004	10.73%	89.27%
2005	20.16%	79.84%
2006	36.60%	63.40%
2007	27.52%	72.48%
2008	0.00%	100.00%
2009	26.25%	73.75%

Relative Split in Cable Retransmission Royalties, Program Suppliers Category:

Year	IPG_PS	MPAA
2004	12.13%	87.87%
2005	10.46%	89.54%
2006	12.68%	87.32%
2007	11.01%	88.99%
2008	11.38%	88.62%
2009	6.95%	93.05%

Relative Split in Satellite Retransmission Royalties, Program Suppliers Category:

Year	IPG_PS	MPAA
2000	11.14%	88.86%
2001	9.79%	90.21%
2002	8.81%	91.19%
2003	7.08%	92.92%
2004	5.77%	94.23%
2005	7.09%	92.91%
2006	10.64%	89.36%
2007	12.47%	87.53%
2008	8.08%	91.92%
2009	6.69%	93.31%

Respectfully submitted,

Dated: October 13, 2016

_____/s/_____

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DESIGNATION OF PRIOR RECORDS

FROM DOCKET NO. CRT 91-2-89 CD
(1989 Cable Royalty Distribution Proceeding):

Direct testimony of each of the following witnesses, filed on August 16, 1991 (MPAA), respectively, as well as the referenced oral testimony (including cross-examination exhibits):

Witness	Transcript Reference	
Marsha Kessler	Tr. 85-210	(9/12/91)
	Tr. 211-306	(9/13/91)
Allen Cooper	Tr. 307-369	(9/13/91)
	Tr. 376-521	(9/17/91)
	Tr. 525-691	(9/19/91)
	Tr. 692-791	(9/20/91)
Paul Lindstrom	Tr. 5546-5788	(1/14/92)

FROM DOCKET NO. 2000-2 CARP CD 93-97
(1993-1997 Cable Royalty Distribution Proceeding (Phase II):

Direct and rebuttal testimony and exhibits of each of the following witnesses, filed on April 3, 2000 (MPAA) and January 26, 2001 (IPG; **under protective order**; and MPAA), respectively, as well as the referenced oral testimony (including cross-examination exhibits):

Witness	Transcript Reference	
Marsha Kessler	Tr. 121-202	(1/8/01)
	Tr. 206-400	(1/9/01)
	Tr. 404-712	(1/10/01)

	Tr. 714-785	(1/11/01)
	Tr. 1241-1256	(1/12/01)
Paul Lindstrom	Tr. 1258-1520	(2/6/01)
Tom Larson	Tr. 1579-1716	(2/7/01) **(under protective order)**
Raul Galaz	Tr. 2215-2336	(2/21/01)
	Tr. 2338-2541	(2/22/01)

Exhibits:
IPG Exh. 6-X, 9-X, 10-X
IPG Rebuttal Exh. 3, 4
IPG Exh. 5-X-R
MPAA Rebuttal Exh. 7, 8
Larson Exh. 4 **(under protective order)**

FROM DOCKET NO. 2001–8 CARP CD 98–99 (Phase I);
Distribution of 1998 and 1999 Cable Royalty Funds:

Direct and Rebuttal testimony of each of the following witnesses, filed on December 2, 2002 and June 20, 2003 (JSC and NAB, as noted), respectively, as well as the oral testimony (including cross-examination exhibits):

John Fuller	JSC
James Trautman	JSC
Michael Egan	JSC
Judith Allen	JSC
Gregory Rosston	NAB

FROM DOCKET NO. 2012-6 CRB CD 2004-2009 (Phase II), consolidated with DOCKET NO. 2012-7 CRB SD 1999-2009 (Phase II);
Distribution of 2004-2009 Cable Royalty Funds, and 999-2009 Satellite Royalty Funds:

Direct and Rebuttal testimony of each of the following witnesses, filed on May 5, 2015, July 8, 2014, and March 27, 2015 (IPG), as well as the oral testimony (including cross-examination exhibits):

Dr. Laura Robinson	Tr. 53-102 (April 15, 2015) Tr. 66-266 (April 16, 2015) Tr. 126-136 (April 17, 2015)
Michael Egan	Tr. 105-211 (April 15, 2015)

Amended Expert Report of Charles D. Cowan, Ph.D.

Summary

1. I have been retained by Pick & Boydston, LLP to develop a methodology for estimating values for programs\sets of programs for different third party television show providers for use by the Copyright Royalty Board in its determination of allocation of royalties. I was also asked to review past methodologies employed and data provided to determine their utility.

2. I derived a set of estimates based on my analysis of data I was provided, which are presented in a later section, along with a review of the assumptions that underlie the estimates.

3. I developed a methodology that is directly responsive to what is my understanding of the valuation required for these analyses, similar to methods I have used in the past. I implemented this methodology to perform these calculations.

Education and Experience

4. My background covers 40 years of research and study in the areas of statistics, economics, and their application to business problems. I am Managing Partner of Analytic Focus LLC, headquartered in San Antonio, TX with offices in Birmingham, AL and Washington, DC. My firm conducts research for a variety of clients, including in litigation. We also support Federal organizations needing economic and financial analysis to pursue their missions. Prior to founding Analytic Focus, I served as Chief Statistician for the Federal Deposit Insurance Corporation. I was also a Director for Price Waterhouse where I headed the Financial Services Group in the Quantitative Methods Division. I am also an adjunct professor in the School of Public Health at the University of Alabama – Birmingham (UAB). I previously served in the Business School at UAB, as a research professor at the University of Illinois, in the graduate program at Harvard, and in other academic and professional positions.

5. My resume and a listing of my publications are presented in Appendix 1.

Introduction

6. I have read some of the past rulings by the Judges, some of the past submissions by Plaintiffs and Defendants, and some of the econometric literature on the topic of allocations of royalties.

7. I note that in another ruling, the Judges advocated use of Shapley values. The utility of Shapley Values for this situation would be the construction of relative marginal values; these would be used in making a decision as to how to allocate a fixed pot of money. In response to this suggestions, another expert, Dr. Erdem, indicated this couldn't be done because "(s)uch an approach was not possible ... because of the non-existence, unavailability, or, from the parties' perspective, prohibitive development cost of the necessary evidence upon which such a comparison could be made."

8. Dr. Erdem understates the difficulty of using Shapley values, because no amount of expenditure would make it possible to derive the relative marginal values. The reason is that stations that are rebroadcast are obtained as a portfolio of shows that are offered by a particular station without separate payments made by program, so that you would know the cost associated with each program (which would then, in turn, be used to compute the marginal value). Thus, a particular station or call-sign is acquired for a fixed payment or licensing fee, but there is no separate determination made for the portion of the licensing fee for a particular program.

9. In fact, the key question to be answered is: what is the relative marginal value of IPG shows relative to SDC shows (devotional programming category) and MPAA shows (program suppliers category). I use the term relative marginal value because I have been informed by counsel that there is a fixed royalty pool for cable rebroadcasts of IPG, SDC, and MPAA shows for each of the years 2004-2009 inclusive, and a fixed royalty pool for satellite rebroadcasts of IPG, SDC, and MPAA shows for each of the years 1999-2009 inclusive (2000-2009 for program suppliers category). If one can determine the marginal value of IPG shows and the marginal value of SDC

and MPAA shows, the relative marginal value of each would be a proportion of the overall marginal value of IPG, SDC, and MPAA shows combined (in their respective categories).

10. This is a frequent problem in statistics. I adopted a commonly used method to do exactly what was requested in this litigation - estimation of values that are the marginal value affiliated with each set of programs, IPG, SDC, or MPAA. As a possible alternative, I present in this report a set of estimates that relies on a calculation that the Judges have accepted in past hearings. The cable data upon which I relied was data from Cable Data Corporation summarizing the number of distant cable subscribers on a station-by-station basis, and broadcast data secured from Tribune Media based on a stratified random sample conducted by Dr. Laura Robinson. The satellite data upon which I relied was data summarizing the number of distant satellite subscribers on a station-by-station basis, and broadcast data secured from Tribune Media based on a non-random sample that includes such stations covering approximately 99.5% of the distant satellite subscribers.

11. The next sections present a method for calculation of marginal value of IPG, SDC, and MPAA programs and estimates derived from comparison of these marginal values. These are followed by estimates calculated using the more traditional IPG methodology used in past cases.

Related Economic Theory

12. The economic theory is that a Cable or Satellite Operator (CSO) is paying a fee as a royalty for rebroadcasting a station. Each station in the offering has a set of titles, some of which are offered more than once, and some of which will be offered at different times of the day, different days of the week, and so on. The point is, the CSO is paying a fee for rebroadcasting a station that has a collection of titles, and for that station a title is either present or absent. The CSO makes a decision to rebroadcast the station to induce subscribers to sign up for their services. The CSO is obtaining a license to rebroadcast the station - a single fee for a bundle of programs. There is only a single licensing fee paid for the station as a large bucket, with no indication to the outside world about how the CSO values a particular program within the offerings of the station, or even whether the CSO considers individual programs in the decision to rebroadcast a station.

13. A second part to the economic theory is that a CSO can decide to pay or not pay for a station. If the fee is too high, the CSO can simply decide to not offer the station based on what potential subscribers are being brought to the CSO. Thus there is a mechanism that the CSO has to be following to determine the value of the station. The mechanism is unknown, which is why we need to estimate what the values are for programs in the bundle. This is a fair market transaction in the market where the CSO obtains packages of programs with the ability to accept or reject based on the pricing and the expected value to the CSO.

14. A third part of the economic theory is that, while there is likely some variation in value from CSO to CSO about the value of different titles, the value cannot vary in an extreme manner, since that would create an extreme demand for some stations that are offering the popular titles, and thus the title would be omnipresent.

15. Finally, the CSO earns its revenues by signing on subscribers. A subscriber pays for the cable or satellite service but pays a single fee for all channels\stations the subscriber receives. There is no fee charged by show or by viewing, with the exception of pay-per-view, which does not apply to offerings of IPG, SDC, or MPAA.

16. Thus, the presence of a title in a station that is being rebroadcast is used to calculate the marginal value of that title when it is part of a station's offering. The value is to the CSO who is paying the royalty. The CSO is indifferent to viewership of a particular program since the station can decide to no longer offer the program, can decide to move the program to a different time slot, or make other changes that would impact the offering of the program - the CSO has no input to a programming decision by a station or a set of stations. If viewership of a particular program were important to the CSO, the CSO would put terms in the licensing agreement to allow it to have a say in whether the time or the offering of a program were to be changed. This would be impractical when many CSOs rebroadcast a station, each with their own interests. As a result, viewership cannot be important to the decisions of the CSO; it's only the ability to obtain more subscribers that is relevant to the decision by the CSO to pay the licensing fees.

Economic Theory - Supply and Demand

17. I offer two parallels from previous work I've done in a similar vein. One comes from portfolio theory and the other comes from the automotive industry.

18. The first is work I did as Chief Statistician for the Federal Deposit Insurance Corporation (FDIC). The FDIC closes and takes over failed banks. At the time the FDIC takes over a failed bank, the FDIC becomes receiver and conservator for the bank and takes over all assets from the failed bank. After paying off depositors for each failed bank, the FDIC then pools and manages all assets obtained from all failed banks. The FDIC is not in the business of operating other businesses or being a bank itself, so the FDIC sells the assets as quickly as possible after the assets are remediated (meaning that the documentation on the assets is brought up to legal standards). The FDIC sells the assets by setting them in pools sold as bulk sales or auctions, receiving a single price for a large number of assets in the pool.

19. Under Federal law, the FDIC must allocate the proceeds of a sale of assets back to the individual receiverships (the remnants of the failed banks) so that the proceeds can be distributed to creditors. Even though the pool is sold for a single price, a value has to be placed on each loan\asset in the pool so that there is a proper dispersal of proceeds back to the individual banks.

20. A pool that is sold is composed of, for example, residential mortgages, commercial mortgages, commercial loans, real estate, construction loans, and other types of assets. There may be hundreds of such assets, with different levels of value. For example, commercial mortgages are more valuable than commercial loans because commercial mortgages are secured by underlying collateral (the building) whereas the commercial loans typically are not. However, there is no way to determine exactly how much more valuable one class of loans is than another when only one price is obtained for the entire pool that may have over 1,000 assets.

21. The solution is to use sales of multiple pools, where the mix of loans in each pool differs from pool to pool, as do the prices. By using regression theory (explained below), the marginal value of a class of assets within a pool (say, construction loans) can be computed by determining how the return on the pool varies after holding constant the mix of loans across the pools.

22. This is exactly the same problem faced in this litigation. There are multiple returns (subscribers) obtained when licenses are obtained to broadcast stations. Each station has a mix of IPG and SDC programs (devotional programming), or mix of IPG and MPAA programs (program suppliers programming); each station has distant subscribers. If all distant subscribers that are obtained for each station are the return, the number of subscribers obtained will vary by a number of factors, including the number of IPG and SDC programs, and the number of IPG and MPAA programs.

23. The second example is work I conducted for Fiat Automotive in Italy. Fiat had a database of cars sold in several European countries, the prices paid for cars, and the characteristics of the cars. This included not only Fiats but other makes, such as Peugeot, Renault, Ford, Volkswagen, and others. Armed with prices paid for cars, and knowing the make\model for each car sold, I could relate prices paid for cars to the characteristics that each make\model had (e.g. horsepower, wheelbase, interior room, trunk space, etc.) and derive the marginal return for each characteristic.

24. Each buyer paid a single price for a car with multiple such characteristics. But the car is a bundle of characteristics, not simply a box with four wheels. The analysis enabled Fiat to consider which characteristics were most attractive to buyers (higher marginal values) to increase volume of sales and also how to price cars competitively, in some cases increasing the price for cars with more desirable characteristics.

25. Again - the sale is for a bundle of characteristics, but a single price is paid, in exactly the same way that a single payment is made by a cable or satellite operator to entice more households to subscribe, but the station acquisition involves only a single licensing fee.

26. Finally, I show up at an airport and rent a car. I don't know which car I'm going to get. I don't know the type - make and model - of car I'm going to get. The rental car company might know which car I will get, but the rental car company doesn't know which features of the car I may or may not use. The rental car company doesn't know how much I am going to drive the car in terms of number of miles. The rental car company and I both agree on a price, offered in a

fair market, in competition with other rental car companies. The rental car company makes money; I get a car. Usage of features is immaterial to both of us. That doesn't mean the features have no value since they comprise a piece of the whole - it just means that usage of the features is not part of the calculus of demand and supply. In the same way, viewing of the IPG, SDC, or MPAA programs has no relevancy.

27. In summary, subscriber data for the stations and programs offered can be combined in a structure that permits the computation of the marginal returns ascribed to particular classes of programs (IPG or SDC) based on factors that relate to the value of a station and a program class.

Econometric Theory and Marginal Returns

28. In general, there is a well known relationship used to obtain the marginal value of an item that is based on linear regression. For any general linear regression, one can compute the rate of change in the dependent variable relative to a unit change in a single predictor variable. The change in the dependent variable that results from a change in a single factor is the marginal rate of change. A brief discussion of why this relationship exists is presented in Appendix 2.

29. In a regression, slope coefficients each measure the rate of change in the dependent variable relative to a change in a particular descriptor variable, holding all other variables constant. In other words, I remove the impact of any other variable and find only the change in the dependent variable when I change the specific independent variable associated with that regression coefficient and no other variable. In economics, this is the marginal return if the dependent variable in the regression is measuring a return and the independent variables measure inputs to production.

Data and Analysis

30. In the voluminous data provided to me, I have millions of records for every program call sign (station) and year, the number of "distant subscribers" for cable and subscribers for satellite, the number of IPG programs broadcast in a year by that station and the number of SDC and MPAA programs broadcast in a year by that station, and some other information about other broadcasts.

31. I aggregated information to obtain records by call sign and year with the number of subscribers for satellite, or number of distant subscribers for cable and the number of devotional IPG programs offered, the number of SDC programs offered, the number of program supplier IPG programs offered, the number of program supplier MPAA programs offered, and indicator variables for call signs with no devotional IPG programs, no program supplier IPG programs, no devotional SDC programs, or no program supplier MPAA programs. An indicator variable is a zero or one depending on whether there are no programs offered or there are programs offered.

32. Using this reduced data set, I then ran two regressions, one for cable, one for satellite, in the form (for cable, subscribers is actually distant subscribers):

$$\begin{aligned} \mathrm{Ln}(\mathrm{Subscribers}) = a + \sum_{i=1}^{\#\,\mathrm{years}} b_i * \mathrm{Indicator}_{\mathrm{Year}} + \sum_{p=1}^{\#\,\mathrm{call\ signs}} c_p * \mathrm{Indicator}_{\mathrm{Call\ Sign}} + \\ e*(\#_\mathrm{IPG}_\mathrm{dev}_\mathrm{shows}) + f*(\#_\mathrm{SDC}_\mathrm{dev}_\mathrm{shows}) + \\ g*(\#_\mathrm{IPG}_\mathrm{ProgSupp}_\mathrm{shows}) + h*(\#_\mathrm{MPAA}_\mathrm{shows}) \end{aligned} \quad (1)$$

33. If one takes the partial derivative of Subscribers with respect to "devotional", the coefficients "e" and "f" give the marginal returns for offering devotional programs from either source in terms of attracting more subscribers.

34. To obtain the relative number of subscribers that would be obtained under either offering, for the programs offered, I create a summary of what was gained by IPG relative to what was gained by SDC, relying on the shows they offered and the number of additional subscribers that resulted from their shows.

$$A = \exp\left(e * \sum_{p=1}^{\#\,\mathrm{call\ signs}} \#\mathrm{IPG}_\mathrm{dev}_\mathrm{shows}_p\right) \quad (2)$$

$$B = \exp\left(f * \sum_{p=1}^{\#\,\mathrm{call\ signs}} \#\mathrm{SDC}_\mathrm{dev}_\mathrm{shows}_p\right) \quad (3)$$

35. Equations (2) and (3) give the proportion of additional subscribers that one would expect when stations offer IPG devotional programs, in (2), and the proportion of additional subscribers that one would expect when stations offered SDC devotional programs, in (3). Only "e" or "f" measure a change in subscribers, so (2) and (3) are the marginal returns in the total number of subscribers if one offers a set number of programs, either IPG or SDC.

36. Exactly the same methods are used for Cable and for Satellite (except that cable uses distant subscribers). Exactly the same methods are used for Program Supplier comparisons, except the relevant coefficients in equation (1) are "g" and "h". Details of the regressions are offered in the back up materials to this report, where coefficients in each regression are summarized.

Results

37. Following the paradigm described in the previous section, for the devotional programs, I obtained two tables, one for cable for distant subscribers and one for satellite for all subscribers. In the same way, I obtained two tables for the program supplier comparisons.

38. For cable, there are few differences in the "value" of IPG versus SDC offerings when predicting the Distant Subscribers. The results are presented in Table 1 below.

Table 1: Relative Split in Number of Distant Subscribers - Cable Devotional - Between IPG Programs and SDC Programs Holding Constant Year and Station (Call Sign)

Year	IPG	SDC
2004	30.67%	69.33%
2005	23.05%	76.95%
2006	31.98%	68.02%
2007	34.60%	65.40%
2008	28.76%	71.24%
2009	23.79%	76.21%

39. Similar results are found for satellite, for all subscribers, as shown in Table 2 below. Tables 3 and 4 give similar results comparing IPG program suppliers and MPAA.

Table 2: Relative Split in Number of Subscribers - Satellite Devotional - Between IPG Programs and SDC Programs Holding Constant Year and Station (Call Sign)

Year	IPG	SDC
1999	1.11%	98.89%
2000	0.00%	100.00%
2001	8.78%	91.22%
2002	11.23%	88.77%
2003	10.39%	89.61%
2004	10.73%	89.27%
2005	20.16%	79.84%
2006	36.60%	63.40%
2007	27.52%	72.48%
2008	0.00%	100.00%
2009	26.25%	73.75%

Table 3: Relative Split in Number of Distant Subscribers - Cable Program Suppliers - Between IPG Program Supplier Programs and MPAA Programs Holding Constant Year and Station

Year	IPG_PS	MPAA
2004	12.13%	87.87%
2005	10.46%	89.54%
2006	12.68%	87.32%
2007	11.01%	88.99%
2008	11.38%	88.62%
2009	6.95%	93.05%

Table 4: Relative Split in Number of Subscribers - Satellite Suppliers - Between IPG Program Supplier Programs and MPAA Programs Holding Constant Year and Station

Year	IPG_PS	MPAA
2000	11.14%	88.86%
2001	9.79%	90.21%
2002	8.81%	91.19%
2003	7.08%	92.92%
2004	5.77%	94.23%
2005	7.09%	92.91%
2006	10.64%	89.36%
2007	12.47%	87.53%
2008	8.08%	91.92%
2009	6.69%	93.31%

Alternative Estimates

40. As part of my assignment, I was asked to consider the computations that IPG has performed in the past, but modified to address criticisms levied by the Judges to such computations, and to provide the results of these computations as alternatives. The methodology employed is similar to that previously presented by IPG in the 2000-2003 cable proceedings (Phase II), however excluding a Time Period Weight Factor, and utilizing broadcast data taken from a stratified random sampling. Prior decisions of the Judges specifically criticized IPG's reliance on a Time Period Weight Factor, criticized IPG's reliance on a non-random sample, and criticized the presentation of such data by a non-expert witness.

41. In my computations, I use broadcast hours for programs as a measure of volume. "Broadcast hours" is offered as an alternative measure of value as the CSO recognizes that some titles are broadcast more frequently than others. However, this captures an alternative aspect of value not addressed above. These calculations have been accepted by the court in previous cases, so are repeated here. These calculations are averages used to obtain allocations, not marginal values used for this purpose.

Table 5: Estimates of Relative Distributions for Devotional, Using Previous IPG Methods for Cable Distant Subscribers

Year	IPG	SDC
2004	17.33%	82.67%
2005	13.02%	86.98%
2006	20.65%	79.35%
2007	19.55%	80.45%
2008	17.15%	82.85%
2009	15.93%	84.07%

Table 6: Estimates of Relative Distributions for Devotional, Using Previous IPG Methods for Satellite Distant Subscribers

Year	IPG	SDC
1999	0.47%	99.53%
2000	0%	100%
2001	11.60%	88.40%
2002	11.87%	88.13%
2003	12.30%	87.70%
2004	0.73%	99.27%
2005	5.02%	94.98%
2006	32.08%	67.92%
2007	23.37%	76.63%
2008	0%	100%
2009	16.17%	83.83%

Table 7: Estimates of Relative Distributions for Program Suppliers, Using Previous IPG Methods for Cable Distant Subscribers

Year	PS	MPAA
2004	5.05%	94.95%
2005	5.18%	94.82%
2006	6.38%	93.62%
2007	5.26%	94.74%
2008	4.60%	95.40%
2009	3.14%	96.86%

Table 8: Estimates of Relative Distributions for Program Supplier, Using Previous IPG Methods for Satellite Distant Subscribers

Year	PS	MPAA
2000	4.34%	95.66%
2001	3.79%	96.21%
2002	3.14%	96.86%
2003	2.98%	97.02%
2004	2.96%	97.04%
2005	3.43%	96.57%
2006	4.32%	95.68%
2007	4.52%	95.48%
2008	2.67%	97.33%
2009	2.03%	97.97%

October 13, 2016
San Antonio, TX

Charles D. Cowan, Ph.D.

Appendix 1: Resume

Charles D. Cowan is Managing Partner of ANALYTIC FOCUS LLC. Dr. Cowan has 40 years of experience in statistical research and design. He consults for numerous public and private sector entities on the design, implementation, and evaluation of research and the synthesis of statistical and sampling techniques for measurement.

Dr. Cowan has designed some of the largest and most complex research programs conducted by the Federal Government, including the Post Enumeration Program conducted by the Bureau of the Census to evaluate the 1980 Decennial Census, the Economic Cash Recovery valuations conducted by the Resolution Trust Corporation in 1990-95, and many evaluation studies conducted for the Justice Department, the Department of Defense, the Department of Housing and Urban Development, and the Treasury Department. He has provided expert advice to corporations and government agencies on the incorporation of complex research designs in demographic and economic measurement problems, including:

- Development of procedures used by the Resolution Trust Corporation and the FDIC for determination of the value of all assets held by the RTC\FDIC taken from failed banks and S&Ls. Results from this research were used in quarterly reports to Congress on the loss to the American taxpayer that resulted from these failures. These estimates of anticipated recoveries on assets were also used by the RTC and FDIC for financial reporting, leading these agencies to their first clean opinions from the GAO in their annual review of agency financial statements.

- Establishment of audit and sampling methods to determine the completeness and reliability of reporting and record systems. These procedures were used to both expand and streamline bank examinations for safety and soundness and also compliance measurement for the FDIC. These sampling techniques are applied in the audit of Federal agencies concerned with regulatory review of operations and systems, and related systems for banks, regulatory agencies, and law firms;

- Application of econometric and biometric procedures for measurement of credit risk in large portfolios of loans. These models are frequently used for a variety of purposes within financial institutions, such as the pricing of loans, the management of customers long term, decision making on workouts for delinquent loans, and for establishment of economic and regulatory reserves.

- Evaluation of research conducted for the Department of Defense, for the National Institutes of Health, and for the Department of Agriculture, each in response to Congressional inquiries on the validity of published results, and also for defendants in lawsuits involving evidence proffered by plaintiffs in furtherance of their suit.

- Model fitting and development of projection methods to measure the likelihood of loss or errors in recording in loans held by banks or put up for auction; measurement of the likelihood of fraud and/or noncompliance in systems, including bank holding companies, trading activities for brokers, and systems for compliance with health department and judicial requirements;

- Incorporation of population demographic models with financial assessment models to predict risk for insurance companies and corporations in terms of number and value of potential claims in mass tort litigation.

- Development of procedures used by the Bureau of the Census for apportionment of population for revenue sharing purposes and the estimation of the undercount in the Decennial Census of Population and Housing. These procedures include application of capture-recapture methods to measure the size of the undercount in the decennial census, use of network sampling as an alternative measure for population size, and measurement of the reliability of data collected in the Census.

- Development of statistical methods to quantify the size of populations, including nomadic populations for the Census of Somalia, the undercount and overcount in the Census of Egypt, the number of missing children in Chicago, IL, and the number of homeless persons and families needing services in several large cities with transient populations.

Dr. Cowan teaches graduate and undergraduate courses in survey methods, statistics, and computer methods for analysis. He is the co-author of two books, one on evaluation of survey and census methods and one on econometric measures related to the welfare of the U.S. economy. He has written numerous articles on statistical methods, sampling, rare and elusive population research, and optimization techniques.

Prior to cofounding ANALYTIC FOCUS LLC, Dr. Cowan was a Director with ARPC and with Price Waterhouse, where he specialized in financial research and audit sampling. From 1991 to 1996, Dr. Cowan was the Chief Statistician for the Resolution Trust Corporation and the Federal Deposit Insurance Corporation, where he designed research necessary to measure the loss from the Savings & Loan Crisis of the late 1980's and capitalization requirements for the RTC funds from the U.S. Treasury. Dr. Cowan also served as the Chief Statistician for the U.S. Department of Education, where he designed large-scale surveys of educational institutions to measure resource needs and availability, and for Opinion Research Corporation, where he designed predictive models of demand for automobile manufacturers, banks, and large horizontally diverse firms like GE and AT&T. Dr. Cowan worked for the U.S. Bureau of the Census, where he was the Chief of the Survey Design Branch and developed many of the techniques in use today for the evaluation of coverage in surveys and censuses.

Education
Ph.D., Mathematical Statistics, The George Washington University, 1984
M.A., Economics, The University of Michigan, 1973
B.A., English and B.A., Economics, The University of Michigan, 1972

Professional Experience
Co-Founder, ANALYTIC FOCUS LLC, January, 2002 to present.
Director, ARPC, November, 1999 to December, 2001.
Director, PricewaterhouseCoopers LLP, January 1997 to November, 1999.
Chief Statistician, Federal Deposit Insurance Corporation / RTC, 1991 to 1996.
Chief Statistician, Opinion Research Corporation, 1989 to 1991.
Chief Statistician, National Center for Education Statistics, US Dept. of Education, 1986 to 1989.
Bureau of the Census: Assistant Division Chief, International Statistical Programs Center, 1984 to 1986; Staff Liaison for Statistical Litigation Support, 1983 to 1984; Chief, Survey Design Branch, Statistical Methods Division, 1978 to 1983; Acting Chief, Survey Analysis and Evaluation Branch, Demographic Surveys Division, 1976 to 1978; Office of the Chief, Statistical Research Division, 1975 to 1976
Survey Research Center, Oregon State University: Manager, 1974 to 1975
Institute for Social Research, U. of Michigan: Assistant Study Director, 1972 to 1974.

Professional Associations
Professor, Statistics, University of Alabama – Birmingham, 2002-present.
Associate Professor, Statistics, George Washington University, 1993 - 1998.
Visiting Research Professor, Survey Research Laboratory, U. of Illinois, 1983 - 1989.
Consultant, Dept. of Community Psychiatry, Johns Hopkins U., July 1985 - Dec 1987.

Professional Societies – Memberships
American Statistical Association (ASA)
American Association for Public Opinion Research (AAPOR)
International Association of Assessment Officers
Association for the Advancement of Wound Care

Professional Societies - Positions
President, Research Industry Coalition, 1999-2000
Council Member, Research Industry Coalition, Representative from ASA, 1995-2000
President, Washington/Baltimore Chapter of AAPOR, 1998
Program Chair, American Association for Public Opinion Research, 1991-1992
Program Chair, Section on Survey Research Methods, ASA, 1989-90
Secretary-Treasurer, AAPOR, 1985-1986
Associate Secretary-Treasurer, AAPOR, 1984-1985
Editorial Board, Public Opinion Quarterly, 1980-1984
Editorial Board, Marketing Research, 1989-2000
Chair, Conference Committee, AAPOR, 1982-1989
Chair, Committee on Privacy and Confidentiality, ASA, 1980-1981

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Appendix 2: Derivation of Marginal Return Measures

For a simple regression of the form: $Y_i = a + bX_i + e_i$ (1)

Now add a small deviation to X, changing it slightly. Call the small deviation Δ_x. If X changes slightly, then the value Y must change slightly. How much does Y change when X changes is the question.

Rewrite the regression as: $Y + \Delta_y = a + b(X + \Delta_x) + e$ (2)

Subtract equation (1) from equation (2) and get:

$$\Delta_y = b\Delta_x \quad (3)$$

Solving for b, the result is: $b = \frac{\Delta_y}{\Delta_x}$ (4)

Thus in a regression, b is the rate of change in Y relative a change in X. If Δ_x is infinitesimally small, then b is the marginal rate of change in y relative to X, the result one would obtain using calculus and taking the partial derivative of equation (1) with respect to X. In other words, when the change in X is made vanishingly small, the result is:

$$b = \frac{\partial Y}{\partial X} \quad (5)$$

A similar result is found when the natural logarithm of Y is used as the dependent variable, except that changes are now expressed as proportional changes. References on marginal return and measurement using regression methods:

1. Baumol, William J. *Economic Theory and Operations Analysis.* 2nd ed., Prentice-Hall Inc., Englewood Cliffs New Jersey, 1965, p. 44, p.215

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EXHIBIT B

Before the
COPYRIGHT ROYALTY JUDGES
Washington, D.C.

In the Matter of	)	
	)	
Distribution of 2004, 2005, 2006, 2007, 2008 and 2009 Cable Royalty Funds	)	Docket No. 2012-6 CRB CD 2004-2009 (Phase II) (REMAND)
	)	
In the Matter of	)	
	)	
Distribution of 1999-2009 Satellite Royalty Funds	)	Docket No. 2012-7 CRB SD 1999-2009 (Phase II) (REMAND)
	)	

DECLARATION OF DR. CHARLES COWAN

I, CHARLES COWAN, swear under penalty of perjury, that the following is true and correct:

1. I am over twenty-one years of age, am of sound mind and suffer from no legal disabilities. I am fully competent to testify to the matters set forth in this declaration. I have personal knowledge of all the facts stated herein and am in all respects qualified to assert the same. The contents of this declaration are true and correct.

2. On August 22, 2016, I submitted a report in conjunction with the presentation of Independent Producers Group's ("IPG") Written Direct Statement. Therein I submitted a proposed methodology for the distribution of 1999-2009 satellite retransmission royalties, and 2004-2009 cable retransmission royalties.

3. The methodology I used was well explained, and is a methodology that has never been presented to the court, yet which directly responds to the court's desire to base the allocations on the marginal value of programs. This methodology is a standard application of

regression theory, where the coefficients of variables included in the regression are interpreted as the hedonic marginal values of programs offered by each of the parties in this proceeding.

4. After preparation of the August 22nd report, IPG's counsel immediately inquired about the produced results, particularly in the program suppliers category, which appeared uncharacteristically beneficial to IPG. I embarked to look at the issue, and during the course of the next week I discovered errors in the earlier processing of the data. Specifically, I discovered that the earlier processing of the files I had been given regarding the classification of television shows was incomplete and in some cases incorrect, and not all of the program titles that could match had been given the opportunity to be matched to the database of program names and broadcasts. As noted earlier, some of the earlier work done matching the program names was also incorrect. Thus, the database containing matches of broadcasts to program names, needed to indicate which broadcasts should be counted, had to be recreated.

5. An example was the categorization of the SDC program "In Touch with Charles Stanley". This program name had been matched exactly and was categorized as an SDC program (correctly). What was not included in my initial calculations were various other permutations of this title that should have also been considered in the count of programs for the SDC, IPG Devotional, IPG non-devotional, and MPAA. Thus, "Charles Stanley In Touch", "Charles Stanley", "In Touch", and similar permutations and abbreviated names, had been excluded. This happened for each of the MPAA, SDC and IPG claimed programs. Consequently, the SDC had a net increase of 89 program broadcasts in the stations analyzed. While the net difference was not substantial, I was endeavoring to analyze the data as correctly as possible, with all programs and broadcasts properly accounted for. Similarly, there was a substantially larger change in recognized programs and broadcasts for the MPAA and IPG.

6. The only other change to my report was the use of a logarithm in scaling the dependent variable "subscribers", and considered it to be a revision of no extraordinary significance. As an initial matter, as a mathematician I attempt to use the concise language of that discipline to describe my analysis. A "method" is a procedure used to obtain a specific outcome – thus, "regression" is a method that is used to minimize the distances between the actual observations and the predicted observations that one would obtain by fitting a line through all the observations. It does not change regardless of the type of dependent variable being used. An example is given below in the discussion of Dr. Erdem's example, where a regression is run twice, using a linear and logarithmic version of the same dependent variable. A logarithm is not a "method" – it is a *scaling* of a variable that is simply a transformation. It is not done to achieve a specific goal, as a method would be – it is just a restatement of the scale of a variable.

7. The "method" I have proposed in order to address the question raised by the court is the regression appearing in my reports. Notwithstanding, both Dr. Erdem and Dr. Gray have stated in submitted declarations that a revision to the *scaling* is a change in method. Dr. Erdem and Dr. Gray are both silent on the known distinction between scaling and method, asserting that a modification to scaling is a change in method. It is not. While such terminology may appear to be quibbling over subjective definitions, the imprecise means by which Dr. Erdem and Dr. Gray refer to scaling as a method is simply inaccurate, and takes liberties with the definitions employed in the field of statistics.

8. The "method" that I proposed in both my initial and subsequent reports, i.e., obtaining the marginal coefficients from the regression, remained unchanged – both reports measure a marginal change in subscribers that are ascribable to the program source. How I

scale the dependent variable is dictated by which scaling leads to the best fit of the data, but is under no circumstances considered a change in "methodology".

9. Nevertheless seeking to find fault in any manner possible, Dr. Erdem ambiguously asserted that I did not use my "intuition for the model" that I presented, or the change of scaling. Initially, I am unclear at which juncture I was obligated to articulate my reasoning. Notwithstanding, even Dr. Erdem points out in the second declaration he filed that there are two obvious reasons to use a logarithm rather than a linear scale. The first is that the fit of the regression to the data available may be better. In the example provided by Dr. Erdem, the logarithm fits the data better than the linear scale and, for example, the amount of variability explained in Dr. Erdem's example improves from 16% to 19%. See *SDC Reply in Support of Motion to Strike Amended Direct Statement of IPG*, Erdem Decl. at pp. 5-6 (Exh.1) (filed Sept. 22, 2016). The second obvious reason for using a logarithmic scale that is demonstrated by Dr. Erdem's example is that it protects the user by giving one an option to better fit the shape of the data and to avoid making unwarranted predictions. For example, in the chart presented as Exhibit 2 to Dr. Erdem's declaration, the linear regression completely misses all the lower values in the chart (which in turn makes the description of the data less viable), as the log regression curves and better fits those observations. Id at p. 5. Consequently, while Dr. Erdem feigns that he is unaware why I would have adjusted the scaling from a linear to a logarithmic relationship between variables, his own example demonstrates the obvious purposes for doing so - - improvement of this particular analysis.

10. If a correction had not been made to the means by which claimed programs were processed, or the use of a logarithmic scale rather than linear scale, Dr. Erdem would instead have complained that I did not consider the distribution of the corrected data being analyzed,

even though Dr. Erdem's second declaration acknowledges that the functional form of a variable included in the analysis is dictated by the data being analyzed. In short, Dr. Erdem would like to claim that different methodologies were presented, when they weren't, but he would also like to have the opportunity to complain that I paid no attention to the form of the data that was ultimately analyzed. I interpret this is a ploy to attack the analysis before he has performed any review of the data or the actual analysis conducted. Dr. Erdem's conclusion in paragraph 6 of his declaration, that this is a "change in methodology" is belied by his own presentation of the same equations and the description in standard economics texts that the logarithm is a change of the scale of a variable to facilitate comparisons along that scale, not a change in "method.

11. Regardless, and as should already be evident from the examples provided by Dr. Erdem (see Exhibit 2 to Erdem Decl. of Sept. 22, 2016), my revision to the allocated percentages was not predominately due to the revised scaling. Rather, it was due to more accurately matching SDC, MPAA, and IPG programs to the compensable programs and broadcasts appearing in the database. I have calculated the differing measures of fit from application of a linear versus a logarithmic scale, and the regression using a logarithmic scaling is an improvement in fit relative to the linear. Any suggestion that my use of a logarithmic scale rather than a linear scale in order to artificially enhance the percentage allocations to IPG is simply fabrication.

12. As a basis of comparison, the following chart compares the amount of variability attributable to moving from linear scaling to logarithmic scaling using the same database after more accurately matching the claimed titles to the compensable programs and broadcasts:

Model Results using August, 30 Report Data Merge

	Sample Size	Number of Years	Number of Call Signs	R^2 - Log	R^2 - Linear
Cable	1103	6	493	97.9%	95.4%
Satellite	887	11	308	94.4%	92.1%

To explain, regression is a method to fit a line to a set of observations. The goal or objective in a regression is to fit the line that minimizes the distance between the line and all the actual values. Thus, if I am trying to predict the number of subscribers attributable to different factors, I fit a line that minimizes the distance between the prediction of the number of subscribers and the actual number of subscribers. If there is a perfect prediction, such as knowing a person's weight exactly by knowing their height, then 100% of the variability in weight has been explained just by knowing a person's height. If the prediction tells me nothing about the thing we are predicting, like sun spot activity on Tuesday predicting milk sales on Tuesday, then 0% of the variability is explained.

13. A better prediction means more variability has been explained for the dependent variable "subscribers" in the instance of the results submitted to the Judges. The variability explanation is called R-squared: R-squared is the proportion of variability in the dependent variable that is explained by the prediction.

14. As reflected above, I calculated that for the cable figures a 95% explanation of the variability exists when utilizing a linear scale, while 97% of the variability explanation exists when utilizing a logarithmic scale. For the satellite figures, a 92% explanation of the variability exists when utilizing a linear scale, while 94% of the variability explanation exists when utilizing a logarithmic scale. So, the increase in variance explained for cable is only 2.5%, and the increase in variance explained for satellite is only 2.3%. Consequently, while the logarithmic scaling lets us explain more of the variability, it is not significantly more variability,

demonstrating *mathematically* that my allocated percentage shares to IPG, MPAA, and the SDC, were not significantly affected the use of logarithmic versus linear scaling. That is, most of the change to the allocated percentage shares comes from the correct matching of the shows, not the switch in scaling.

15. Ironically, Dr. Erdem had the data to perform the above calculations at the time that he submitted his September 22 declaration – he could have easily performed both calculations using the regression method and see that this scaling transformation is the correct choice. The "intuition" that Dr. Erdem has criticized that I was lacking makes it very clear to me that the changes are most significantly due to the improved matching of claimed programs to compensable programs and their broadcasts, not a revision to the scaling.

16. I amended my initial report on October 30, 2016, which amended report revised the percentage allocations appearing in my August 22 report. I have been informed that my revised report was submitted as part of IPG's amended written direct statement, but that such pleading has now been stricken by the CRB Judges on the grounds that, without additional information, the revision to the allocated percentages suggests a change in methodology. As noted, however, I also engaged in a correction of the processing of the data that, by my estimates, was the predominate reason for changes to the allocated percentages.

17. The August 22nd submission included all the descriptions, mathematics, and rationale that was needed by any party to interpret what was being done, and discovery on the initial and subsequent submission would be form wise and substantively identical. The regression method I used in the later calculations is exactly the same. The variables I used are exactly the same. Subscriptions are on the left hand side of the equation, while the number of programs offered by each of the parties are on the right hand side, plus controls for time in years

and for the stations offering the programs. As noted in the appendix to my report, the coefficients in the regression are the percentage change in subscriptions due to a unit change in the number of programs offered by a party in the proceeding. Accordingly, the text of the two reports, dated August 22 and August 30, are identical in terms of explaining that a regression was being used, the same variables included in the regression, and the interpretation of the coefficients. The identical nature of the submitted methodology can be readily evaluated by the court by simply holding up and comparing the two texts.

18. Finally, it bears noting that the revised calculations were in the process of being performed and corrected prior to a pleading filed by the SDC entitled *Notice of Consent of 1999-2009 Satellite Shares Proposed by Independent Producers Group, and Motion for Entry of Distribution Order.* As noted, I began to review my original calculations on August 22, whereas the SDC's *Notice of Consent* was not filed until August 26, 2016. None of my calculations were made in response to such pleading, nor were affected by such pleading. I was not even aware of the pleading filed by the SDC until after my revised calculations were completed and submitted to the Judges on August 30, 2016, so I clearly could not have performed an analysis in response to the SDC's pleading.

DATED: October 17, 2016

By: _____

Dr. Charles Cowan

EXHIBIT C

pillsbury

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September 1, 2016

Brian D. Boydston
Pick & Boydston, LLP
10786 Le Conte Ave.
Los Angeles, California 90024

Re: *Docket No. 2012-6 CRB CD 2004-2009 (Phase II) and Docket No. 2012-6 CRB SD 1999-2009 (Phase II) Settling Devotional Claimants' Document Production Requests in connection with Independent Producers Group's Written Direct Statement in Reopened Proceedings*

Dear Mr. Boydston:

The Settling Devotional Claimants hereby submit the following discovery requests in the above-referenced Docket (hereinafter the "Proceeding").

Instructions

Please repeat each of the requests below on your response. Please provide a separate written response to each request. If you object to any request, state each basis for your objection in sufficient detail so as to permit adjudication of the validity of the objection, and produce any documents responsive to the portions of the request that are not objectionable. If you claim a document is "privileged," please state every fact supporting your claim of privilege. Selection of documents from files and other sources, as well as the numbering or identification of such documents for purposes of this production, shall be performed in such a manner as to ensure that the source of each document may be determined, if necessary. In particular, in the event that documents are used in sequence with other documents to produce a result, the documents should be produced in such order, or the order of sequence used stated so as to permit replication of the results. Further, if any documents that you produce are contained in file folders with tabs or labels identifying such documents, you are requested to produce such folders, tabs and/or labels intact with such documents. Documents otherwise attached to each other should not be separated for purposes of this production. Any electronic record or computerized piece of information should be produced in an intelligible format or should

include a description of the system and/or program from which each was derived sufficient to permit rendering the material intelligible.

Definitions

The following shall apply to all requests:

a. the singular of each word shall be construed to include its plural and vice versa;
b. "and" as well as "or" shall be construed both conjunctively as well as disjunctively;
c. "each" shall be construed to include "every" and vice versa;
d. "any" shall be construed to include "all" and vice versa;
e. "including" shall be construed as "including without limitation"; and
f. the present tense shall be construed to include the past tense and vice versa.

The term "underlying" has the same meaning as in 37 C.F.R. § 351.6, and includes, without limitation, all documents upon which the witness relied in making his or her statement and all documents that verify bottom-line numbers.

"Regarding," "relating to," "addressing," or "showing" when used herein means, in whole or in part, constituting, relating to, embodying, containing, evidencing, reflecting, reciting, identifying, stating, recording, supporting, refuting, referring to, or in any way being relevant, directly or indirectly to the subject.

"Supporting" or "support" means, in whole or in part, relating to the basis for a statement or assertion, and includes documents that might tend to refute the statement or assertion.

"Mr. Galaz" means Raul C. Galaz.

"Dr. Cowan" means Charles D. Cowan, Ph.D.

The term "document" means and includes all materials comprehended within the description of the term "document" contained in Rule 34 of the Federal Rules of Civil Procedure and means the original and all drafts of a writing, as that term is defined by Rule 1001 of the Federal Rules of Evidence, including, without limitation, all written, recorded, graphic or photographic matter, however produced or reproduced, of every kind and description in your actual or constructive possession, custody, care or control pertaining in any manner to the subject matter indicated and includes, without limiting the generality of the foregoing, originals (or copies where originals are not available) and drafts, all papers, letters, notes, memoranda, correspondence, telegrams, cables, photographs, microfilm, prints, recordings, transcriptions, blueprints, drawings, paper,

books, accounts, objects, notes or sound recordings of any type of personal or telephone conversations or meetings or conferences, minutes of directors or committee meetings, other minutes, interoffice communications or correspondence, reports, studies, written forecasts, projects, analyses, contracts, licenses, invoices, charge slips, expense account reports, hotel charges, receipts, agreements, ledgers, journals, books of account, vouchers, bank checks, freight bills, working papers, drafts, statistical records, cost sheets, abstracts of bids, stenographers' notebooks, calendars, appointment books, telephone slips, diaries, time sheets or logs, job or transaction files, computer printouts or papers similar to any of the foregoing however denominated. A draft or non-identical copy is a separate document within the meaning of this term. The term "document" also refers to electronic records in the form of electronic mail, computer files and the like without regard to whether the electronic record exists in printed form.

DOCUMENT REQUESTS

1. All documents which underlie, relate to, support or form the basis for the statement in the Expert Report of Charles D. Cowan, Ph. D. ("Cowan Report") and the Amended Expert Report of Charles D. Cowan, Ph. D. ("Amended Cowan Report") that, "I have been retained by Pick & Boydston to develop a methodology for estimating values for programs/sets of program for different third party television show providers for use by the Copyright Royalty Board in its determination of allocation of royalties."

2. All documents which underlie, relate to, support or form the basis for the statement of Dr. Cowan in the Cowan Report and the Amended Cowan Report that, "I was also asked to review past methodologies employed and data provided to determine their utility."

3. All documents, reports, analyses or other material which reflect, relate to, or form the basis for any conclusions reached by Dr. Cowan as to the utility or accuracy of past methodologies employed by IPG in proceedings before the Copyright Royalty Board.

4. All documents, data, and source material that Dr. Cowan considered that underlie, relate to, support or form the basis of, or in the alternative undermine or dispute all facts, conclusions, and/or opinions contained in the Cowan Report and the Amended Cowan Report.

5. All data provided to Dr. Cowan, as referenced in paragraph 2 of the Cowan Report and the Amended Cowan Report.

6. All documents showing the source of the data that Dr. Cowan was provided (Cowan Report and Amended Cowan Report, at ¶ 2), including who selected, compiled, and provided him with the data.

7. All documents underlying the statement: "I developed a methodology that is directly responsive to what is my understanding of the valuation required for these

analyses, similar to methods I have used in the past." (Cowan Report and Amended Cowan Report, ¶ 3.)

8. All documents, rulings, past submissions by "Plaintiffs and Defendants" and econometric literature on the topic of allocations of royalties which Dr. Cowan states he has read prior to preparation of the Cowan Report (Cowan Report and Amended Cowan Report, ¶ 6).

9. All documents underlying Dr. Cowan's statement that the method he adopted is a "commonly used method." (Cowan Report and Amended Cowan Report, ¶ 10.)

10. All documents underlying the "set of estimates that relies on a calculation that the Judges have accepted in past hearings," referenced in paragraph 10 of the Cowan Report and Amended Cowan Report.

11. All documents underlying the statement "There is a mechanism that the CSO has to be following to determine the value of the station. The mechanism is unknown, which is why we need to estimate what the values are for programs in the bundle." (Cowan Report and Amended Cowan Report, ¶ 13.)

12. All documents underlying the statement, "[W]hile there is likely some variation in value to CSO to CSO about the value of different titles, the value cannot vary in an extreme manner, since that would create an extreme demand for some stations that are offering the popular titles, and thus the title would be omnipresent." (Cowan Report and Amended Cowan Report, ¶ 14.)

13. All documents underlying the statements, "The CSO is indifferent to viewership of a particular program ...," and "[V]iewership cannot be important to the decisions of the CSO ...." (Cowan Report and Amended Cowan Report, ¶ 16.)

14. All documents underlying the statement, "If viewership of a particular program were important to the CSO, the CSO would put terms in the licensing agreement to allow it to have a say in whether the time or the offering of a station were to be changed." (Cowan Report and Amended Cowan Report, ¶ 16.)

15. All computations and all documents that underlie the results set forth in each table contained in the Cowan Report, including but not limited to "the voluminous data provided to me" (Cowan Report ¶ 30) and the modified alternative estimates Dr. Cowan was asked to consider.

16. All computations and all documents that underlie the results set forth in each table contained in the Amended Cowan Report, including but not limited to "the voluminous data provided to me" (Amended Cowan Report ¶ 30) and the modified alternative estimates Dr. Cowan was asked to consider.

17. All documents related to any computation of confidence intervals conducted in connection with any witness's methodology in this case.

18. All reference materials Dr. Cowan relied upon, including the pages cited on page 21 of the Cowan Report and the Amended Cowan Report.

19. All documents relating to any changes between the Cowan Report and the Amended Cowan Report, and the reasons for those changes, including all communications with Dr. Cowan and notes of communications with Dr. Cowan in which any changes or reasons for changes were discussed.

Sincerely,

/s/
Matthew J. MacLean
Counsel for Settling Devotional Claimants

EXHIBIT D

msk

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September 1, 2016

VIA E-MAIL AND U.S. MAIL

Brian D. Boydston
Pick & Boydston LLP
10786 Le Conte Avenue
Los Angeles, CA 90024

Re: Initial Requests for Underlying Documents Related To Independent Producers Group's Written Direct Statement, Docket Nos. 2012-6 CRB CD 2004-2009 (Phase II) and 2012-7 CRB SD 1999-2009 (Phase II)

Dear Brian:

In connection with the Written Direct Statement of Independent Producers Group ("IPG") filed on August 22, 2016 in the referenced proceeding, MPAA hereby submits the following discovery requests. Without conceding the propriety of IPG's Amended Written Direct Statement filed August 31, 2016, MPAA also includes at the end a section of additional discovery requests related to that filing. The materials sought in this letter constitute our initial discovery requests and may be supplemented.

In accordance with the Copyright Royalty Judges' August 16, 2016 Order adopting the parties' proposed procedural schedule for discovery, your responses to these requests are due no later than September 12, 2016. Production of responsive documents is due no later than September 15, 2016.

INSTRUCTIONS

Please repeat each of the requests below in your response. Please provide a separate written response to each request. If you object to any request, state each basis for your objection in sufficient detail so as to permit adjudication of the validity of the objection, and produce any documents responsive to a portion of the request that is not objectionable. If you claim a document is "privileged," please state every fact supporting your claim of privilege.

The term "underlying" has the same meaning as in 37 C.F.R. § 351.6, and includes, without limitation, all documents upon which the witness relied in making his or her statement and all documents which verify bottom-line numbers.

The term "document" means and includes all materials comprehended within the description of the term "document" contained in Rule 34 of the Federal Rules of Civil Procedure and means the original and all duplicates of a writing or recording, as those terms are defined by Rule 1001 of the Federal Rules of Evidence, including, without limitation, all written, recorded,

graphic or photographic matter, however produced or reproduced, of every kind and description in your actual or constructive possession, custody, care or control pertaining in any manner to the subject matter indicated. The term "document" also refers to electronic records in the form of electronic mail, computer files and the like without regard to whether the electronic record exists in printed form.

Responsive documents containing underlying data, quantitative analyses, statistical analyses, methodologies, calculations, or any other analyses **must be provided, separately, for each of the 2004, 2005, 2006, 2007, 2008, and 2009 cable royalty funds ("2004-2009 Cable Funds") and 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, and 2009 satellite royalty funds ("2000-2009 Satellite Funds"), and must identify the particular royalty year(s) associated with the document.**

DISCOVERY REQUESTS

Expert Report Of Charles D. Cowan, Ph.D.

1. Provide all nonprivileged underlying documents and source materials related to the assertion on page 1, in paragraph 1, of Dr. Cowan's expert report ("Expert Report") that he "has been retained by Pick & Boydston, LLP to develop a methodology for estimating values for programs\sets of programs for different third party television show providers for use by the Copyright Royalty Board in its determination of allocation of royalties." This request includes, but is not limited to, any agreement or other document engaging Dr. Cowan, and any correspondence or other documents provided to Dr. Cowan by IPG in connection with his engagement for work in this case.

2. Provide all nonprivileged underlying documents and source materials related to the assertion on page 1, in paragraph 1, of the Expert Report that he "was asked to review past methodologies employed and data provided to determine their utility." This request includes, but is not limited to, all documents and data Dr. Cowan was asked to review, and any notes or analyses prepared by Dr. Cowan during his review of such materials.

3. Provide all nonprivileged underlying documents and source materials related to the assertion on page 1, in paragraph 2, of the Expert Report that he "derived a set of estimates based on [his] analysis of data [he] was provided" and that a set of "assumptions underlie the estimates." This request includes, but is not limited to, all documents related to Dr. Cowan's derivation of estimates, including all program files and data necessary to replicate such estimates, the source(s) of such data, and documents identifying all "assumptions" Dr. Cowan relied on in formulating his estimates.

4. Provide all nonprivileged underlying documents and source materials related to the assertion on page 1, in paragraph 3, of the Expert Report that he "developed a methodology that is directly responsive to what is my understanding of the valuation

required for these analyses, similar to methods I have used in the past." This request includes, but is not limited to, all documents related to the development of Dr. Cowan's methodology, including any references consulted, any past projects considered, and any economic theories on which the methodology is based.

5. Provide all nonprivileged underlying documents and source materials related to the assertion on page 1, in paragraph 3, of the Expert Report that he "implemented this methodology to perform these calculations." This request includes, but is not limited to, all documents related to the implementation of Dr. Cowan's methodology, including all program files and data necessary to replicate Dr. Cowan's methodology and calculations.

6. Provide all nonprivileged underlying documents and source materials related to the assertion on page 1, in paragraph 4, of the Expert Report that he has "40 years of research and study in the areas of statistics, economics, and their application to business programs."

7. Provide all nonprivileged underlying documents and source materials related to the assertion on page 1, in paragraph 4, of the Expert Report that his company supports "Federal organizations needing economic and financial analysis to pursue their missions." This request includes, but is not limited to, documents identifying the federal organizations referenced by Dr. Cowan.

8. Provide all nonprivileged underlying documents and source materials related to the assertion on page 2, in paragraph 6, of the Expert Report that he has "read some of the past rulings by the Judges, some of the past submissions by Plaintiffs and Defendants, and some economic literature on the topic of allocations of royalties." This request includes, but is not limited to, documents identifying the particular decision(s) by the Copyright Royalty Judges that Dr. Cowan references in paragraph 6, and copies of all documents Dr. Cowan references in this statement.

9. Provide all nonprivileged underlying documents and source materials related to the assertion on page 2, in paragraph 7, of the Expert Report that "[t]he utility of Shapley Values for this situation would be the construction of relative marginal values; these would be used in making a decision as to how to allocate a fixed pot of money." This request includes copies of all documents Dr. Cowan references or relied on in formulating this statement.

10. Provide all nonprivileged underlying documents and source materials related to the assertion on page 2, in paragraph 8, of the Expert Report that "no amount of expenditure would make it possible to derive the relative marginal values."

11. Provide all nonprivileged underlying documents and source materials related to the assertion on page 2, in paragraph 8, of the Expert Report that "stations that are rebroadcast are obtained as a portfolio of shows that are offered by a particular station

without separate payments made by program, so that you would know the cost associated with each program."

12. Provide all nonprivileged underlying documents and source materials related to the assertion on page 2, in paragraph 8, of the Expert Report that "a particular station or call-sign is acquired for a fixed payment or licensing fee, but there is no separate determination made for the portion of the licensing fee for a particular program."

13. Provide all nonprivileged underlying documents and source materials related to the assertion on page 2, in paragraph 9, of the Expert Report that "the key question to be answered is: what is the relative marginal value of IPG shows relative to SDC shows (devotional programming category) and MPAA shows (program suppliers category)."

14. Provide all nonprivileged underlying documents and source materials related to the assertion on pages 2-3, in paragraph 9, of the Expert Report that "[i]f one can determine the marginal value of IPG shows and the marginal value of SDC and MPAA shows, the relative marginal value of each would be a proportion of the overall marginal value of IPG, SDC, and MPAA shows combined (in their respective categories)."

15. Provide all nonprivileged underlying documents and source materials related to the assertion on page 3, in paragraph 10, of the Expert Report that "[t]his is a frequent problem in statistics."

16. Provide all nonprivileged underlying documents and source materials related to the assertion on page 3, in paragraph 10, of the Expert Report that he "adopted a commonly used method to do exactly what was requested in this litigation - estimation of values that are the marginal value affiliated with each set of programs, IPG, SDC, or MPAA."

17. Provide all nonprivileged underlying documents and source materials related to the assertion on page 3, in paragraph 10, of the Expert Report that he "present[s] in this report a set of estimates that relies on a calculation that the Judges have accepted in past hearings." This request includes, but is not limited to, documents identifying the specific "calculation," the particular "past hearings," and copies of any orders or decisions by the Copyright Royalty Judges that Dr. Cowan is referencing in this statement.

18. Provide all nonprivileged underlying documents and source materials related to the assertion on page 3, in paragraph 10, of the Expert Report that "[t]he cable data upon which [he] relied was data from Cable Data Corporation summarizing the number of distant cable subscribers on a station-by-station basis, and broadcast data secured from Tribune Media based on a stratified random sample conducted by Dr. Laura Robinson." This request includes, but is not limited to, all Cable Data Corporation and Tribune Media data referenced by Dr. Cowan, and all documents and data related to the "stratified random sample conducted by Dr. Laura Robinson."

19. Provide all nonprivileged underlying documents and source materials related to the assertion on page 3, in paragraph 10, of the Expert Report that "[t]he satellite data upon which [he] relied was data summarizing the number of distant satellite subscribers on a station-by-station basis, and broadcast data secured from Tribune Media based on a non-random sample that includes such stations covering approximately 99.5% of the distant satellite subscribers." This request includes, but is not limited to, all satellite subscriber data and Tribune Media data referenced by Dr. Cowan, and all documents and data related to the "non-random sample" referenced by Dr. Cowan.

20. Provide all nonprivileged underlying documents and source materials related to the assertion on page 3, in paragraph 12, of the Expert Report that "[t]he economic theory is that a Cable or Satellite Operator (CSO) is paying a fee as a royalty for rebroadcasting a station."

21. Provide all nonprivileged underlying documents and source materials related to the assertion on page 3, in paragraph 12, of the Expert Report that "[e]ach station in the offering has a set of titles, some of which are offered more than once, and some of which will be offered at different times of the day, different days of the week, and so on."

22. Provide all nonprivileged underlying documents and source materials related to the assertion on page 3, in paragraph 12, of the Expert Report that "[t]he point is, the CSO is paying a fee for rebroadcasting a station that has a collection of titles, and for that station a title is either present or absent."

23. Provide all nonprivileged underlying documents and source materials related to the assertion on page 3, in paragraph 12, of the Expert Report that "[t]he CSO makes a decision to rebroadcast the station to induce subscribers to sign up for their services."

24. Provide all nonprivileged underlying documents and source materials related to the assertion on page 3, in paragraph 12, of the Expert Report that "[t]he CSO is obtaining a license to rebroadcast the station - a single fee for a bundle of programs."

25. Provide all nonprivileged underlying documents and source materials related to the assertion on page 3, in paragraph 12, of the Expert Report that "[t]here is only a single licensing fee paid for the station as a large bucket, with no indication to the outside world about how the CSO values a particular program within the offerings of the station, or even whether the CSO considers individual programs in the decision to rebroadcast a station."

26. Provide all nonprivileged underlying documents and source materials related to the assertion on page 4, in paragraph 13, of the Expert Report that "[a] second part to the economic theory is that a CSO can decide to pay or not pay for a station."

27. Provide all nonprivileged underlying documents and source materials related to the assertion on page 4, in paragraph 13, of the Expert Report that "[i]f the fee is too high,

the CSO can simply decide to not offer the station based on what potential subscribers are being brought to the CSO."

28. Provide all nonprivileged underlying documents and source materials related to the assertion on page 4, in paragraph 13, of the Expert Report that "there is a mechanism that the CSO has to be following to determine the value of the station."

29. Provide all nonprivileged underlying documents and source materials related to the assertion on page 4, in paragraph 13, of the Expert Report that "[t]he mechanism is unknown, which is why we need to estimate what the values are for programs in the bundle."

30. Provide all nonprivileged underlying documents and source materials related to the assertion on page 4, in paragraph 13, of the Expert Report that "[t]his is a fair market transaction in the market where the CSO obtains packages of programs with the ability to accept or reject based on the pricing and the expected value to the CSO."

31. Provide all nonprivileged underlying documents and source materials related to the assertion on page 4, in paragraph 14, of the Expert Report that "[a] third part of the economic theory is that, while there is likely some variation in value from CSO to CSO about the value of different titles, the value cannot vary in an extreme manner, since that would create an extreme demand for some stations that are offering the popular titles, and thus the title would be omnipresent."

32. Provide all nonprivileged underlying documents and source materials related to the assertion on page 4, in paragraph 15, of the Expert Report that "the CSO earns its revenues by signing on subscribers."

33. Provide all nonprivileged underlying documents and source materials related to the assertion on page 4, in paragraph 15, of the Expert Report that "[a] subscriber pays for the cable or satellite service but pays a single fee for all channels\stations the subscriber receives."

34. Provide all nonprivileged underlying documents and source materials related to the assertion on page 4, in paragraph 15, of the Expert Report that "[t]here is no fee charged by show or by viewing, with the exception of pay-per-view, which does not apply to offerings of either IPG, SDC, or MPAA."

35. Provide all nonprivileged underlying documents and source materials related to the assertion on page 4, in paragraph 16, of the Expert Report that "the presence of a title in a station that is being rebroadcast is used to calculate the marginal value of that title when it is part of a station's offering."

36. Provide all nonprivileged underlying documents and source materials related to the assertion on page 4, in paragraph 16, of the Expert Report that "[t]he value is to the CSO who is paying the royalty."

37. Provide all nonprivileged underlying documents and source materials related to the assertion on page 4, in paragraph 16, of the Expert Report that "[t]he CSO is indifferent to viewership of a particular program since the station can decide to no longer offer the program, can decide to move the program to a different time slot, or make other changes that would impact the offering of the program - the CSO has no input to a programming decision by a station or a set of stations."

38. Provide all nonprivileged underlying documents and source materials related to the assertion on page 4, in paragraph 16, of the Expert Report that "[i]f viewership of a particular program were important to the CSO, the CSO would put terms in the licensing agreement to allow it to have a say in whether the time or the offering of a program were to be changed."

39. Provide all nonprivileged underlying documents and source materials related to the assertion on page 4, in paragraph 16, of the Expert Report that "[t]his would be impractical when many CSOs rebroadcast a station, each with their own interests."

40. Provide all nonprivileged underlying documents and source materials related to the assertion on page 4, in paragraph 16, of the Expert Report that "viewership cannot be important to the decisions of the CSO; it's only the ability to obtain more subscribers that is relevant to the decision by the CSO to pay the licensing fees."

41. Provide all nonprivileged underlying documents and source materials related to the assertion on page 5, in paragraph 17, of the Expert Report describing two "parallels from previous work [he's] done in a similar vein" related to "portfolio theory" and "the automotive industry." This request includes, but is not limited to, documents describing the "previous work" that Dr. Cowan references, the economic or statistical; theories underlying such work, and documents underlying Dr. Cowan's conclusion that "parallels" exist between such work and this proceeding.

42. Provide all nonprivileged underlying documents and source materials related to the assertions on page 5, in paragraph 18, of the Expert Report describing the business practices of the FDIC.

43. Provide all nonprivileged underlying documents and source materials related to the assertions on page 5, in paragraph 19, of the Expert Report that "[u]nder Federal law, the FDIC must allocate the proceeds of a sale of assets back to the individual receiverships (the remnants of the failed banks) so that the proceeds can be distributed to creditors. Even though the pool is sold for a single price, a value has to be placed on each loan\asset in the pool so that there is a proper dispersal of proceeds back to the individual banks."

44. Provide all nonprivileged underlying documents and source materials related to the assertions on page 5, in paragraph 20, of the Expert Report that "[a] pool that is sold is composed of, for example, residential mortgages, commercial mortgages, commercial

loans, real estate, construction loans, and other types of assets. There may be hundreds of such assets, with different levels of value."

45. Provide all nonprivileged underlying documents and source materials related to the assertions on page 5, in paragraph 20, of the Expert Report that "commercial mortgages are more valuable than commercial loans because commercial mortgages are secured by underlying collateral (the building) whereas the commercial loans typically are not. However, there is no way to determine exactly how much more valuable one class of loans is than another when only one price is obtained for the entire pool that may have over 1,000 assets."

46. Provide all nonprivileged underlying documents and source materials related to the assertions on page 5, in paragraph 21, of the Expert Report that "[t]he solution is to use sales of multiple pools, where the mix of loans in each pool differs from pool to pool, as do the prices. By using regression theory (explained below), the marginal value of a class of assets within a pool (say, construction loans) can be computed by determining how the return on the pool varies after holding constant the mix of loans across the pools."

47. Provide all nonprivileged underlying documents and source materials related to the assertions on page 6, in paragraph 22, of the Expert Report that "[t]here are multiple returns (subscribers) obtained when licenses are obtained to broadcast stations. Each station has a mix of IPG and SDC programs (devotional programming), or mix of IPG and MPAA programs (program suppliers programming); each station has distant subscribers. If all distant subscribers that are obtained for each station are the return, the number of subscribers obtained will vary by a number of factors, including the number of IPG and SDC programs, and the number of IPG and MPAA programs."

48. Provide all nonprivileged underlying documents and source materials related to the assertions on page 6, in paragraph 23, of the Expert Report describing the business practices of the Fiat Automotive in Italy. This request includes, but is not limited to, Dr. Cowan's report on the work he conducted for Fiat Automotive.

49. Provide all nonprivileged underlying documents and source materials related to the assertions on page 6, in paragraph 24, of the Expert Report that "[e]ach buyer paid a single price for a car with multiple such characteristics. But the car is a bundle of characteristics, not simply a box with four wheels. The analysis enabled Fiat to consider which characteristics were most attractive to buyers (higher marginal values) to increase volume of sales and also how to price cars competitively, in some cases increasing the price for cars with more desirable characteristics."

50. Provide all nonprivileged underlying documents and source materials related to the assertions on page 6, in paragraph 25, of the Expert Report that "the sale is for a bundle of characteristics, but a single price is paid, in exactly the same way that a single payment is made by a cable or satellite operator to entice more households to subscribe, but the station acquisition involves only a single licensing fee."

51. Provide all nonprivileged underlying documents and source materials related to the following assertions on pages 6-7, in paragraph 26, of the Expert Report:

> I show up at an airport and rent a car. I don't know which car I'm going to get. I don't know the type - make and model - of car I'm going to get. The rental car company might know which car I will get, but the rental car company doesn't know which features of the car I may or may not use. The rental car company doesn't know how much I am going to drive the car in terms of number of miles. The rental car company and I both agree on a price, offered in a fair market, in competition with other rental car companies. The rental car company makes money; I get a car. Usage of features is immaterial to both of us. That doesn't mean the features have no value since they comprise a piece of the whole - it just means that usage of the features is not part of the calculus of demand and supply. In the same way, viewing of the IPG, SDC, or MPAA programs has no relevancy.

52. Provide all nonprivileged underlying documents and source materials related to the following assertions on page 7, in paragraph 27, of the Expert Report that "subscriber data for the stations and programs offered can be combined in a structure that permits the computation of the marginal returns ascribed to particular classes of programs (IPG or SDC) based on factors that relate to the value of a station and a program class."

53. Provide all nonprivileged underlying documents and source materials related to the following assertions on page 7, in paragraph 28, of the Expert Report that "there is a well known relationship used to obtain the marginal value of an item that is based on linear regression. For any general linear regression, one can compute the rate of change in the dependent variable relative to a unit change in a single predictor variable. The change in the dependent variable that results from a change in a single factor is the marginal rate of change."

54. Provide all nonprivileged underlying documents and source materials related to the following assertions on page 7, in paragraph 29, of the Expert Report that "[i]n a regression, slope coefficients each measure the rate of change in the dependent variable relative to a change in a particular descriptor variable, holding all other variables constant. In other words, I remove the impact of any other variable and find only the change in the dependent variable when I change the specific independent variable associated with that regression coefficient and no other variable."

55. Provide all nonprivileged underlying documents and source materials related to the following assertions on page 7, in paragraph 29, of the Expert Report that "[i]n economics, this is the marginal return if the dependent variable in the regression is measuring a return and the independent variables measure inputs to production."

56. Provide all nonprivileged underlying documents and source materials related to the following assertions on page 7, in paragraph 30, of the Expert Report that "[i]n the

voluminous data provided to me, I have millions of records for every program call sign (station) and year, the number of 'distant subscribers' for cable and subscribers for satellite, the number of IPG programs broadcast in a year by that station and the number of SDC and MPAA programs broadcast in a year by that station, and some other information about other broadcasts." This request includes, but is not limited to, all of the documents and data that IPG provided to Dr. Cowan for review in connection with his analysis.

57. Provide all nonprivileged underlying documents and source materials related to the following assertions on page 8, in paragraph 31, of the Expert Report: "I aggregated information to obtain records by call sign and year with the number of subscribers for satellite, or number of distant subscribers for cable and the number of devotional IPG programs offered, the number of SDC programs offered, the number of program supplier IPG programs offered, the number of program supplier MPAA programs offered, and indicator variables for call signs with no devotional IPG programs, no program supplier IPG programs, no devotional SDC programs, or no program supplier MPAA programs."

58. Provide all nonprivileged underlying documents and source materials related to the following assertions on page 8, in paragraph 31, of the Expert Report that "an indicator variable is a zero or one depending on whether there are no programs offered or there are programs offered."

59. Provide all nonprivileged underlying documents and source materials related to the following assertions on page 8, in paragraph 32, of the Expert Report describing his "two regressions" run on a "reduced data set." This request includes, but is not limited to, all documents and data comprising the "reduced data set" described by Dr. Cowan; all documents and data underlying the creation of the "reduced data set;" and all documents, data, formulas, code, and program files necessary to replicate and run the "two regressions" described by Dr. Cowan.

60. Provide all nonprivileged underlying documents and source materials related to the formulas reported on page 8, in paragraph 32, of the Expert Report. This request includes, but is not limited to, all references or source(s) on which Dr. Cowan relied to develop his formulas, all documents and data underlying the application of the formulas described by Dr. Cowan, all documents, data, formulas, code, and all program files necessary to replicate Dr. Cowan's application of those formulas in this proceeding.

61. Provide all nonprivileged underlying documents and source materials related to the following assertions on page 8, in paragraph 33, of the Expert Report that "if one takes the partial derivative of Subscribers with respect to "devotional", the coefficients "e" and "t" give the marginal returns for offering devotional programs from either source in terms of attracting more subscribers."

62. Provide all nonprivileged underlying documents and source materials related to the following assertions on page 8, in paragraph 34, of the Expert Report that "[t]o obtain the relative number of subscribers that would be obtained under either offering, for the programs offered, I create a summary of what was gained by [IPG] relative to what was gained by

SDC, relying on the shows they offered and the number of additional subscribers that resulted from their shows." This request includes, but is not limited to, all documents and data comprising the "summary" described by Dr. Cowan; all documents and data underlying the creation of the "summary;" and all documents, data, formulas, code, and program files necessary to replicate Dr. Cowan's calculations of the "relative number of subscribers."

63. Provide all nonprivileged underlying documents and source materials related to the following assertions on page 9, in paragraph 35, of the Expert Report that "[e]quations (2) and (3) give the additional number of subscribers that one would expect if when stations offer IPG devotional programs, in (2), and the additional number of subscribers that one would expect when stations offered SDC devotional programs, in (3). Only "e" and "f" measure a change in the number of subscribers, so (2) and (3) are the marginal returns in the total number of subscribers if one offers a set number of programs, either IPG or SDC." This request includes, but is not limited to, all documents and data underlying the "equations" described by Dr. Cowan, and all documents, data, formulas, code, and program files necessary to replicate Dr. Cowan's calculations.

64. Provide all nonprivileged underlying documents and source materials related to the following assertions on page 9, in paragraph 36, of the Expert Report that "[e]xactly the same methods are used for Cable and for Satellite (except that cable uses distant subscribers). Exactly the same methods are used for Program Supplier comparisons, except the relevant coefficients in equation (1) are "g" and "h". This request includes, but is not limited to, all documents and data underlying the "methods" described by Dr. Cowan, and all documents, data, formulas, code, and program files necessary to replicate Dr. Cowan's calculations.

65. Provide all nonprivileged underlying documents and source materials related to the assertion on page 9, in paragraph 36, of the Expert Report that "[d]etails of the regressions are offered in the back up materials to this report, where coefficients for all variables in each regression are summarized." This request includes, but is not limited to, all the "back up materials" referenced by Dr. Cowan.

66. Provide all nonprivileged underlying documents and source materials related to the assertion on page 9, in paragraph 37, of the Expert Report that "[f]ollowing the paradigm described in the previous section, for the devotional programs, I obtained two tables, one for cable for distant subscribers and one for satellite for all subscribers. In the same way, I obtained two tables for the program supplier comparisons." This request includes, but is not limited to, all documents and data underlying application of the paradigm described by Dr. Cowan, and all documents, data, formulas, code, and program files necessary to replicate Dr. Cowan's calculations.

67. Provide all nonprivileged underlying documents and source materials related to the assertion on page 9, in paragraph 38, of the Expert Report that "[f]or cable, there are few differences in the "value" of IPG versus SDC offerings when predicting the Distant Subscribers."

68. Provide all nonprivileged underlying documents and source materials related to the figures appearing in Tables 1-4 on pages 9-10 of the Expert Report. This request includes, but is not limited to, all documents and data underlying the figures reported by Dr. Cowan in Tables 1-4, and all documents, data, formulas, code, and program files necessary to replicate Dr. Cowan's calculations.

69. Provide all nonprivileged underlying documents and source materials related to the assertion on page 11, in paragraph 40, of the Expert Report that "[a]s part of my assignment, I was asked to consider the computations that IPG has performed in the past, but modified to address criticisms levied by the Judges to such computations, and to provide the results of these computations as alternatives. The methodology employed is similar to that previously presented by IPG in the 2000-2003 cable proceedings (Phase II), however excluding a Time Period Weight Factor, and utilizing broadcast data taken from a stratified random sampling. Prior decisions of the Judges specifically criticized IPG' s reliance on a Time Period Weight Factor, criticized IPG's reliance on a non-random sample, and criticized the presentation of such data by a non-expert witness." This request includes, but is not limited to, documents identifying the "computations IPG has performed in the past" that were utilized by Dr. Cowan; documents describing how those computations were "modified" by Dr. Cowan; and all documents, data, formulas, code, and program files necessary to replicate Dr. Cowan's computations.

70. Provide all nonprivileged underlying documents and source materials related to the assertion on page 11, in paragraph 41, of the Expert Report that "[i]n my computations, I use broadcast hours for programs as a measure of volume. "Broadcast hours" is offered as an alternative measure of value as the CSO recognizes that some titles are broadcast more frequently than others. However, this captures an alternative aspect of value not addressed above."

71. Provide all nonprivileged underlying documents and source materials related to the assertion on page 11, in paragraph 41, of the Expert Report that "[t]hese calculations have been accepted by the court in previous cases, so are repeated here." This request includes, but is not limited to, documents supporting Dr. Cowan's statement that certain calculations "have been accepted by the court in previous cases" and identifying what "court" Dr. Cowan is referencing in his statement.

72. Provide all nonprivileged underlying documents and source materials related to the assertion on page 11, in paragraph 41, of the Expert Report that "[t]hese calculations are averages used to obtain allocations, not marginal values used for this purpose."

73. Provide all nonprivileged underlying documents and source materials related to the figures appearing in Tables 5-6 on page 12 of the Expert Report. This request includes, but is not limited to, all documents and data underlying the figures reported by Dr. Cowan in Tables 5-6, and all documents, data, formulas, code, and program files necessary to replicate Dr. Cowan's calculations.

74. Provide all nonprivileged underlying documents and source materials related to the equations appearing Appendix 2 on page 21 of the Expert Report. This request includes, but is not limited to, all documents and data underlying the equations reported by Dr. Cowan in Appendix 2, and all documents, data, formulas, code, and program files necessary to replicate Dr. Cowan's calculations using the equations reported in Appendix 2.

75. Provide copies of all the source materials on "Marginal Return and measurement using regression methods" referenced in Appendix 2, in footnotes 1-5 (*see* page 21 of the Expert Report).

76. To the extent not sought by the foregoing requests, provide all other nonprivileged documents (whether in electronic format or hardcopy) underlying the Expert Report, including, but not limited to, notes, research materials, calculations, workpapers, spreadsheets, data files, program files, code, and correspondence.

Amended Expert Report Of Charles D. Cowan, Ph.D.

77. Provide all nonprivileged underlying documents and source materials related to the revised formulas appearing on page 8 of the Amended Expert Report. This request includes, but is not limited to, documents explaining the changes to Dr. Cowan's formulas, all references or source(s) on which Dr. Cowan relied to develop his formulas; all documents and data underlying the application of the formulas described by Dr. Cowan; and all documents, data, formulas, code, and program files necessary to replicate Dr. Cowan's application of those formulas in this proceeding.

78. Provide all nonprivileged underlying documents and source materials related to the figures appearing in Table 1 on page 9 of the Amended Expert Report. This request includes, but is not limited to, documents explaining the changes to Dr. Cowan's tables, all documents and data underlying the figures reported by Dr. Cowan in Table 1 and all documents, data, formulas, code, and program files necessary to replicate Dr. Cowan's calculations.

79. Provide all nonprivileged underlying documents and source materials related to the figures appearing in Tables 2-4 on page 10 of the Amended Expert Report. This request includes, but is not limited to, documents explaining the changes to Dr. Cowan's tables; documents and data underlying the figures reported by Dr. Cowan in Tables 2-4; and all documents, data, formulas, code, and program files necessary to replicate Dr. Cowan's calculations.

80. Provide all nonprivileged underlying documents and source materials related to the figures appearing in Tables 5-6 on pages 11-12 of the Amended Expert Report. This request includes, but is not limited to, documents explaining the changes to Dr. Cowan's tables; documents and data underlying the figures reported by Dr. Cowan in Tables 5-6;

and all documents, data, formulas, code, and program files necessary to replicate Dr. Cowan's calculations.

81. Provide all nonprivileged underlying documents and source materials related to the figures appearing in new Tables 7-8 on page 12 of the Amended Expert Report. This request includes, but is not limited to, documents explaining why Dr. Cowan added these new tables; all documents and data underlying the figures reported by Dr. Cowan in Tables 5-6; and all documents, data, formulas, code, and program files necessary to replicate Dr. Cowan's calculations.

82. To the extent not sought by the foregoing requests, provide all other nonprivileged documents (whether in electronic format or hardcopy) underlying the Amended Expert Report, including, but not limited to, notes, research materials, calculations, workpapers, spreadsheets, data files, program files, code, and correspondence.

83. Please provide a document identifying with specificity all of the differences between IPG's Written Direct Statement and its Amended Written Direct Statement, and nonprivileged documents underlying all such differences.

Sincerely,

Gregory O. Olaniran
A Professional Corporation of
MITCHELL SILBERBERG & KNUPP LLP

GOO/pxt

EXHIBIT E

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September 29, 2016

Brian D. Boydston
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Re: *Docket No. 2012-6 CRB CD 2004-2009 (Phase II) and Docket No. 2012-6 CRB SD 1999-2009 (Phase II) Settling Devotional Claimants' Follow-Up Document Requests to Independent Producers Group*

Dear Mr. Boydston:

The Settling Devotional Claimants ("SDC") hereby submit the following follow-up discovery requests to Independent Producers Group ("IPG") in the above-referenced Docket (hereinafter the "Proceeding").

The SDC recognize that many of the communications sought in these requests relating to Dr. Cowan's expert reports may be covered by the work product doctrine. But the SDC believe that in this case, they meet the narrow exception to overcome work product protection based on the fact that the SDC have "substantial need for the materials to prepare [their] case and cannot, without undue hardship, obtain their substantial equivalent by other means." *See* Fed. R. Civ. P. 26(b)(3)(A) (codifying federal common law on work product protection).

Dr. Cowan claims to have corrected multiple rounds of errors in direct response to inquiries from IPG, he has not identified what any of those alleged errors were, he falsely denies making any changes to his regression model, even though his testimony and calculations produced show an unexplained change from a level-linear to a log-linear model, and he bizarrely tries to obfuscate the difference between level-linear and log-linear regression models. Under the circumstances, the SDC have a substantial need for materials allowing them to understand the true reasons for the changes he made, and the SDC have no way to obtain a substantial equivalent for these materials by other means.

Moreover, even if an exception to work product protection did not apply in this case, the SDC see no basis for any work product protection of any communications with

Raul Galaz absent evidence that Mr. Galaz is an employee or consultant of IPG. Mr. Galaz has testified that he is no longer employed by IPG, and the SDC have never seen any agreement suggesting that he is a consultant falling within the zone of privilege for purposes of work product protection.

Instructions

Please repeat each of the requests below on your response. Please provide a separate written response to each request. If you object to any request, state each basis for your objection in sufficient detail so as to permit adjudication of the validity of the objection, and produce any documents responsive to the portions of the request that are not objectionable. If you claim a document is "privileged," please state every fact supporting your claim of privilege. Selection of documents from files and other sources, as well as the numbering or identification of such documents for purposes of this production, shall be performed in such a manner as to ensure that the source of each document may be determined, if necessary. In particular, in the event that documents are used in sequence with other documents to produce a result, the documents should be produced in such order, or the order of sequence used stated so as to permit replication of the results. Further, if any documents that you produce are contained in file folders with tabs or labels identifying such documents, you are requested to produce such folders, tabs and/or labels intact with such documents. Documents otherwise attached to each other should not be separated for purposes of this production. Any electronic record or computerized piece of information should be produced in an intelligible format or should include a description of the system and/or program from which each was derived sufficient to permit rendering the material intelligible.

Definitions

The following shall apply to all requests:

a. the singular of each word shall be construed to include its plural and vice versa;
b. "and" as well as "or" shall be construed both conjunctively as well as disjunctively;
c. "each" shall be construed to include "every" and vice versa;
d. "any" shall be construed to include "all" and vice versa;
e. "including" shall be construed as "including without limitation"; and
f. the present tense shall be construed to include the past tense and vice versa.

The term "underlying" has the same meaning as in 37 C.F.R. § 351.6, and includes, without limitation, all documents upon which the witness relied in making his or her statement and all documents that verify bottom-line numbers.

"Regarding," "relating to," "addressing," or "showing" when used herein means, in whole or in part, constituting, relating to, embodying, containing, evidencing, reflecting, reciting, identifying, stating, recording, supporting, refuting, referring to, or in any way being relevant, directly or indirectly to the subject.

"Supporting" or "support" means, in whole or in part, relating to the basis for a statement or assertion, and includes documents that might tend to refute the statement or assertion.

"Mr. Galaz" means Raul C. Galaz.

"Dr. Cowan" means Charles D. Cowan, Ph.D.

"Navigant" means Navigant Economics, LLC or Navigant Consulting, LLC.

"Mr. West" means Jeffrey D. West who previously worked for Navigant Economics, LLC or Navigant Consulting, Inc.

"Dr. Robinson" means Laura O. Robinson, Ph.D. of Navigant Economics, LLC or Navigant Consulting, Inc.

"Ms. Vernon" means Denise Vernon of Independent Producers Group.

The term "document" means and includes all materials comprehended within the description of the term "document" contained in Rule 34 of the Federal Rules of Civil Procedure and means the original and all drafts of a writing, as that term is defined by Rule 1001 of the Federal Rules of Evidence, including, without limitation, all written, recorded, graphic or photographic matter, however produced or reproduced, of every kind and description in your actual or constructive possession, custody, care or control pertaining in any manner to the subject matter indicated and includes, without limiting the generality of the foregoing, originals (or copies where originals are not available) and drafts, all papers, letters, notes, memoranda, correspondence, telegrams, cables, photographs, microfilm, prints, recordings, transcriptions, blueprints, drawings, paper, books, accounts, objects, notes or sound recordings of any type of personal or telephone conversations or meetings or conferences, minutes of directors or committee meetings, other minutes, interoffice communications or correspondence, reports, studies, written forecasts, projects, analyses, contracts, licenses, invoices, charge slips, expense account reports, hotel charges, receipts, agreements, ledgers, journals, books of account, vouchers, bank checks, freight bills, working papers, drafts, statistical records, cost sheets, abstracts of bids, stenographers' notebooks, calendars, appointment books, telephone slips, diaries, time sheets or logs, job or transaction files, computer printouts or papers similar to any of the foregoing however denominated. A draft or non-identical copy is a separate document within the meaning of this term. The term "document" also refers to electronic records in the form of electronic mail, computer files and the like without regard to whether the electronic record exists in printed form.

FOLLOW-UP DOCUMENT REQUESTS

1. All communications between Dr. Cowan and Mr. Galaz concerning Dr. Cowan's initial Expert Report that was submitted with IPG's August 22, 2016 Direct Statement ("Cowan Report").

2. All communications between Dr. Cowan and Mr. Galaz concerning any changes, edits, or corrections made between the Cowan Report and Dr. Cowan's Amended Expert Report that was submitted with IPG's August 31, 2016 Amended Direct Statement ("Amended Cowan Report").

3. All communications between Dr. Cowan and Mr. Galaz concerning the Amended Cowan Report and the unsworn Affidavit of Dr. Cowan dated September 23, 2016 that was served on the SDC by email on September 25, 2016 ("Cowan Affidavit").

4. All communications between Dr. Cowan and Ms. Vernon or anyone else on behalf of IPG, concerning the Cowan Report.

5. All communications between Dr. Cowan and Ms. Vernon or anyone else on behalf of IPG, concerning any changes, edits, or corrections made between the Cowan Report and the Amended Cowan Report.

6. All communications between Dr. Cowan and Ms. Vernon or anyone else on behalf of IPG, concerning the Amended Cowan Report and the Cowan Affidavit.

7. All communications between Dr. Cowan and counsel for IPG concerning the Cowan Report.

8. All communications between Dr. Cowan and counsel for IPG concerning any changes, edits, or corrections made between the Cowan Report and the Amended Cowan Report.

9. All communications between Dr. Cowan and counsel for IPG concerning the Amended Cowan Report and the Cowan Affidavit.

10. All communications between Mr. Galaz and Navigant concerning the Cowan Report.

11. All communications between Mr. Galaz and Navigant concerning any changes, edits, or corrections made between the Cowan Report and the Amended Cowan Report.

12. All communications between Mr. Galaz and Navigant concerning the Amended Cowan Report and the Cowan Affidavit.

13. All communications between Ms. Vernon and Navigant concerning the Cowan Report.

14. All communications between Ms. Vernon and Navigant concerning any changes, edits, or corrections made between the Cowan Report and the Amended Cowan Report.

15. All communications between Ms. Vernon and Navigant concerning the Amended Cowan Report and the Cowan Affidavit.

16. All communications between Dr. Robinson and Navigant concerning the Cowan Report.

17. All communications between Dr. Robinson and Navigant concerning any changes, edits, or corrections made between the Cowan Report and the Amended Cowan Report.

18. All communications between Dr. Robinson and Navigant concerning the Amended Cowan Report and the Cowan Affidavit.

19. All communications to, from or cc'ing Mr. West concerning the Cowan Report, the Amended Cowan Report, or the Cowan Affidavit.

20. All communications to, from or cc'ing Dr. Robinson concerning the Cowan Report, the Amended Cowan Report, or the Cowan Affidavit.

21. All communications with Navigant regarding any formulas or data relating to the the Cowan Report, the Amended Cowan Report, or the unsworn Affidavit of Dr. Cowan dated September 23, 2016 that was served on the SDC by email on September 25, 2016.

22. All computations and calculations performed by Dr. Cowan in connection with the Cowan Report, the Amended Cowan Report, or the Cowan Affidavit.

23. All communications regarding the discovery of the errors that led to the filing of IPG's Amended Direct Statement.

24. All communications with Dr. Cowan regarding the SDC's August 26, 2016, "Notice of Consent to 1999-2009 Satellite Shares Proposed by IPG, and Motion for Entry of Distribution Order."

25. All internal communications between Dr. Cowan and anyone at Analytic Focus LLC, or anyone working under the direction of Dr. Cowan, concerning errors or corrections to the Cowan Report, the Amended Cowan Report, or the Cowan Affidavit.

26. Any employment or consulting agreement between Mr. Galaz and IPG.

Sincerely,

/s/
Matthew J. MacLean
Counsel for Settling Devotional Claimants

EXHIBIT F

From: Brian D. Boydston, Esq. <brianb@ix.netcom.com>
To: MacLean,Matthew J. <matthew.maclean@pillsburylaw.com>
Cc: goo <goo@msk.com>; lhp <lhp@msk.com>; Harrington,Clifford M. <clifford.harrington@pillsburylaw.com>; Draper,Victoria L. <victoria.lynch@pillsburylaw.com>
Subject: Re: 1999-2009 Royalty Distributions
Date: Tue, Sep 27, 2016 7:46 pm

There is nothing suspicious going on here, just mistakes.

Brian

-----Original Message-----
From: "MacLean, Matthew J."
Sent: Sep 27, 2016 4:42 PM
To: "Brian D. Boydston, Esq."
Cc: "goo@msk.com" , "lhp@msk.com" , "Harrington, Clifford M." , "Draper, Victoria L."
Subject: Re: 1999-2009 Royalty Distributions

Brian,

I am glad you finally understand my request.

The SDC will oppose your filing of yet another revision to Dr. Cowan's results, principally because I am far from persuaded that the very material changes were actually the result of an error. Your failure to preserve the data and calculations underlying the amended direct statement, along with the fact that it took you this long to admit that they were not preserved, only adds to suspicions.

Matt

Sent from my iPhone

On Sep 27, 2016, at 6:48 PM, Brian D. Boydston, Esq. <brianb@ix.netcom.com> wrote:

Matt,

The backup that is current for the second amended report is what we sent right after the August 30th report. We don't have a file that tells how Mr. Cowan got to the satellite calculations that were in the Aug. 30th report – they were based on an intermediate result that Mr. Cowan overwrote.

That didn't exist by the time we supplied the backup materials, and Mr. Cowan didn't even know he had copied anything off of them.

We have produced everything Mr. Cowan relied on the for the August 22nd report and everything he relied on for the August 30th report. We do not have any materials encompassing the steps between the two reports, since they weren't anything Mr. Cowan was ever going to rely on.

Accordingly, we have no further materials to provide to you.

Also, you referenced Mr. Cowan's "unsworn" affidavit. That was an oversight. We will file one which is "sworn".

Brian

-----Original Message-----
From: "MacLean, Matthew J."
Sent: Sep 27, 2016 2:29 PM
To: "Brian D. Boydston, Esq."
Cc: "goo@msk.com" , "lhp@msk.com" , "Harrington, Clifford M." , "Draper, Victoria L."
Subject: Re: 1999-2009 Royalty Distributions

Brian,

I want the backup calculations for the satellite results in Dr. Cowan's amended direct statement, not just the backup calculations for the result in this unsworn "affidavit" that is supposedly a correction to the amended direct statement. I want to know what he changed, and why. The brouhaha over his first methodological change clearly shows that I cannot take him at his word when he says he is merely making a correction.

This is my fourth and final time requesting this information. And frankly, I do not believe you that you do not understand my request, just like I do not believe that Dr. Cowan and IPG don't know the difference between a natural scale and a logarithmic scale. I hate to be so blunt about it, but this time you have gone too far feigning ignorance.

Matt

Sent from my iPhone

On Sep 27, 2016, at 5:12 PM, Brian D. Boydston, Esq. <brianb@ix.netcom.com> wrote:

Matt, the affidavit is something we will file with a corrected written statement.

As for documents underlying Mr. Cowan's calculations, I don't understand what you are looking for as we produced it prior to producing the backup for the second version.

Brian

-----Original Message-----
From: "MacLean, Matthew J."

Sent: Sep 26, 2016 12:54 PM
To: "Brian D. Boydston, Esq." , "goo@msk.com" , "lhp@msk.com" , "Harrington, Clifford M." , "Draper, Victoria L."
Subject: RE: 1999-2009 Royalty Distributions

Brian,

Is the "affidavit" attached to your email below something that you intend to file with the Judges as part of yet another iteration of a written direct statement, or is it just something you are providing to us in discovery?

Regardless of your answer to this question, it does not excuse IPG from producing the documents underlying the results reported in the amended direct statement. Please produce the documents underlying the "earlier analysis of an incomplete data file" that purportedly led to the results in the amended direct statement.

Why do I have to keep asking for this? Are you really going to force us to go to the Judges over something you know you are required to produce?

Matthew J. MacLean | Partner
Pillsbury Winthrop Shaw Pittman LLP
1200 Seventeenth Street NW | Washington, DC 20036-3006
t 202.663.8183 | f 202.663.8007
matthew.maclean@pillsburylaw.com | website bio
Washington

Pillsbury Law

From: Brian D. Boydston, Esq. [mailto:brianb@ix.netcom.com]
Sent: Sunday, September 25, 2016 12:07 PM
To: goo@msk.com; lhp@msk.com; Harrington, Clifford M.; MacLean, Matthew J.; Draper, Victoria L.
Cc: worldwidesg@aol.com
Subject: 1999-2009 Royalty Distributions

Counsel,

We have been informed by Analytic Focus that the aggregate of the files that were utilized by Dr. Charles Cowan in the creation of his report of August 22, 2016, can be accessed through the attached link:

https://analyticfocusllc.sharefile.com/d-sb8651cf99404069a

As you will see, it is highly redundant of files that were already produced.

Additionally, it appears as though statements made by Mr. MacLean earlier this week were accurate, and that two of the tables appearing in Dr. Cowan's August 30, 2016 report incorrectly reported the results of his calculations. To that matter, attached please find an affidavit executed by Dr. Cowan.

Brian Boydston

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Before the
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Washington, D.C.

In the Matter of	)	
	)	
Distribution of 2004, 2005, 2006, 2007, 2008 and 2009 Cable Royalty Funds	)	Docket No. 2012-6 CRB CD 2004-2009 (Phase II) (REMAND)
	)	
In the Matter of	)	
	)	
Distribution of 1999-2009 Satellite Royalty Funds	)	Docket No. 2012-7 CRB SD 1999-2009 (Phase II) (REMAND)
	)	

AFFIDAVIT OF DR. CHARLES COWAN

1. On August 30, 2016, I submitted an amended version of a report I had prepared in connection with the above proceedings. Thereafter, I was asked to provide the backup materials on which I relied in order to create the amended report, and such materials were produced in discovery. In subsequent communications received from opposing counsel following the production of back up materials, a discrepancy between the backup materials and the reported results were noted and questioned.

2. At that time, both I and members of my company reviewed the materials in order to determine if a discrepancy existed and, if so, the explanation for the discrepancy. Almost immediately, it was determined that I erroneously included two tables in the body of the report that were incorrect. These tables, tables 2 and 4 to my amended report, both pertain to the Satellite estimates. After substantial investigation, it was determined that these two tables were taken from an earlier analysis of an incomplete data file, and needed to be replaced. In fact, the backup materials I provided in discovery reflect the correct satellite figures.

3. Both corrected tables are provided below. While the changes from the reported tables to the corrected tables are nominal, it is still my responsibility to ensure that the proper data is provided in this case. The error is my fault - I apologize to all parties concerned.

Table 2: Relative Split in Number of Subscribers - Satellite Devotional - Between IPG Programs and SDC Programs Holding Constant Year and Station (Call Sign)

Year	IPG	SDC
1999	1.11%	98.89%
2000	0.00%	100.00%
2001	8.78%	91.22%
2002	11.23%	88.77%
2003	10.39%	89.61%
2004	10.73%	89.27%
2005	20.16%	79.84%
2006	36.60%	63.40%
2007	27.52%	72.48%
2008	0.00%	100.00%
2009	26.25%	73.75%

Table 4: Relative Split in Number of Subscribers - Satellite Suppliers - Between IPG Program Supplier Programs and MPAA Programs Holding Constant Year and Station

Year	IPG_PS	MPAA
2000	11.14%	88.86%
2001	9.79%	90.21%
2002	8.81%	91.19%
2003	7.08%	92.92%
2004	5.77%	94.23%
2005	7.09%	92.91%
2006	10.64%	89.36%
2007	12.47%	87.53%
2008	8.08%	91.92%
2009	6.69%	93.31%