

**Before the
COPYRIGHT ROYALTY JUDGES
Washington, DC**

In the Matter of)	
)	
Phase II Distribution of the 1998 and 1999 Cable Royalty Funds)	Docket No. 2008-1 CRB CD 1998-1999 (Phase II)
)	

**SETTLING DEVOTIONAL CLAIMANTS' WRITTEN REBUTTAL STATEMENT ON
ALLOCATION ISSUES**

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August 12, 2014

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Pursuant to 17 U.S.C. § 803(b)(6), section 351.11 of the rules of the Copyright Royalty Judges (“Judges”), 37 C.F.R. § 351.11, and the Judges’ March 7, 2014 Order Granting Consent Motion to Modify Hearing Scheduling Order and Amended Hearing Schedule, the Settling Devotional Claimants (“SDC”) submit their written rebuttal statement in connection with the above-referenced proceeding to determine the Phase II distribution of the 1999 cable royalty funds attributable to syndicated devotional programming.

SUMMARY OF TESTIMONY

Testimony of Erkan Erdem

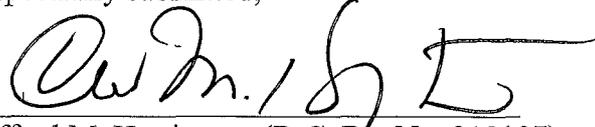
Erkan Erdem is a Senior Manager at KPMG LLP in the Economic and Valuation Services practice. Dr. Erdem has a Ph.D. in Economics from the Pennsylvania State University. Prior to joining KPMG, he worked as an antitrust economist for Bates White, LLC and an economist for IMPAQ International, research consulting firms. Dr. Erdem has an impressive background providing expert analyses on economic and statistical matters.

In his rebuttal testimony, Dr. Erdem will discuss his review and analysis of the methodology submitted by Independent Producers Group (“IPG”), and specifically Dr. Laura Robinson, for allocating shares between the SDC and IPG. He will discuss the flaws in Dr.

Robinson's approach and calculations, demonstrating why IPG's methodology is ineffective in measuring the relative market value of the SDC and IPG programs.

August 12, 2014

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Clifford M. Harrington", with a long horizontal flourish extending to the right.

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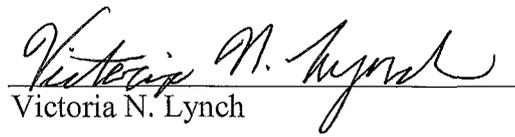
Counsel for Settling Devotional Claimants

CERTIFICATE OF SERVICE

I, Victoria N. Lynch, hereby certify that a copy of the foregoing was sent electronically and by overnight delivery via Federal Express, this 12th day of August, 2014, to the following:

INDEPENDENT PRODUCERS GROUP

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


Victoria N. Lynch

Before the
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In the Matter of)
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Phase II Distribution of the 1998)
and 1999 Cable Royalty Funds)
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Docket No. 2008-1
CRB CD 1998-1999 (Phase II)

DIRECT TESTIMONY OF ERKAN ERDEM

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August 12, 2014

TESTIMONY OF ERKAN ERDEM, Ph.D.

August 12, 2014

I. Qualifications

I, Erkan Erdem, am a Senior Manager at KPMG LLP (“KPMG”) in the Economic and Valuation Services (EVS) practice. The economists and statisticians of the EVS practice provide expert analyses on economic and statistical matters to a variety of clients.

I received a Bachelor of Science in Mathematics and Bachelor of Arts in Economics from Koç University in Istanbul, Turkey in 2000. I subsequently earned a Ph.D. in Economics from The Pennsylvania State University in 2006. Between 2006 and 2010, I worked as an antitrust economist for Bates White, LLC, an economic consulting firm where I prepared expert reports on mergers and acquisitions, monopolization disputes, market power and concentration issues, and cartels. From 2010 to 2013, I worked as an economist at IMPAQ International, a research and consulting firm. In that role, I led large projects for federal agencies such as the Centers for Medicare & Medicaid Services (CMS). Since joining KPMG in September of 2013, I have been involved in projects for the New York State Department of Health and Maryland Health Services Cost Review Commission (HSCRC). For the last two years, I have been teaching graduate-level econometrics at University of Maryland as an Adjunct Professor in the Masters in Applied Economics program. My research has been published in peer-reviewed economic journals. I have also presented my work and research findings at numerous conferences to a wide range of audiences. I have also testified in a prior proceeding before the Copyright Royalty Board.

My curriculum vitae, with detailed information on my publications, project work, and conference presentations, is attached as Exhibit 1. This report is based upon information made available to me. I worked with a team of economists and analysts at KPMG who worked under my guidance during the preparation of my report. I reserve the right to supplement this report should additional information be made available in the future.

II. Royalty Allocation Process Overview

The purpose of this proceeding, known as Phase II, is to determine the allocation of royalty funds between two categories of claimants represented by Settling Devotional Claimants (SDC) and Independent Producers Group (IPG) in the Devotional category. The funds that are relevant for this proceeding were collected for 1999 cable retransmissions. It is my understanding that the Devotional Claimants resolved by settlement their share of the allocation of funds in Phase I, which allocates funds between eight different categories of programming (e.g., Devotional, Sports, Program Suppliers, etc).¹

It is my understanding that per Section 111 of the Copyright Act these royalty payments are made by Cable System Operators (CSOs) when they retransmit copyrighted works included in their broadcast television signals outside the program's original, local broadcast area.² This is permitted by Section 111 of the Copyright Act and royalties are deposited semiannually based on the CSOs' annual gross revenues from their subscribers in the relevant markets. The owners of the copyrighted works are required to file claims every July to receive a share of the royalties collected in the previous calendar year. Because royalty deposits are not directly tied to individual programs, the Judges of the Copyright Royalty Board are charged with the allocation of and distribution of royalties among the claimants. As I detail in the sections below, the guiding precedent is to measure the "relative market value" of programs to allocate shares of royalties among programs within the "zone of reasonableness."³

III. Materials Considered

I have obtained, reviewed, and used the following documents and data files during the preparation of this testimony:

- Amended Direct Statement of Independent Producers Group, In the Matter of Distribution of 1998 and 1999 Cable Royalty Funds.

¹ *Distribution of 1998-1999 Cable Royalty Funds*, 69 FR 3606, 3608 (Jan. 26, 2004).

² Final Determination of Distributions Phase II, In re Distribution of Cable Royalty Funds 2000-2003.

³ *Ibid.*

- All supporting documents and data produced by Independent Producers Group as part of the discovery process for the Amended Direct Statement of Independent Producers Group, In the Matter of Distribution of 1998 and 1999 Cable Royalty Funds.
- Written Direct Statement of the Settling Devotional Claimants, In the Matter of Distribution of 1998 and 1999 Cable Royalty Funds.
- Testimony of Jeffrey S. Gray, Amended August 20, 2012, In the Matter of Distribution of the 2000, 2001, 2002, and 2003 Cable Royalty Funds.
- Direct Testimony of Alan G. Whitt, In the Matter of Phase II Distribution of the 1998 and 1999 Cable Royalty Funds.
- Nielsen distant viewing data (estimated hours of viewing) for 1999.
- Programming data for 1999 from Tribune Media Services (TMS).

IV. Devotional Category and Relevant Programs

As an economist, I have been specifically asked to review Dr. Laura Robinson's opinions and proposed methodologies for the division of the 1999 cable royalties in the Devotional category. The Devotional category is comprised of syndicated programs of a primarily religious theme, not limited to those produced by or for religious institutions.⁴ It is my understanding that the copyrighted works that are included in Phase 2 of the proceeding are represented by SDC and IPG.

After reviewing Dr. Robinson's reports, I noted a list of issues with her approach and calculations. A significant feature of Dr. Robinson's approach is the fact that it relies on measures that are not appropriate to determine "relative market value." I conclude that the methodologies proposed by Dr. Robinson for the allocation of royalties for SDC and IPG claimants are not in the "zone of reasonableness" as stipulated by prior orders of the CRB, and its predecessor panels, which have been subject to appellate court review. I describe the problems with Dr. Robinson's approach in detail in the following subsections.

⁴ Stipulation of the Parties on the Issues of Program Categorization and Scope of Claims, In the Matter of 1990-1992 Cable Royalty Distribution Proceeding.

Missing SDC-claimed titles

While comparing the list of non-IPG titles Dr. Robinson used in her calculations with the list of SDC-claimed titles provided in the Direct Testimony of John S. Sanders, I found that Dr. Robinson excluded some programs claimed by SDC in her calculations, which has the effect of inflating the royalty allocation share for IPG in her report. It is my understanding that Dr. Robinson based her calculations only on programming designated as “religious” in the Tribune Media Services TV Data that Dr. Robinson used, rather than searching for individual titles, as Alan Whitt did in compiling the HHVH reports used by the SDC.⁵ Using the full TV Data from TMS,⁶ I identified additional titles which are relevant for this proceeding (Table 1). There were six more SDC-claimed titles broadcast for a total of 126 times which were excluded from Dr. Robinson’s royalty allocation percentage calculations. Significantly, Dr. Robinson excluded no IPG-claimed titles from her calculations.

Table 1. Missing SDC-claimed Titles from Dr. Robinson’s Estimates

Title	Claimant	TMS type code and type description	Number of broadcasts
700 Club Super Sunday			8
Crystal Cathedral Christmas Eve	SDC	10 (Special)	11
Hour of Power Christmas			1
Flying House	SDC	17 (Cartoon)	50
Superbook			50
700 Club Super Sunday	SDC	62 (Other)	6
Total			126

Additionally, as part of IPG’s claims, Dr. Robinson incorrectly included a few titles that should not have been included. The following titles should have been excluded from Dr. Robinson’s estimates:⁷

- Programs for Feed the Children, Inc.: These programs (“Feed the Children” and “Feed the Children: the Kosovo Crisis”) should be excluded because the Judges determined that Feed the Children programming is not Devotional.⁸

⁵ This is done by including only the programs identified as “Religious” in TV Data (program type code of 27).

⁶ Provided by IPG during discovery as “Item 33 – 1999 broadcasts (aggregate).accdb.”

⁷ See Exhibit IPG-4 in Dr. Robinson’s amended testimony.

- Programs for Adventist Media Center, Inc.: These programs (“Breath of Life” and “It Is Written”) should be excluded because the Judges have stricken IPG’s claims for this claimant.⁹

Volume is not a reliable methodology to measure relative market value

One of the methods put forward to calculate royalty allocation percentages (Table 2 of Dr. Robinson’s Supplemental Report) is based on hours of programming for distantly retransmitted claimed broadcasts calculated from Tribune data using the length of each show. A methodology based on volume (of hours of transmitted programming) is not a reliable method because viewers and CSOs may value a 30-minute program more than they value a 90-minute program.¹⁰ This “utility” or satisfaction one receives from a choice made, such as watching a program, is not necessarily determined by the length of the program. Given that the “quality” of the content and the time slot when a show is broadcast (e.g., prime time vs. 3:00 AM in the morning) are significant drivers of “demand”, and that the demand for a program will certainly be a determinant of the relative market value of the program, a determination of relative market value cannot be based on total hours or total number of programs.¹¹ A 30-minute show may attract a lot more viewers than a 90-minute show depending on the differences in content, quality, or the time slot the shows are broadcast, which are significant drivers of “demand.” To simplify this issue with “volume” further, one would not expect anyone to eat five terrible tasting cookies instead of a single delicious cookie. Analogously, there could be and are situations where one hit show airs once a week on Sunday and has a very large viewership, while there may be another program that is telecast five days a week (Monday-Friday) with many broadcast hours but very small viewership. It is the taste of the cookie or the “taste” for the shows that governs their value, not the number of available hours on air.

⁸ See Ruling and Order Regarding Claims and Separate Opinion, In Re Distribution of 1998 and 1999 Cable Royalty Funds.

⁹ See Ruling and Order Regarding Claims and Separate Opinion, In Re Distribution of 1998 and 1999 Cable Royalty Funds.

¹⁰ This is also discussed by Dr. Gray in his testimony (amended August 20, 2012) In the Matter of Distribution of the 2000, 2001, 2002, and 2003 Cable Royalty Funds.

¹¹ Similarly, from a CSO’s perspective, with few exceptions, programs that are not scheduled on a regular basis are less likely to drive subscriptions than regularly scheduled programs (such as the ones captured by the Nielsen reports).

Number of subscribers is not a reliable methodology to measure relative market value

The second method Dr. Robinson proposes relies on the number of distant subscribers. As argued in prior proceedings, CSOs are profit maximizing entities that construct bundles (or packages) of channels to attract and retain subscribers. Accordingly, the revenues of a CSO can be attributed to different types of programming that drive subscriptions to the bundle. This is consistent with the Bortz Surveys conducted to measure the relative market value of different types of programming from a CSO's perspective.¹² Hence, the Bortz Surveys are relevant for Phase I of the proceedings which determine the shares of the eight types of programming. However, Phase II of the proceedings deals with different programs that belong to the same category (e.g., Devotional) which are similar (or homogeneous). Merely indicating the total number of subscribers receiving a distant signal that contains a bundle of programs does not establish the relative value of any specific program by that summation alone. Therefore, a method of allocating royalties amongst the devotional programs based on subscribers is not a reasonable allocation method.

Moreover, a subscription-based methodology is not reliable, because subscribers pay a price to have *access* to a list of channels over a certain period of time. In practice, each subscriber is interested in watching a small share of the available channels and programs even though he/she pays the price set for the "bundle." Hence, associating every subscriber of a channel with every broadcast on the channel would be very misleading. As an example, consider a community where grocery store A sells brand X coffee and grocery store B sells brand Y coffee. Coffee brands X and Y sell for the same price. Assume now that grocery store A has thousands of customers per month attracted to grocery store A's selection of European cheeses, 10 of whom also purchase brand X coffee. Store B, on the other hand, has only a few hundred customers per month all of whom purchase Brand Y coffee. A claim that brand X has a higher relative market value based on the number of customers who patronize store A would clearly miss the mark in this situation. Brand Y coffee clearly has higher "relative market value"

¹² This can be explained using the following two hypothetical surveys. The first survey asks every subscriber the most important type of programming he/she would like to have in the bundle. The second survey asks every subscriber to provide percentages for each type of programming he/she would like to have in the bundle. The results from both surveys can be used to calculate shares for each category of programming.

- both for the consumers and the grocery store - than brand X coffee given that it is the preferred brand (with higher demand and sales) in this community. The determination of “relative market value” does not depend on how many customers walk through the doors of (or have access to) the grocery store.

To illustrate further, consider a channel with a copyrighted program, Program Z, which is retransmitted in a distant market. Assume that Program Z, broadcast on a particular day and time, has thousands of viewers. Now, consider replacing Program Z with another copyrighted program, Program W, while keeping all other programs on the channel unchanged. Assume that there are no subscribers in the distant market who watch Program W. The theory suggests that Program Z has higher “relative market value” than Program W because (1) higher demand for commercials around Program Z will increase revenues for the channel,¹³ (2) Program Z will increase negotiating power of the channel with the CSOs as well as how much the CSOs pay the channel to carry the signal, (3) the CSOs will have no incentive to carry a signal with Program W, which no subscriber chooses to watch. Under Dr. Robinson’s approach, both programs would have equal value, which is an anomalous result.

Dr. Robinson’s method based on the number of subscribers has flaws

Aside from these theoretical arguments against the use of the number of distant subscribers for determining relative market value, Dr. Robinson’s approach has two major practical defects. To be specific, Dr. Robinson proposes to use “average subscribers” weighted by the number of broadcasts, for IPG and SDC separately, in each quarter hour. First, she uses “average number of distant subscribers per distant system” for each station instead of “total distant subscribers.” For example, KTTV had an average of 102,442 distant subscribers in the two semi-annual CDC filings for 1999, with a total of 5 distant systems in each accounting period. KCAL had an average of 561,459 distant subscribers in 1999, with a total of 26 distant systems. Even though KCAL was received by more than five times as many subscribers as KTTV, Dr. Robinson’s use of the average number of distant subscribers *per distant system* assigned almost equal value to each station:

¹³ It is plausible that organizations that consider paying the channel for such commercials also are profit-maximizing entities, and that their rationale for purchasing commercial time is related to the actual or expected viewership of the program.

KTTV: 102,442 distant subscribers divided by 5 distant systems = 20,489 subscribers per system.

KCAL: 561,459 distant subscribers divided by 26 distant systems = 21,595 subscribers per system.

Dr. Robinson provides no reason to value a program on a station carried by only 5 distant systems as approximately equal in value to a program on a station carried by 26 distant systems.

In addition to using the wrong value for measuring the “reach” of claimed programs, Dr. Robinson then further averages those numbers for all claimed programs by quarter hour.¹⁴ For example, consider two hypothetical stations with one IPG-claimed program on each. One of these stations has an average of 100,000 subscribers per system (using Dr. Robinson’s flawed analysis above), and the other station has an average of 10 subscribers per system. The average number of distant subscribers per system for these two stations is 50,005. Now, assume that the broadcast on the channel with 10 distant subscribers is either not claimed by IPG or is disqualified from this proceeding. Then, the average number of distant subscribers for IPG-claimed broadcasts is simply the number of distant subscribers for the remaining station, which is 100,000. **So, the exclusion or removal of one program (with low subscription) from the claimed broadcast list would *increase* the measure used in the calculation of the royalty allocation share for IPG (from 50,005 to 100,000, in this example). This is clearly counter intuitive and incorrect.**

This feature of Dr. Robinson’s methodology is, in fact, in contradiction with what Mr. Galaz argues in his testimony:

“IPG espouses that each and every program that is demonstrated to have been broadcast by a terrestrial station, and is thereafter retransmitted by a CSO, is required to receive some portion of the fees collected by the U.S. Copyright Office.”¹⁵

¹⁴ This is basically calculating the average of average distant subscribers (over IPG programs).

¹⁵ Amended Testimony of Raul Galaz, In the Matter of Distribution of 1998 and 1999 Cable Royalty Funds. It is noteworthy that the Judges found “unacceptable” a methodology that automatically awarded royalties “in the absence of *any* evidence of viewership.” *Distribution of the 2000, 2001, 2002 and 2003 Cable Royalty Funds*, 78 FR 64984, 65000 (Oct. 30, 2013).

That is, each additional program claimed by IPG, which is eligible to receive royalties, should theoretically increase IPG's share in the royalty allocation. By the same logic, removing a program claimed by IPG from the calculations should theoretically decrease IPG's share in the royalty allocation. In both cases, the proper "direction" of the change in royalty allocation should be clear regardless of how "small" or "large" the change in the royalty allocation percentage is. Using Dr. Robinson's approach, the direction of change is frequently the reverse of what is proper.

This basic flaw in Dr. Robinson's approach materializes when I correct for her incorrect inclusion of "It Is Written" among IPG's claimed programs. In Table 2, I reproduced what Dr. Robinson reported in her testimony using her flawed method: 19,648 and 18,460 weighted average distant subscribers for IPG and SDC, respectively. These estimates for weighted average distant subscribers imply a royalty allocation percentage of 51.56% for IPG. I then I remove "It Is Written" from the list of IPG-claimed broadcasts, because the Cable Royalty Board has stricken IPG's claims for this claimant.¹⁶ In theory, the *removal* of a program from IPG's claims must *decrease* the royalty allocation percentage for IPG. However, after removing "It Is Written" from the IPG-claimed broadcasts and associated subscribers from the calculations, the average number of distant subscribers for IPG broadcasts increases from 19,648 to 19,937. This is because the CSOs that rebroadcast "It Is Written" had relatively lower average number of subscribers compared to CSOs rebroadcasting other programs claimed by IPG. As a result, the implied share attributed to IPG programs *increases* from 51.56% to 51.92% as a result of the exclusion of "It is Written" from IPG's list of claimed programs. The direction of the change is simply wrong.

As a further demonstration of the flaws in Dr. Robinson's approach, I calculated the shares of IPG and SDC based on a hypothetical situation in which IPG has claimed only one show: Creflo A. Dollar Jr. A logical expectation when the number of IPG-claimed titles changes from 14 to 1 is that the royalty allocation share estimated by IPG should decrease from 51.56% to a much lower value. Contrary to this expectation, Dr. Robinson's methodology indicates that the weighted average subscribers for the channels on which Creflo A. Dollar Jr. is broadcast is

¹⁶ See Ruling and Order Regarding Claims and Separate Opinion, In Re Distribution of 1998 and 1999 Cable Royalty Funds.

20,221 – a higher value than 19,648 with all 14 IPG-claimed titles. The implied percentage for IPG with only Creflo A. Dollar Jr. is 52.28% which is higher than the 51.56% originally estimated by Dr. Robinson with all IPG-claimed titles. Again, the direction is wrong and the outcome is counter-intuitive.

Table 2. Sensitivity Analyses of Dr. Robinson’s Estimates with Subscribers

	As reported by Dr. Robinson	After removing “It Is Written”	Including only Creflo A. Dollar Jr.
Weighted Average Subscribers for IPG Broadcasts	19,648	19,937	20,221
Weighted Average Subscribers for SDC Broadcasts	18,460	18,460	18,460
Implied Allocation for IPG ¹⁷ (%)	51.56	51.92	52.28

Many other counter-intuitive examples can be calculated to demonstrate the flaws with this approach. For example, it is clear that either claimant (IPG or SDC) could simply pick the title which is broadcast on a channel (or a group of channels) with the largest value of average distant subscribers to “maximize” its royalty allocation share.

Based on these analyses, I believe that the CRB should reject Dr. Robinson’s methodologies based on “averages.” Additionally, given that (1) a subscription-based methodology is not a reliable methodology for determining relative market value, and (2) Dr. Robinson’s approach has multiple and significant problems, I do not attempt to provide “revised” royalty allocation percentages based on this approach.

Fee generation is not a reliable methodology to measure relative market value

The third method Dr. Robinson proposes relies on the “fees generated” for stations with IPG and SDC broadcasts. There are major flaws with this approach; indeed, Dr. Robinson cannot even calculate a royalty allocation between IPG and the SDC based on this method (see Table 2 of her testimony). First, the fees are actually paid by CSOs (not by stations) based on the gross receipts and Distant Signal Equivalent (DSE) values for the distant signals on a particular CSO.¹⁸ The “fees generated” values used by Dr. Robinson are not calculations made by the CSOs or

¹⁷ The royalty allocation percentage for IPG is given by $100 \frac{\text{IPG}}{\text{IPG} + \text{SDC}}$, where IPG and SDC represent the weighted average subscribers for each claimant presented in the table.

¹⁸ A detailed overview of how fees are calculated is provided in the Direct Testimony of Marsha E. Kessler, In the Matter of Distribution of the 2000, 2001, 2002, and 2003 Cable Royalty Funds.

dictated by the Copyright Office, but rather are values “allocated” by CDC to individual stations using DSEs as relative weights for reporting purposes. Second, a royalty allocation methodology based on the fee generation approach has been discredited by the CRB in a previous proceeding.¹⁹ This is because the fees paid by the CSOs are not directly linked to individual programs, or even to individual stations. Third, “fees generated” allocated by CDC to each station will be higher for larger CSOs (with high gross receipts) for a given DSE, but have no relationship to the “value” of a broadcast.

Finally, as with Dr. Robinson’s methodology based on average distant subscribers per CSO, rather than total distant subscribers per program, Dr. Robinson’s fee generation methodology is based on average fees per CSO rebroadcasting a program, rather than total fees generated by a station on which the program is broadcast. The use of averages, instead of totals, gives rise to all of the same pitfalls as Dr. Robinson’s methodology based on average distant subscribers per CSO, including the relative devaluation of programs rebroadcast by greater numbers of smaller CSOs and the possibility of increasing allocations by dropping programs.

Incorrect use of viewership to measure relative market value

In her fourth set of royalty allocation estimates, Dr. Robinson uses a combination of (1) number of claimed broadcasts by Nielsen quarter hours and (2) Nielsen viewership measured as estimated number of households tuned in at each quarter hour.²⁰ Even though I agree with the use of actual viewing patterns, I disagree with the manner and means by which Dr. Robinson attempts to determine viewership values to estimate royalty allocation percentages.

First, Dr. Robinson relies on Nielsen viewership values from 1997 (and a small portion to 1998),²¹ and not from 1999, which is the relevant year for the royalty allocation calculations in this proceeding. It is possible that the Nielsen reports for 1999 were not available to Dr. Robinson. However, providing royalty allocation estimates for 1999 using viewership data from 1997-1998 is methodologically problematic.

¹⁹ See *Distribution of the 2004 and 2005 Cable Royalty Funds*, 75 FR 57063, 57072-57073. (Sept. 17, 2010)

²⁰ See Exhibit IPG-6 in Dr. Robinson’s amended testimony.

²¹ Even though Dr. Robinson’s amended testimony mentions that the data belongs to 1997, the data she uses in her calculations includes sweeps from 1998.

Second, instead of calculating viewership separately for IPG and SDC programs, Dr. Robinson calculates the *total* number of households estimated to be viewing television for each quarter hour. For example, Dr. Robinson estimates that a total of 307,075,317 households²² watched television during quarter hour 85 (corresponding to 23:00-23:15) over the course of 1997 and the portion of 1998 included in her data.²³ There were a total of 50 IPG and 50 SDC titles broadcast at that quarter hour in 1999 (e.g., one program roughly once per week for both SDC and IPG). Then, Dr. Robinson calculates a weighted average of number of viewers in which she uses the number of titles as weights.

As a methodology applied to establish relative market place value of a program, Dr. Robinson's analysis (in which she makes no attempt to calculate how many households actually tuned in to a program claimed by IPG or SDC during any quarter hour) makes no sense. By her approach, a program showing opposite the Super Bowl, the perennial #1 rated show on television, would be presumed to have the same viewership as the Super Bowl itself. This reflects neither common sense nor reality. Indeed, rational stations seeking to maximize station value would sometimes choose to air their less popular programs at times when highly popular programs are showing on other channels, so as to avoid the toughest competition.

For these reasons, I do not find Dr. Robinson's calculation useful at all. In the course of this proceeding (including discovery), Dr. Robinson had access to the necessary data to calculate the number of households that viewed the SDC titles separately from the number of households that viewed the IPG titles. If she had calculated these values separately for IPG and SDC, then she could have calculated the total number of viewers for IPG and SDC over quarter hours, and used those values (without the need to use the number of titles as weights) to calculate the royalty allocation percentages for SDC and IPG.

Analysis of Tribune TV Data and Nielsen Data

The 1999 TV Data produced by IPG²⁴ provides detailed broadcast information including the distantly transmitted station, date, time, program length, and title from 134 distinct stations in 1999. It includes a total of 46,138 quarter hours for titles claimed by either SDC or

²² This is a sum of households over a whole year at each quarter hour.

²³ See row QH85 in Exhibit IPG-6 in Dr. Robinson's amended testimony.

²⁴ TMS TV Data provided by IPG as "Item 33 – 1999 broadcasts (aggregate).accdb"

IPG (Table 3). About 52.1% of these quarter hours belong to titles claimed by IPG. The number channels associated with SDC-claimed titles is 65 compared to 34 for IPG-claimed titles.

Table 3. IPG and SDC Quarter Hours in 1999 TV Data

	Quarter Hours Matched between TV Data and Nielsen Data	Percent of Quarter Hours	Number of Channels Associated with Titles
IPG	24,052	52.1%	34
SDC	22,086	47.9%	65
Total	46,138	100.0%	

The 1999 Nielsen data provides viewership data for 123 unique channels. It includes 44 channels associated with SDC-claimed titles and 25 channels associated with IPG-claimed titles (Table 4). Hence, 67.7% of the channels associated with SDC-claimed titles and 73.5% of the channels associated with IPG-claimed titles are included in the 1999 Nielsen Data. On the other hand, the “coverage” of the channels in the 1997-1998 Nielsen Data, which provides viewership data for 102 unique channels, is lower for both IPG and SDC. About 60.0% of the channels associated with SDC-claimed titles and 67.7% of the channels associated with IPG-claimed titles are included in the 1997-1998 Nielsen Data. Therefore, the 1999 Nielsen data appears to be a better source than the 1997-1998 Nielsen Data to use together with the 1999 IPG TV Data.

Table 4. Coverage of 1999 TV Data and 1997-1998 TV Data

	1999 Nielsen Data	1997-1998 Nielsen Data	Number of Channels Associated with Titles	Coverage of 1999 Nielsen Data	Coverage of 1997- 1998 Nielsen Data
	(a)	(b)	(c)	(d) = 100*[(a)/(c)]	(e) = 100*[(b)/(c)]
IPG	25	23	34	73.5%	67.6%
SDC	44	39	65	67.7%	60.0%

Revised royalty allocation shares based on viewership

I provide revised royalty allocation percentages based on viewership data with the following corrections to Dr. Robinson estimates:

- Use the relevant 1999 Nielsen viewership data²⁵ instead of 1997-1998;
- Revise the list of IPG- and SDC-claimed titles that should be included in the analyses (see pages 4-5 above);
- Calculate the number of households that viewed the SDC titles separately from the number of households that viewed the IPG titles in each quarter hour;
- Use the total Nielsen viewership for SDC and IPG programs instead of calculating “weighted average viewership” as Dr. Robinson. It is the total viewership (or total demand) for each claimant group that matters, not “average” viewership.^{26,27}

I merge the 1999 Nielsen viewership data with the 1999 TV Data and identify program titles claimed by IPG and SDC to calculate the viewership by Nielsen quarter hours.²⁸ I drop the records that do not merge at this stage, which can happen, for example, due to the fact that Nielsen sweeps are available only for the six sweep periods in 1999. I find that SDC and IPG are equally affected by the exclusion of non-merging quarter hour records from the rest of my analysis. Table 5 shows that about 26 percent of the quarter hours (combinations of channel, date, and quarter hour) remain in the merged data for both IPG and SDC.

Table 5. Merging TV Data and Nielsen Data

	Quarter Hours Matched between TV Data and Nielsen Data	Total Quarter Hours in TV Data for IPG or SDC programs	Percent Successfully Matched
	(a)	(b)	(c) = 100*[(a)/(b)]
IPG	6,390	24,052	26.6%
SDC	5,828	22,086	26.4%

Note: Each quarter hour (or record) is a combination of channel, date, and quarter hour.

²⁵ Based on quarterly Nielsen sweeps with the estimated quarter hours that households located in distant cable markets viewed qualified programs.

²⁶ Dr. Robinson does not provide an explanation for why a weighted average is required or why she uses the number of broadcasts in each quarter hour as weights.

²⁷ A particular household may be counted in more than one quarter hour. However, given the nature of the data, it is not possible to estimate the number of “unique” households which viewed titles claimed by either of the claimants.

²⁸ Merging of these two data sources require additional coding/algorithm in which the main objective is to create quarter hours for the TV Data. This is because each row in the Nielsen data represents a 15-minute increment in the sweep period. I confirmed that my algorithm matches Dr. Robinson’s algorithm exactly.

Exhibit 2 shows the results of Dr. Robinson’s analysis with my corrections as described above by quarter hour for IPG and SDC broadcasts separately. There were 5,828 IPG and 6,390 SDC quarter hours (or records) over the 96 quarter hours.²⁹ The total number of viewers for IPG and SDC were 276,179 and 1,225,796, respectively. As I describe above, what really matters in determining relative market value (of SDC-claimed versus IPG-claimed broadcasts) is the total viewership. Hence, the royalty allocation shares based on total Nielsen viewership for IPG and SDC are **18.4%** and **81.6%**, respectively, as presented in Table 6. These allocations are within 0.1% of the allocations set forth in the Direct Statement of John Sanders, based on the Household Viewing Hours Report compiled by Alan Whitt in the SDC’s Written Direct Case.

Table 6. 1999 Royalty Allocation Shares Based on Nielsen Viewers

	IPG	SDC	Total
Total Nielsen viewers	276,179	1,225,796	1,501,975
Royalty Allocation Shares	18.4%	81.6%	100.0%

²⁹ Each broadcast is broken down to 15 minute quarter hours. Hence, a program that is longer than 15 minutes is counted more than once.

V. Declaration of Erkan Erdem

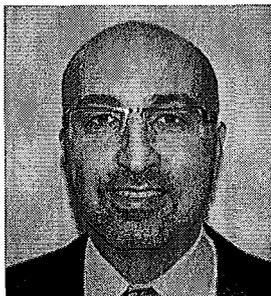
I declare under penalty of perjury that the foregoing testimony is true and correct, and of my personal knowledge.

Executed on August 12, 2014

A handwritten signature in black ink, appearing to be 'Erkan Erdem', written in a cursive style.

ERKAN ERDEM

Exhibit 1. Curriculum Vitae



ERKAN ERDEM

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Function and Specialization

Dr. Erkan Erdem is a Senior Manager in KPMG's Economic and Valuation Services (EVS) practice. Dr. Erdem has eight years of research and consulting experience. He provides economic services to KPMG's clients and teaches econometrics at University of Maryland's Masters in Applied Economics program.

Representative Clients

- Maryland Health Services Cost Review Commission (HSCRC)
- New York State Department of Health
- CMS, CMMI
- Administration on Aging

Professional Associations

AEA, APHA, ASA, and AcademyHealth

Languages

English, Turkish

Education, Licenses & Certifications

- PhD in economics from The Pennsylvania State University
- BS in mathematics and BA in economics from Koç University, Istanbul

Programming Skills

- Matlab, STATA, Gauss, SAS, and C
- Tableau

Background

Dr. Erdem is an expert in program evaluation, policy analysis, statistical modeling, econometrics, and data analytics. He has extensive experience with Medicare payment systems and health care claims data. He teaches graduate-level econometrics at University of Maryland as an Adjunct Professor. Prior to joining KPMG, Dr. Erdem was a Senior Research Associate at IMPAQ International, where he led federal government projects. Prior to IMPAQ, he worked as an Economist at Bates White where he prepared expert reports on mergers and acquisitions, monopolization disputes, market power and concentration issues, and cartels. He has worked closely with clients including leading law firms, Fortune 500 companies, and government agencies on a number of projects.

Testifying Experience

- In the Matter of Phase II Distribution of the 1998 and 1999 Cable Royalty Funds, Docket No. 2008-1 CRB CD 1998-1999 (Phase II) (Copyright Royalty Board).

Professional and Industry Experience

- Population-based analysis of healthcare utilization using Medicaid and all-payer claims databases for New York State Department of Health. Analyzed cost and quality of care measures at the provider- and county-level to assess the needs of the population in a "value" based approach.
- Led the technical efforts in the Comparative Effectiveness Research (CER) Public Use Data Pilot Project for the Centers for Medicaid & Medicare Services (CMS) to create de-identified Public Use files (PUFs) using Medicare claims data. Led a team of economists and statisticians to generate samples of Medicare beneficiaries, link and process enrollment and claims data sets, and apply various statistical disclosure limitation techniques to prepare analytic files that meet HIPAA standards.
- Led the design of the methodology for the calculation of baseline and benchmark Medicare Fee-for-Service (FFS) expenditures in the Comprehensive End-Stage Renal Disease (ESRD) Care (CEC) Initiative for the Center for Medicare & Medicaid Innovation (CMMI). Reviewed and synthesized payment models in the Medicare Shared Savings Program (SSP) and Pioneer Accountable Care Organization (ACO) Model as part of the task.
- Conducted monitoring and evaluation of the Bundled Payments for Care Improvement Initiative (BPCI) for CMMI with a focus on services provided around the acute care hospital stay (i.e., episode of care). Statistically identified diagnoses with a potential to generate savings and designed various cost and utilization measures to assess the performance of the

initiative compared to appropriate benchmarks.

- Conducted a rapid-cycle evaluation of the Community-based Care Transitions Project (CCTP) for CMS to assess the impact of the program on continuity of care and outcomes, including readmissions, emergency visits, medication errors, costs, and patient satisfaction.
- Led the project for a simulation-based cost-benefit analysis of school-based influenza vaccination programs for a private biopharmaceutical company.
- Conducted the process evaluation of the Chronic Disease Self-Management Program (CDSMP) for the Administration on Aging (AoA) and analyzing the determinants of completion rates using participant-level data.
- Evaluated the performance of over 1,000 hospitals in the U.S. in the National Content Developer Project for CMS. The data elements cover patient safety culture, measurement of health care processes and outcomes, infection control, procedures, medications, nursing practices, communication.
- Investigated the response rates in the Consumer Assessment of Healthcare Providers and Systems (CAHPS) survey using a predictive regression model and reported the findings to CMS with recommendations for future surveys.
- Provided analyses for the liability and the damages experts for AMD Inc. in the exclusionary conduct litigation of Intel Corp. (AMD Inc. vs. Intel Corporation).
- Estimated damages to
 - Novell, Inc. in the Microsoft monopolization litigation (In re Microsoft Corp. Antitrust Litigation).
 - Purchasers in the price-fixing litigation of global rubber chemicals manufacturers (In re Rubber Chemicals Antitrust Litigation).
 - Purchasers of hypodermic products in a foreclosure litigation involving a major medical supplies company.
- Analyzed the competitive effects of a merger in the
 - Oil refining industry in the U.S.
 - Liquor distribution industry in the U.S.
- Developed a methodology and a simulation model to estimate damages in Section II (i.e., monopolization) cases.
- Provided economic analyses related to the calculation of water price in an international arbitration case.
- Analyzed market power of Shell Trading Gas & Power Company in proceedings before the Federal Energy Regulatory Commission (FERC).
- Conducted a review of the econometric modeling in the Enron bankruptcy litigation.

Publications and Research Papers

- Erdem, E. "Prevalence of Chronic Conditions Among Medicare Part A

Beneficiaries in 2008 and 2010: Are Medicare Beneficiaries Getting Sicker?" *Preventing Chronic Disease*. 2014;11:130118.

- Erdem, E., Korda, H., Woodcock, C., and Pedersen, S. "Racial and Ethnic Minority Participants in Chronic Disease Self-Management Programs (CDSMP): Findings from the Communities Putting Prevention to Work Initiative." *Ethnicity and Disease*. Vol. 23. Autumn 2013.
- Erdem, E., Korda, H., Sennett, C., and Haffer CS. "Medicare Claims Data as Public Use Files: A New Tool for Public Health Surveillance." *Journal of Public Health Management & Practice*. Forthcoming.
- Erdem, E. and Korda, H. "Self-Management Program Participation by Older Adults with Diabetes: Chronic Disease Self-Management Program (CDSMP) and Diabetes Self-Management Program (DSMP)." *Family and Community Health*. April/June 2014. Vol. 37(2):134–146.
- Erdem, E., Fout, B., and Abolude, A. "Hospital Readmission Rates in Medicare." April 2013. *Journal of Hospital Administration*. Revise and resubmit.
- Erdem, E. and Holly Korda. "Medicare Fee-for-Service Spending for Diabetes: Examining Aging and Co-morbidities." *Journal of Diabetes and Metabolism*. Forthcoming.
- Erdem, E. "Chronic Conditions and Medicare Spending." *Medicare and Medicaid Research Review*. Revise & Resubmit.
- Erdem, E. and Fout, B. "Trends in Medicare Prescription Drug Utilization." Working Paper, April 2013.
- Erdem, E., Prada, S. and Haffer, C. "Medicare Payments: How much Do Chronic Conditions Matter?" *Medicare and Medicaid Research Review*. 2013: Volume 3 (2).
- Erdem, E., Korda, H., Woodcock, C., and Pedersen, S. "From Participation to Completion: Older Adults in the Communities Putting Prevention to Work—Chronic Disease Self-Management Program (CDSMP) Initiative." Working Paper, March 2013.
- Erdem, E. and Thomas W. Concannon. "What Do Researchers Say about Proposed Medicare Claims Public Use Files?" *Journal of Comparative Effectiveness Research*, November 2012, Vol. 1, No. 6, pp. 519-525.
- Erdem, E. "Chronic Conditions in Medicare." IMPAQ Research Brief #3. IMPAQ International LLC, November 2011.
- Erdem, E. "Gender Differences in Home Health Care Utilization in Medicare." IMPAQ Research Brief #1. IMPAQ International LLC, September 2011.
- Erdem, E. and Sergio Prada. "Creation of Public Use Files: Lessons Learned from the Comparative Effectiveness Research Public Use Files Data Pilot Project." Joint Statistical Meeting Proceedings, Government Statistics Section. Alexandria, VA: American Statistical Association, pp. 4095-4109,

2011.

- Erdem, E. and James Tybout. "Trade Policy and Industrial Sector Responses: Using Evolutionary Models to Interpret the Evidence." *Brookings Trade Forum 2003*, pp. 1-43.
- Erdem, E. "An Empirical Model of Investment Behavior in Dynamic Oligopolies." Working Paper, 2005.
- Erdem, E. "Strategic Investment and Endogenous Entry." Working Paper, 2003.

Conference Presentations

- Erdem, E. "From Participant to Completer: Understanding Completion Rates among Older Adults in the Chronic Disease Self- management Program." American Public Health Association Annual Meeting, Boston, MA, November 2013.
- Erdem, E., Singh, A., and Borton, J. "Aggregate Level Public Use Files with High Data Confidentiality and Analytic Utility for Descriptive Analyses from Medicare Claims Data." Joint Statistical Meetings, Montreal, QC, August 2013.
- Erdem, E. "Medicare Public Use Files for Research, Training, and Innovation." Panel Chair. AcademyHealth 2013 Annual Research Meeting, Baltimore, MD, June 2013.
- Erdem, E. "Chronic Conditions and U.S. Health Care." American Public Health Association Annual Meeting, San Francisco, CA, October 2012.
- Erdem, E. "Getting the DIRT [Data for Innovation, Research, and Transparency] on Medicare and Medicaid Public Use Files." AcademyHealth 2012 Annual Research Meeting, Orlando, FL, June 2012.
- Erdem, E. "An Introduction to Medicare Claims Public Use Files (PUFs)." AcademyHealth Methods Webinar Series, July 26 and August 9, 2011.
- Erdem, E. "Creation of Public Use Files: Lessons Learned from the Comparative Effectiveness Research Public Use Files Data Pilot Project."
 - American Evaluation Association Meeting, Anaheim, CA, November 2011.
 - Joint Statistical Meetings, Miami Beach, FL, August 2011.
- Erdem, E. "CMS Public Use Files for Comparative Effectiveness Research", AcademyHealth Annual Research Meeting Innovation Center, Seattle, WA, June 2011.
- Erdem, E. "New CMS Data Sets: CMS 2008 BSA Inpatient Claims PUF." Health 2.0 Developer Challenge Code-a-thon, Washington, DC, February 2011.

Exhibit 2. SDC and IPG Viewers

Quarter hour	IPG broadcasts	SDC broadcasts	Total IPG viewers	Total SDC viewers
1	518	330	19,081	156,511
2	518	330	17,663	159,845
3	596	314	39,834	19,289
4	596	314	34,311	19,005
5	109	456	4,816	105,646
6	109	456	6,114	105,702
7	339	396	25,772	102,858
8	339	396	26,070	100,214
9	236	304	8,132	59,156
10	236	304	8,553	58,567
11	77	314	6,814	59,679
12	77	314	6,459	58,580
13	172	128	10,972	1,652
14	172	128	11,078	1,660
15	120	159	0	3,998
16	120	159	0	3,839
17	74	137	1,282	26,097
18	74	137	1,282	25,959
19	0	151	0	30,374
20	0	151	0	30,067
21	120	94	5,547	26,347
22	120	94	8,258	24,736
23	0	80	0	19,935
24	0	80	0	19,566
25	0	0	0	0
26	0	0	0	0
27	0	0	0	0
28	0	0	0	0
29	0	80	0	1,087
30	0	80	0	786
31	0	0	0	0
32	0	0	0	0
33	0	40	0	445
34	0	40	0	445
35	0	0	0	0
36	0	0	0	0
37	0	0	0	0
38	0	0	0	0
39	0	0	0	0

Quarter hour	IPG broadcasts	SDC broadcasts	Total IPG viewers	Total SDC viewers
40	0	0	0	0
41	0	0	0	0
42	0	0	0	0
43	0	0	0	0
44	0	0	0	0
45	0	0	0	0
46	0	0	0	0
47	0	0	0	0
48	0	0	0	0
49	0	68	0	0
50	0	68	0	0
51	0	68	0	693
52	0	68	0	693
53	0	24	0	0
54	0	24	0	0
55	0	24	0	0
56	0	24	0	0
57	0	0	0	0
58	0	0	0	0
59	0	0	0	0
60	0	0	0	0
61	0	0	0	0
62	0	0	0	0
63	120	0	4,662	0
64	120	0	5,590	0
65	12	0	0	0
66	12	0	0	0
67	0	0	0	0
68	0	0	0	0
69	19	0	0	0
70	19	0	265	0
71	0	0	0	0
72	0	0	0	0
73	20	0	0	0
74	20	0	0	0
75	45	0	614	0
76	45	0	435	0
77	47	8	0	0
78	47	8	0	0
79	5	11	0	2,365

Quarter hour	IPG broadcasts	SDC broadcasts	Total IPG viewers	Total SDC viewers
80	5	11	0	0
81	1	0	0	0
82	1	0	0	0
83	0	0	0	0
84	0	1	0	0
85	0	1	0	0
86	0	0	0	0
87	0	0	0	0
88	0	0	0	0
89	0	4	0	0
90	0	4	0	0
91	0	4	0	0
92	0	4	0	0
93	64	0	0	0
94	64	0	2,670	0
95	220	0	9,885	0
96	220	0	10,020	0
Total	5,828	6,390	276,179	1,225,796