Before the
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In re	)	
DISTRIBUTION OF CABLE	)	**CONSOLIDATED PROCEEDING**
ROYALTY FUNDS	)	**NO. 14-CRB-0010-CD (2010-13)**
	)	
	)	
	)	

AMENDED WRITTEN REBUTTAL STATEMENT OF THE SETTLING DEVOTIONAL CLAIMANTS

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February 12, 2018

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In re	)	
DISTRIBUTION OF CABLE	)	**CONSOLIDATED PROCEEDING**
ROYALTY FUNDS	)	**NO. 14-CRB-0010-CD**
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AMENDED WRITTEN REBUTTAL STATEMENT OF THE SETTLING DEVOTIONAL CLAIMANTS

Pursuant to 17 U.S.C. § 803(b)(6), 37 C.F.R. § 351.11, and the Judges' January 26, 2018 Order Continuing Hearing and Permitting Amended Written Rebuttal Statements, Denying Other Motions, and Reserving Ruling on Other Requests, the Settling Devotional Claimants ("SDC") hereby submit their Amended Written Rebuttal Statement in connection with the above-referenced proceeding to determine the Phase I Allocation of the 2010 through 2013 cable royalty funds attributable to syndicated Devotional programming.

The SDC's Amended Written Rebuttal Statement is related to (a) the documents and data produced in discovery by the Joint Sports Claimants after the Judges' Order of January 17, 2018 and (b) the revised testimony of Jeffrey S. Gray (filed Jan. 22, 2018), and includes the attached amended written rebuttal testimony of Dr. Erkan Erdem of KPMG, LLC as additional testimony in support of the SDC's Written Rebuttal Statement, filed on September 15, 2017.

Respectfully submitted,

/s/ Jessica T. Nyman

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February 12, 2018

CERTIFICATE OF SERVICE

I, Jessica T. Nyman, hereby certify that a copy of this Amended Written Rebuttal Statement of the Settling Devotional Claimants was filed via eCRB and sent electronically, this February 12, 2018 to the following:

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Before the
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In re	
DISTRIBUTION OF CABLE ROYALTY FUNDS	**CONSOLIDATED DOCKET NO. 14-CRB-0010-CD (2010-13)**

AMENDED REBUTTAL TESTIMONY OF ERKAN ERDEM, PH.D.

February 12, 2018

TESTIMONY OF ERKAN ERDEM, PH.D.

1. I, Erkan Erdem, am a Managing Director at KPMG LLP, engaged by the Settling Devotional Claimants (SDC) as an expert witness in this case. My qualifications are set forth more fully in the Testimony of Erkan Erdem, Ph.D., submitted with the Amended Written Direct Statement of the Settling Devotional Claimants, dated March 9, 2017.

I. Purpose of the Testimony

2. I was recently provided with the Third Errata to Amended and Corrected Written Direct Statement and Second Errata to Written Rebuttal Statement Regarding Allocation Methodologies of Program Suppliers ("Errata") submitted on January 22, 2018, by Motion Picture Association of America Represented Program Suppliers (MPAA), and the Declaration of Jeffrey S. Gray, Ph.D., submitted with MPAA's Response in Opposition to the SDC's Motion to Strike Program Suppliers' Errata to the Testimony of Dr. Jeffrey S. Gray, dated February 2, 2018. I was also provided with additional Bortz survey data submitted on January 24, 2018, by Joint Sports Claimants (JSC) that allowed for analyses that were not previously possible.

II. Analyses of the New Bortz Survey Data

3. The new Bortz survey data files from JSC allowed me to revise the results that I have previously presented as Exhibit 8 in my Written Direct Testimony. **Exhibit AR1** provides royalty shares disaggregated by WGNA-only systems and systems with WGNA and other distant signals. These new results, which are now weighted by fees paid, are generally very similar to the results I have presented in my Amended Written Direct Testimony, and my conclusions have not changed: The royalty shares for the Devotional claimants were

slightly higher every year in systems that retransmitted WGNA with other distant signals in the Bortz survey, but the largest difference was approximately 3 percentage points (2.02 vs. 5.12 percent in 2011). The royalty shares for Program Suppliers (PS) did not present sizeable differences, either. They were slightly higher in two out of four years for WGNA-only systems than systems that retransmitted WGNA with others signals, but lower in the remaining two years.

4. Using the new Bortz survey data files, I conducted an equality of means test to further investigate whether these differences in the shares allocated by survey respondents across the two types of systems – WGNA-only and WGNA other signals – were significant.[1] I confirmed, based on a weighted analysis presented in **Exhibit AR2**, as I previously testified based on an unweighted analysis, that all differences for Devotional, except for 2011, are statistically insignificant in the Bortz survey.[2] All differences of PS were statistically insignificant.

5. This test for statistical significance shows two things: (1) the statistically insignificant differences in the valuation of PS programming for all years and Devotional programming for all but one year demonstrate that survey respondents across the two types of systems value the two program types similarly (even though not every program that was provided in the instructions to WGNA-only systems was compensable and systems that retransmitted WGNA with other signals were not provided with instructions to distinguish compensable from non-compensable programming or the summary of compensable

[1] The equality of means test is a statistical technique that is used to understand if two population (or true) means are equal based on data from two samples.

[2] Testimony of Erkan Erdem, Ph.D., In re Distribution of 2010-2013 Cable Royalty Funds, March 9, 2017, at p. 11.

programs); and similarly (2) it is not possible to establish that non-compensable programming on WGNA biases the results in favor of Devotional or PS programming.[3] The fact that the differences across all years in both PS and Devotional categories (except in 2011 for Devotional) are statistically insignificant, even though the volume of non-compensable programming by number of minutes is relatively high, is consistent with the notion that cable systems are more interested in providing a menu of different categories of programming than they are in the particular volume of programming in "minutes." In my opinion, this test further falsifies the hypothesis that non-compensable programming on WGNA creates a bias in favor of Devotional shares in survey results. It may also suggest that the improvements in the 2010-2013 Bortz surveys to address the non-compensable programming on WGNA have worked, and any remaining "issues" with the survey with respect to shares for Devotional and PS due to non-compensable content on WGNA are not influential.

6. In the process of preparing Exhibit AR2 with the new Bortz survey data, I noticed an error in my calculations for the equality of means test with the Horowitz survey data (presented as Exhibit 9 in my Amended Written Direct Testimony). **Exhibit AR3** summarizes the results of the revised equality of means test for the Horowitz survey. None of the differences are statistically significant for Devotional, indicating that the treatment of non-compensable programming on WGNA by the survey (i.e., providing examples of programming to respondents that included non-compensable content during 2010-2013 as I detailed in my Amended Written Direct Statement) did not impact (or bias) the

[3] By definition, a lack of statistical significance means that any difference in the results may be caused by randomness, rather than bias.

Devotional shares in a significant way. This test also indicates that the differences for PS shares across the two types of systems were statistically significant for three out of four years.

III. Analyses of MPAA's Errata

7. In MPAA's Errata, Dr. Gray provided substantial changes to both his data and methodology. First, as an update to his analysis data, Dr. Gray included Nielsen viewing data for WGNA, the most widely retransmitted station in the U.S., in his analyses that MPAA claims had not been included in the data set that had been provided to him. MPAA's claim that Dr. Gray had not been provided with WGNA viewing data does not appear to be entirely accurate. Dr. Gray had local and distant viewing records for WGN in his data (though very sparse) before the Errata. Neither the Errata nor Dr. Gray's Declaration explains why the new data files contain different data for WGNA than his old data files did.

8. The inclusion of the distant viewing for WGNA in the Errata has little impact on the data problems I had previously presented. As I previously testified, Dr. Gray lacked Nielsen data for many of the stations he had sampled and most periods of programming for other stations. Even with the inclusion of Dr. Gray's new data for WGNA, the Nielsen dataset is still missing data for 59.9% of quarter-hours in Dr. Gray's station sample (down from 63.5% without his new WGNA data). **Exhibits AR4**. It is important to note that these missing quarter-hours of data are not "zeroes," which would not necessarily be surprising. They are simply missing altogether. As I previously noted, Dr. Gray continues incorrectly to impute zeroes for most of these missing data points, and drops the rest (potentially destroying the randomness of his sample). **Exhibit AR5**. In addition to introducing error,

Dr. Gray's improper imputation of zeroes and improper dropping of records introduce bias, because the mismatch between the Gracenote and Nielsen data is uneven across claimant groups, with Devotional and Canadian being the most negatively affected, with more than 80% of records missing in both categories. **Exhibit AR6**.

9. With Dr. Gray's new data, imputation of zeros has significant effects on regression results and predicted distant viewership. When the regressions are run without imputing zeroes to missing data, they consistently imply larger shares for Devotional, PTV, and PS, and lower shares for Canadian, CTV, and JSC in every year. **Exhibit AR7.** Dr. Gray also excludes records with positive distant viewership ranging between 21 and 27 for 2010 through 2013 (up from 10 and 22 percent without his new WGNA data), thus further reducing the amount of distant viewing in his analysis. **Exhibit AR8, Panel 1**. Similarly, Dr. Gray excludes records with zero distant viewership ranging between 18 and 24 percent for 2010 through 2013 (down from 19 to 28 percent without his new WGNA data). **Exhibit AR8, Panel 1**. These exclusions skew the data underlying Dr. Gray's analysis.

10. Second, as a reaction to criticisms from multiple parties, Dr. Gray changed the dependent variable in his regression(s) for distant viewing from the count of viewers in the sample to a weighted number provided by Nielsen.[4] Similarly, Dr. Gray changed the numerator of his independent variable for "local ratings" from the count of viewers in the sample to the weighted number provided by Nielsen. Due to lack of documentation from Nielsen and explanation from Dr. Gray, it is not clear how these "weighted" estimates are calculated. It

[4] For both local and distant viewers, the count of viewers in the sample is available as HOUSEHOLD_COUNT and the number of estimated viewers is available as SUM_OF_DAILY_HOUSEHOLD_WEIGHT.

appears that these estimated viewers are calculated based on Nielsen's complex sampling methodology (and associated weights attached to sampled households) that is designed to measure national viewership of programs; not local and distant viewership for specific stations.

11. Dr. Gray's use of "Nielsen weights" in the Errata is a major methodological change. It is not necessarily an improvement because, as I previously testified, Dr. Gray's attempt to estimate local and distant viewership at the *station-level* completely ignores Nielsen's sampling and weighting methodology that is designed to estimate *national* viewership. That is, the Nielsen "weights" are inconsistent with correctly (and precisely) estimating viewership patterns for a list of station in different markets across the U.S.
12. I investigated the relationship between Nielsen weighted viewers (for local and distant markets) and subscriber data from CDC that Dr. Gray uses in his regression analyses. I found thousands of examples for which the estimated viewers for distant subscribers are greater than the total distant subscribers (**Exhibit AR9**). For example, station WFMZ is estimated to have 45,157 *distant* viewers on 4/21/2013 at 6:00PM for "69 NEWS WEEKEND EDITION" However, WFMZ only had 1,620 total *distant* subscribers in this accounting period in 2013, meaning that, according to Dr. Gray, there were more than 27 times as many people watching the program on a distant basis than were receiving it on a distant basis.
13. In another example, WCIU had 462,183 *local* viewers on 9/27/2010 at 7:30 PM for "NFL FOOTBALL," but WCIU only had 20,652 *total* subscribers in this accounting period in 2010. Because Dr. Gray calculates his independent variable for "local ratings" by dividing the estimated number of local viewers with the total number of subscribers, Dr. Gray

implies a "local rating" of 2237.96% for this quarter hour. It would clearly be impossible for properly calculated data points to have viewers in excess of the number of subscribers, either in the local or distant markets. This analysis further demonstrates that Nielsen weighted viewers are inconsistent with Dr. Gray's proposed methodology, making Dr. Gray's proposed royalty shares unreliable.

14. Third, Dr. Gray presented a revised approach involving *two regressions* in the Errata as opposed to the *single regression* he had presented in his Written Direct Statement (and subsequent reports). In the Errata, Dr. Gray justified the change in his methodology as:[5]

> Due to the large difference between WGN and non-WGN stations in terms of the extent of non-compensable programming, the number of distant subscribers, and the level of distant viewing, I estimated separate regressions WGN and non-WGN stations each year from 2010-2013.

Although I agree that there are important differences between WGNA and other stations, I disagree with Dr. Gray's statement that this change "… did not introduce any changes to my methodology."[6] The estimation of separate regressions is an important change in methodology. As I discussed above, Dr. Gray had both local and distant viewing for WGN in the Nielsen data he had relied on for his written direct testimony. Dr. Gray initially presented an approach that treated WGN/WGNA similarly to any other signal in his written direct statement. Interestingly, Dr. Gray had used a separate regression for WGN/WGNA in the 2004-2009 Cable and 1999-2009 Satellite proceedings[7] meaning that

[5] Errata, at p. 19.

[6] Declaration of Jeffrey S. Gray, Ph.D., February 2, 2018, In the Matter of Distribution of the 2010-2013 Cable Royalty Funds, at p. 2.

[7] In the Matter of Distribution of the 2004, 2005, 2006, 2007, 2008 and 2009 Cable Royalty Funds, and In the Matter of Distribution of the 1999-2009 Satellite Royalty Funds, Written Direct Case of the MPAA-Represented Program Suppliers, Direct Testimony of Jeffrey S. Gray, Ph.D.

he was aware of the "large differences" between WGN and non-WGN stations, but in this case he initially proposed a methodology that was based on a single regression in his written direct testimony for this proceeding.[8]

15. As I testified previously, there is no rationale for Dr. Gray's use of a regression at all when he already has what he believes to be reliable estimates of distant viewing. If the idea is to propose royalty share distributions that are based on distant viewers, then Dr. Gray already has what he apparently believes to be the actual data from Nielsen. If Dr. Gray believes that a regression is necessary for some reason, it is clear that further investigation is necessary to account for WGNA's outlier status. Dr. Gray did not provide an economic explanation as to why estimating two separate regressions was the best way to account for the differences between WGNA and other signals (as opposed to, for example, using an indicator or dummy variable for WGNA in the same regression with other signals).

16. With the limited time I had since the production of the Errata, I attempted to estimate a single regression, by adding a dummy variable for WGNA to control for the differences between WGNA and other stations, and found out that the coefficients cannot be estimated.[9] This is an indication that Dr. Gray's model specification may not be correct (i.e., the choice of Poisson regression is not appropriate) when one attempts to estimate the model with the entire database. There are other, potentially more appropriate models

[8] I also noticed that Dr. Gray corrected the variable names in the tables with the regression results in his written report. Dr. Gray uses "local ratings" as one of his independent variables in the regression even though the tables in his written statements had indicated "log of local ratings" until the Errata. Dr. Gray did not provide an explanation, but he had used the "log of local ratings" instead in the 2004-2009 Cable and 1999-2009 Satellite proceedings in the past.

[9] That is, the estimation methodology cannot find a set of coefficients that maximize the likelihood function.

that could have been used with Dr. Gray's data (when there are many zeros in the data), such as a two-part model. In two-part models, the first part is a binary model to estimate the likelihood of having positive values (in this case, distant viewership). Conditional on positive values, the second part estimates the model with positive values. I could have performed additional investigations and tests to offer other insights, but it would have required more time.

17. Poisson regression is appropriate when the dependent variable is counts of a *discrete* variable with a limited number of values, such as number of children or number of hospitalizations. Dr. Gray's new weighted viewership data has a lot more variation and takes thousands of different values like a *continuous* variable. This clearly makes the choice of a Poisson regression questionable. As I noted above, these investigations should have been conducted and presented by Dr. Gray. Also, the use of a Poisson regression requires independently distributed observations for viewership data for each data point in Dr. Gray's regression data. However, because millions of data points in Dr. Gray's data are generated by a limited number of meters nationally, many of the observations are correlated with each other, violating the independence requirement and biasing Dr. Gray's estimates.
18. In summary, Dr. Gray adds more data points to his analyses, applies an inappropriate weighting scheme, and switches to a methodology that involves two separate regressions, but he does nothing to address the major concerns with his proposed methodology, as I explained in detail in my Amended Written Direct Statement. His viewership-based royalty shares are calculated from a very poor model with an unusable dataset.

19. I hereby declare under penalty of perjury under the laws of the United States that the foregoing is true and accurate.

Executed on February 12, 2018

Erkan Erdem, Ph.D.

Exhibit AR1. Disaggregated Results from the Bortz and Horowitz Surveys

Bortz Survey

Year	PS		JS		CTV		Devotional		PTV		Canadian	
	WGNA-only	WGNA with others	WGNA-only	WGNA with others	WGNA-only	WGNA with others	WGNA-only	WGNA with others	WGNA -only	WGNA with others	WGNA -only	WGNA with others
2010	32.80%	31.47%	47.08%	37.26%	16.68%	19.65%	3.44%	4.35%	0.00%	7.05%	0.00%	0.23%
2011	38.69%	35.02%	44.19%	34.54%	15.10%	19.10%	2.02%	5.12%	0.00%	5.99%	0.00%	0.23%
2012	26.35%	29.64%	47.10%	34.84%	22.26%	22.97%	4.29%	4.90%	0.00%	6.82%	0.00%	0.83%
2013	24.99%	27.85%	45.88%	35.60%	24.74%	22.28%	4.39%	5.26%	0.00%	7.58%	0.00%	1.43%
2010-2013	30.71%	31.00%	46.06%	35.56%	19.69%	21.00%	3.54%	4.91%	0.00%	6.86%	0.00%	0.68%

Horowitz Survey

	PS		JS		CTV		Devotional		PTV		Canadian	
Year	WGNA-only	WGNA with others	WGNA -only	WGNA with others	WGNA -only	WGNA with others	WGNA -only	WGNA with others	WGNA -only	WGNA with others	WGNA -only	WGNA with others
2010	55.83%	38.86%	35.60%	29.21%	4.83%	16.50%	3.74%	3.61%	0.00%	11.80%	0.00%	0.02%
2011	41.98%	38.26%	39.72%	21.80%	13.21%	13.12%	5.09%	6.19%	0.00%	19.21%	0.00%	1.42%
2012	51.06%	32.56%	30.71%	24.01%	11.43%	17.14%	6.80%	5.49%	0.00%	19.69%	0.00%	1.11%
2013	60.54%	28.69%	29.75%	36.12%	5.83%	10.87%	3.88%	3.42%	0.00%	20.44%	0.00%	0.47%
2010-2013	52.35%	34.59%	33.94%	27.78%	8.83%	14.41%	4.88%	4.68%	0.00%	17.78%	0.00%	0.76%

Note: Results are weighted by royalty fees.

Exhibit AR2. P-Values for the Equality of Means Test with Bortz Survey Results

Category	2010	2011	2012	2013
CTV	0.3230	0.1936	0.9247	0.0958
PS	0.7956	0.0114	0.0333	0.0743
JS	0.0002	0.0011	0.0000	0.0000
Devotional	0.2403	0.0000	0.4028	0.4232

Note: P-values less than 0.01 indicate that the differences in values assigned to a specific claimant category (between WGN only systems and systems with WGNA and other distant signals) are statistically significant at the 1% significance level.

Exhibit AR3. P-Values for the Equality of Means Test with Horowitz Survey Results

Category	2010	2011	2012	2013
CTV	0.0001	0.3310	0.0069	0.0141
PS	0.0064	0.7702	0.0007	0.0000
JS	0.0932	0.0000	0.0580	0.1551
Devotional	0.8717	0.2218	0.0668	0.2620

Note: P-values less than 0.01 indicate that the differences in values assigned to a specific claimant category (between WGN only systems and systems with WGNA and other distant signals) are statistically significant at the 1% significance level.

This exhibit replaces Exhibit 9 in my Amended Written Direct Testimony.

Exhibit AR4. Nielsen Data and Gracenote Data Merge

Year	Nielsen Records with no Matching Gracenote Records	Gracenote Records with no Matching Nielsen Records	Gracenote Records Matched to Nielsen Records	Percent of Nielsen Records Not In Gracenote Records, Out of Total Nielsen Records	Percent of Gracenote Records Not In Nielsen Records, Out of Total Gracenote Records
	A	B	C	D=A/(A+C)	E=B/(B+C)
2010	592,686	2,396,835	1,821,272	24.6%	56.8%
2011	515,651	2,547,026	1,856,257	21.7%	57.8%
2012	601,828	2,617,477	1,652,103	26.7%	61.3%
2013	366,393	2,870,576	1,653,370	18.1%	63.5%
2010-2013	**2,076,558**	**10,431,914**	**6,983,002**	**22.9%**	**59.9%**

This exhibit replaces Exhibit R5 in my Rebuttal Testimony.

Exhibit AR5. Imputation Rates from Nielsen Data and Gracenote Data Merge

Year	Gracenote Records with no Matching Nielsen Records	Number of Unmatched Records, with Distant and Local Viewership Imputed as Zero	Imputed Zeros, as a Percentage of Total Unmatched	Number of Unmatched Records, with Local Rating Imputed at the Mean	Imputed Local Ratings, as a Percentage of Total Unmatched
	A	**B**	**C=B/A**	**D**	**E=D/A**
2010	2,396,835	1,790,595	74.7%	606,240	25.3%
2011	2,547,026	1,812,908	71.2%	734,118	28.8%
2012	2,617,477	1,889,549	72.2%	727,928	27.8%
2013	2,870,576	1,983,640	69.1%	886,936	30.9%
2010-2013	**10,431,914**	**7,476,692**	**71.7%**	**2,955,222**	**28.3%**

This exhibit replaces Exhibit R6 in my Rebuttal Testimony.

Exhibit AR6. Nielsen Data and Gracenote Data Merge, by Claimant Group

2010	Gracenote Records with no Matching Nielsen Records	Gracenote Records Matched to Nielsen Records	Unmatched Gracenote Records, as a Percentage of Total (Matched+Unmatched)
	A	B	C=A/(A+B)
Canadian	113,963	18,198	86.23%
CTV	217,828	327,161	39.97%
Devotional	176,544	39,490	81.72%
PS	966,530	886,700	52.15%
PTV	909,599	532,661	63.07%
JS	12,371	17,062	42.03%
All Programs	**2,396,835**	**1,821,272**	**56.82%**

2011	Gracenote Records with no Matching Nielsen Records	Gracenote Records Matched to Nielsen Records	Unmatched Gracenote Records, as a Percentage of Total (Matched+Unmatched)
	A	B	C=A/(A+B)
Canadian	171,640	7,431	95.85%
CTV	249,859	308,244	44.77%
Devotional	165,302	28,789	85.17%
PS	1,026,942	792,736	56.44%
PTV	919,182	702,503	56.68%
JS	14,101	16,554	46.00%
All Programs	**2,547,026**	**1,856,257**	**57.84%**

2012	Gracenote Records with no Matching Nielsen Records	Gracenote Records Matched to Nielsen Records	Unmatched Gracenote Records, as a Percentage of Total (Matched+Unmatched)
	A	B	C=A/(A+B)
Canadian	228,149	24,788	90.20%
CTV	315,231	313,594	50.13%
Devotional	75,567	20,386	78.75%
PS	760,628	603,950	55.74%
PTV	1,228,611	675,459	64.53%
JS	9,291	13,926	40.02%
All Programs	**2,617,477**	**1,652,103**	**61.31%**

2013	Gracenote Records with no Matching Nielsen Records	Gracenote Records Matched to Nielsen Records	Unmatched Gracenote Records, as a Percentage of Total (Matched+Unmatched)
	A	B	C=A/(A+B)
Canadian	226,527	19,504	92.07%
CTV	254,543	263,157	49.17%
Devotional	111,773	20,813	84.30%
PS	966,574	661,660	59.36%
PTV	1,294,904	671,335	65.86%
JS	16,255	16,901	49.03%
All Programs	**2,870,576**	**1,653,370**	**63.45%**

This exhibit replaces Exhibit R7 in my Rebuttal Testimony.

Exhibit AR7. Distant Viewership Shares: Impact of Imputed Zeros

2010	Predicted Distant Viewing (Based on Testimony Model)	Category Share of Total	Predicted Distant Viewing (Based on Model Build without Zero Imputations of Distant Viewing)	Category Share of Total	Percent Change in Category Share
Canadian	150,412	1.66%	201,545	1.23%	-25.82%
CTV	1,926,449	21.27%	3,035,701	18.56%	-12.76%
Devotional	127,734	1.41%	355,784	2.17%	54.20%
PS	4,044,541	44.66%	7,683,659	46.97%	5.17%
PTV	2,183,929	24.12%	4,303,554	26.31%	9.09%
JS	622,863	6.88%	778,166	4.76%	-30.84%
All Programs	**9,055,929**	**100.00%**	**16,358,408**	**100.00%**	

2011	Predicted Distant Viewing (Based on Testimony Model)	Category Share of Total	Predicted Distant Viewing (Based on Model Build without Zero Imputations of Distant Viewing)	Category Share of Total	Percent Change in Category Share
Canadian	257,621	3.38%	399,484	3.02%	-10.55%
CTV	1,501,043	19.68%	2,179,939	16.49%	-16.23%
Devotional	131,269	1.72%	372,601	2.82%	63.73%
PS	3,187,294	41.80%	6,049,769	45.76%	9.49%
PTV	1,849,697	24.26%	3,352,582	25.36%	4.55%
JS	698,450	9.16%	864,911	6.54%	-28.57%
All Programs	**7,625,374**	**100.00%**	**13,219,285**	**100.00%**	

2012	Predicted Distant Viewing (Based on Testimony Model)	Category Share of Total	Predicted Distant Viewing (Based on Model Build without Zero Imputations of Distant Viewing)	Category Share of Total	Percent Change in Category Share
Canadian	250,426	3.21%	373,505	2.09%	-34.97%
CTV	1,833,992	23.50%	3,507,056	19.59%	-16.63%
Devotional	70,897	0.91%	340,832	1.90%	109.59%
PS	2,616,852	33.53%	6,264,398	34.99%	4.37%
PTV	2,618,044	33.54%	6,770,630	37.82%	12.75%
JS	414,762	5.31%	645,630	3.61%	-32.13%
All Programs	**7,804,974**	**100.00%**	**17,902,052**	**100.00%**	

2013	Predicted Distant Viewing (Based on Testimony Model)	Category Share of Total	Predicted Distant Viewing (Based on Model Build without Zero Imputations of Distant Viewing)	Category Share of Total	Percent Change in Category Share
Canadian	236,713	3.80%	365,714	2.71%	-28.52%
CTV	1,133,057	18.17%	2,037,106	15.12%	-16.82%
Devotional	54,653	0.88%	234,518	1.74%	98.52%
PS	2,713,378	43.52%	6,135,806	45.53%	4.62%
PTV	1,651,305	26.48%	3,995,335	29.64%	11.94%
JS	446,131	7.15%	708,879	5.26%	-26.49%
All Programs	**6,235,239**	**100.00%**	**13,477,357**	**100.00%**	

This exhibit replaces Exhibit R8 in my Rebuttal Testimony.

Exhibit AR8. Proportion of Unmatched Distant Viewing Records Excluded from the Analysis

Year	Gracenote Records with Positive Distant Viewing not Matched to Nielsen Records	Gracenote Records with Positive Distant Viewing Matched to Nielsen Records	All Records with Positive Distant Viewing in the Nielsen Records	Records with Positive Distant Viewing Excluded from Analysis, as a Percentage of Total
	A	B	C	D=A/C
2010	111,619	294,639	406,258	27.47%
2011	79,694	261,055	340,749	23.39%
2012	86,785	271,549	358,334	24.22%
2013	56,783	217,403	274,186	20.71%
2010-2013	**334,881**	**1,044,646**	**1,379,527**	**24.28%**

Year	Gracenote Records with Zero Distant Viewing not Matched to Nielsen Records	Gracenote Records with Zero Distant Viewing Matched to Nielsen Records	All Records with Zero Distant Viewing in the Nielsen Records	Records with Zero Distant Viewing Excluded from Analysis, as a Percentage of Total
	A	B	C	D=A/C
2010	481,067	1,526,633	2,007,700	23.96%
2011	435,957	1,595,202	2,031,159	21.46%
2012	515,043	1,380,554	1,895,597	27.17%
2013	309,610	1,435,967	1,745,577	17.74%
2010-2013	**1,741,677**	**5,938,356**	**7,680,033**	**22.68%**

This exhibit replaces Exhibit R10 in my Rebuttal Testimony.

Exhibit AR9. Viewers vs. Subscribers in Dr. Grays Regression Data

Year	Distant Viewership greater than Distant Subscribers	Local Viewership greater than Total Subscribers	Local Viewership greater than Local Subscribers[1]
2010	9,634	21,578	22,249
2011	3,517	4,900	40,172
2012	4,497	57	2,318
2013	9,861	-	-
Total	27,509	26,535	64,739

Note 1: "Local" subscribers is defined as the different between total subscribers and distant subscribers from the CDC data.

Certificate of Service

I hereby certify that on Monday, February 12, 2018 I provided a true and correct copy of the Written Rebuttal Statement - Amended on Written Rebuttal Statement-PUBLIC to the following:

Broadcast Music, Inc. (BMI), represented by Joseph DiMona served via Electronic Service at jdimona@bmi.com

American Society of Composers, Authors and Publishers (ASCAP), represented by Sam Mosenkis served via Electronic Service at smosenkis@ascap.com

National Association of Broadcasters (NAB), represented by Ann Mace served via Electronic Service at amace@crowell.com

Multigroup Claimants, represented by Brian D Boydston served via Electronic Service at brianb@ix.netcom.com

Public Broadcasting Service (PBS), represented by Ronald G. Dove Jr. served via Electronic Service at rdove@cov.com

Spanish Language Producers, represented by Brian D Boydston served via Electronic Service at brianb@ix.netcom.com

MPAA-represented Program Suppliers, represented by Alesha M Dominique served via Electronic Service at amd@msk.com

Canadian Claimants Group, represented by Lawrence K Satterfield served via Electronic Service at lksatterfield@satterfield-pllc.com

National Public Radio, Inc. (NPR), represented by Gregory A Lewis served via Electronic Service at glewis@npr.org

Joint Sports Claimants, represented by Philip R Hochberg served via Electronic Service at phochberg@srgpe.com

SESAC, Inc., represented by Christos P Badavas served via Electronic Service at cbadavas@sesac.com

Signed: /s/ Jessica T Nyman