

Before the
COPYRIGHT ROYALTY JUDGES
Washington, D.C.

In the Matter of)
)
)

ADJUSTMENT OF RATES AND TERMS FOR)
PREEXISTING SUBSCRIPTION SERVICES)
AND SATELLITE DIGITAL AUDIO RADIO)
SERVICES)
)
)
)

Docket No. 2006-1 CRB DSTR A

**PROPOSED FINDINGS OF FACT
OF SOUNDEXCHANGE, INC.**

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I. INTRODUCTION AND SUMMARY OF KEY PROPOSED FINDINGS

Executive Summary

1. This is a case about the value of music to the SDARS, and what Section 801(b) requires the SDARS to pay for that value.

2. The SDARS' rate proposal values music at "near zero," 8/16/07 Tr. 168:5-11 (Noll), despite the fact that the SDARS' internal documents exclaim that [REDACTED] [REDACTED] SX Trial Ex. 52 at SX Exhibit 125 DR, p. XMCRB 0016479. SoundExchange, of course, values music more highly, proposing a rate that increases over time until, in the final year of the rate period, it is consistent with the amounts that the SDARS pay for non-music content and the rates paid for sound recordings by similar digital music services.

3. Evidence from the marketplace and survey research evidence both support SoundExchange's valuation. The SDARS' own survey evidence, conducted for internal business purposes, repeatedly concludes that music is by far the SDARS' most valuable content and is responsible for drawing and retaining far more subscribers than anything else they broadcast. *See, e.g.*, SX Trial Ex. 1 (XM); SX Trial Ex. 35 (Sirius). The SDARS' lead economic expert, Dr. Woodbury, reviewed the SDARS' surveys and concluded that that music represents between [REDACTED] of the value of the SDARS' content offerings, with talk, sports, news and entertainment splitting the balance. Woodbury WDT at 34, XM Trial Ex. 8. A survey prepared by SoundExchange's retained survey expert, Dr. Wind, reaches similar conclusions. Wind WDT, SX Trial Ex. 51. As one of the SDARS' experts explained, music is the one type of content that the SDARS literally cannot do without. Joachimsthaler WRT at 11, SDARS Trial Ex. 73.

4. Marketplace evidence likewise proves the high value of sound recordings. Economists retained by SoundExchange presented multiple benchmarks with useful parallels to the SDARS. Dr. Pelcovits examined the SDARS' agreements to license non-music content, because that benchmark involves the same buyers with the same cost and revenue constraints, and who acquire non-music content for the same reason they want music – to attract and retain subscribers. Pelcovits WDT at 10, SX Trial Ex. 68. Dr. Ordover analyzed agreements between the record companies and digital music services, because those benchmarks involved the same sellers, licensing the same sound recordings, for digital dissemination by a mobile or portable services. Ordover WDT at 36, SX Trial Ex. 61. These benchmarks were supplemented by a bottom-up analysis of the SDARS' costs and revenues, as well as by a calculation of the record companies' opportunity costs of licensing sound recordings to the SDARS. *See, e.g., Eisenberg* WDT at 8, SX Trial Ex. 53; 8/28/07 Tr. 118:5-19, 120:12-21 (Pelcovits). The different approaches all yield significantly similar results, suggesting a rate at or slightly higher than the rate proposed by SoundExchange in the final year of the rate term of 17% of revenue, \$2.25/subscriber/month, or an equivalent rate re-stated in the most practical available “per listen” metric.

5. The SDARS offer two benchmarks in an attempt to support their “near zero” valuation of music. But their “musical works” benchmark was recently and unequivocally rejected by this Court in its Webcasting Determination, *Digital Performance Right in Sound Recordings and Ephemeral Recordings (“Webcasting II”)*, 72 Fed. Reg. 24084, 24094 (May 1, 2007), and the SDARS have articulated no reason why that ruling should not be repeated here. With respect to the SDARS' PSS benchmark, that rate originated with a CARP decision in 1998 that was based on the now-rejected musical works rate, which is reason enough to dismiss it.

Pelcovits WRT at 11-12, SX Trial Ex. 124. Moreover, the parties renegotiated that rate in 2003, and it is impossible to know whether and how the parties to that negotiation addressed the §801(b) factors. *See, e.g.*, Pelcovits WRT at 9-10, SX Trial Ex. 124; 6/12/07 Tr. 245:7-246:8 (Woodbury); 8/23/07 Tr. 282:22-283:5 (Ordover). Finally, the PSS services and the SDARS services have different functionalities and dramatically different values to consumers, and therefore the derived demand of the buyers is likewise dramatically different. Pelcovits WRT at 12 & n.30, SX Trial Ex. 124; 8/23/07 Tr. 230:10-20 (Ordover). Even if it were possible to adjust for such differences, Dr. Woodbury did not try.

6. The SDARS fall back on Section 801(b), unpersuasively contending in effect that it does not require them to compensate the copyright owners for anything approaching the reasonable market value of music. Having lavished a \$[REDACTED] million, five-year contact on Howard Stern, SX Trial Ex. 27, and having spent hundreds of millions of dollars on other non-music programming that consistently draws and retains far fewer subscribers than does music, *see* SX Trial Exs. 20, 22, 23, 26, 32, 36; SX Trial Exs. 1, 35, the SDARS justify their “near zero” rate proposal on the grounds that they cannot afford to pay SoundExchange without disappointing their investors or postponing their target dates for profitability. But Section 801(b) was not intended to guarantee any particular level of financial performance or protect the expectations of stockholders. And Section 801(b) does not give the SDARS a blank check drawn on the accounts of the record companies and artists, allowing the SDARS to spend freely on talk show hosts and football games while requiring SoundExchange to foot the bill.

7. When Congress drafted Section 801(b), it did not intend to divorce the rate-setting standard from economic reality and basic fairness. Consistent with the courts and tribunals that have construed that statute in the past, *see* SoundExchange’s Proposed Conclusions of Law,

SoundExchange submits that marketplace transactions provide important evidence of the kinds of rates that meet the §801(b) statutory factors. It is the marketplace evidence – and not simply an accounting determination of how much the SDARS can comfortably afford after they buy everything else they want – that should determine the rate in this case.

8. That is not to say that this Court is required by the statute to set a market rate. Indeed, SoundExchange’s proposed rates are well below market levels for all but the final year of the rate period. However, as this Court held in its Webcasting Determination, the relative contributions of the parties with respect to statutory considerations such as creativity, technology, capital investment, costs and risks, generally are already factored into prices that have been negotiated in the marketplace. *Webcasting II*, 72 Fed. Reg. at 24092. And prior tribunals have repeatedly held that, although the ending point of the analysis of §801(b) factors need not to be a market rate, marketplace rates are the starting point. See SoundExchange’s Proposed Conclusions of Law. Consequently, marketplace evidence provides the appropriate starting point and a strong foundation for this Court’s analysis. And that evidence, as we outline in somewhat more detail in the balance of this Introduction, and in far greater detail in the remainder of these proposed findings, strongly supports the rates proposed by SoundExchange.

***Music Is By Far The Most Valuable
Programming on the SDARS’ Services***

9. The value of music to the SDARS’ subscribers should not be an issue in this case. The SDARS’ own principal economic witness, Dr. John Woodbury, provided his best estimate of that value and came up with a [REDACTED] figure for Sirius and a [REDACTED] figure for XM. Woodbury WDT at 20, XM Trial Ex. 8; 6/13/07 Tr. 90-21-91:2 (Woodbury) (Sirius); Woodbury WDT at 20, 34, XM Trial Ex. 8; 6/12//07 Tr. 288:8-289:22 (Woodbury); 6/13/07 Tr. 91:7-11 (Woodbury) (XM). On cross examination at trial he was quick to agree that if the SDARS operated a pure

music-only service it would sell for approximately \$6.00, roughly half of the current subscription price. 6/13/07 Tr. 52:1-7 (Woodbury).

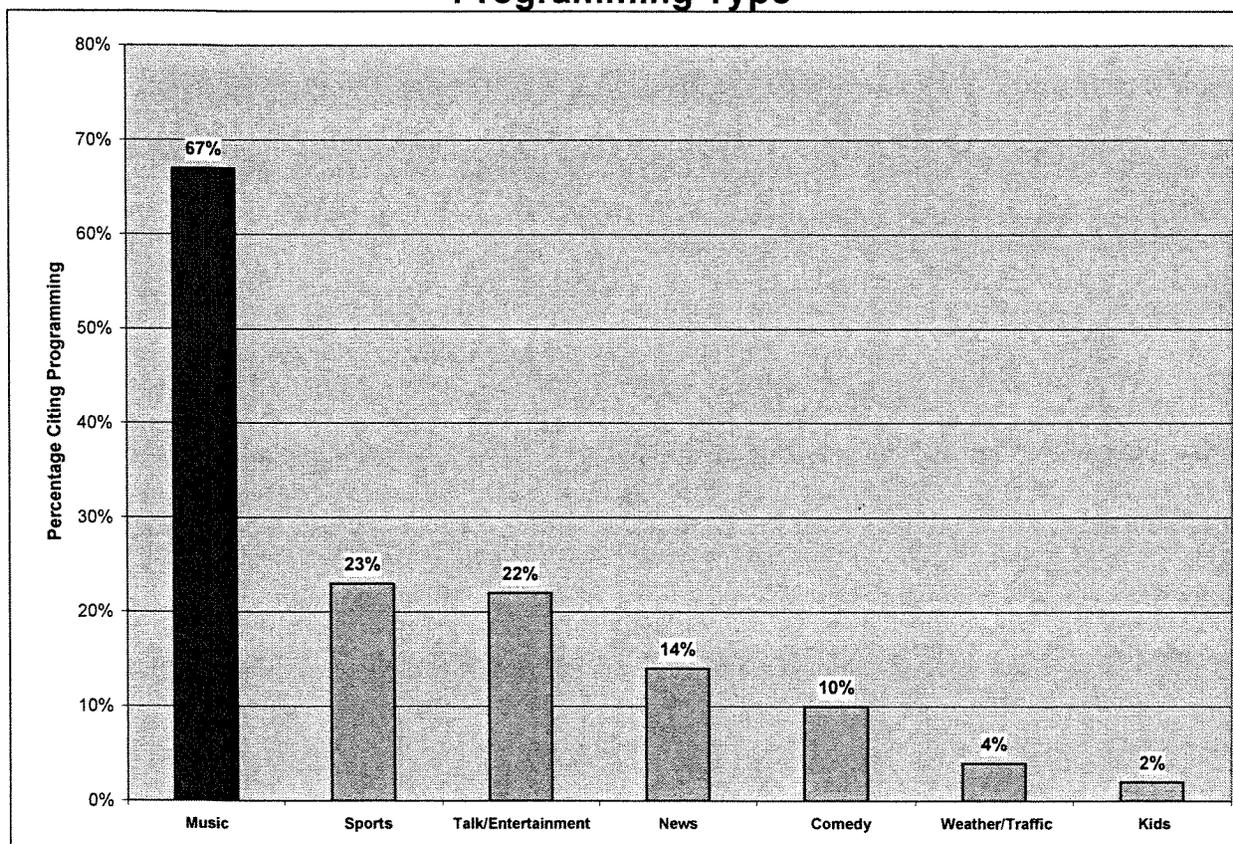
10. The SDARS' own documents show that music is by far the programming that subscribers listen to the most. *See, e.g.*, SX Trial Ex. 35 at 17; SX Trial Ex. 52 at SX Exhibit 123 DR, p. XMCRB 00045107; SX Trial Ex. 52 at SX Exhibit 120 DR, p. XMCRB 00024001. And it is by far the programming most responsible for keeping subscribers from cancelling their service. SX Trial Ex. 52 at SX Exhibit 120 DR, p. XMCRB 00024001. In XM's words, internal studies consistently show that [REDACTED]

[REDACTED] SX Trial Ex. 1 at 2; 6/5/07 Tr. 61:20-64:6 (Parsons). *See also, e.g.*, SX Trial Ex. 1 at 24; 6/5/07 Tr. 64:15-65:2 (Parsons) ("music is by far the most important type of programming for [subscribers]"). Sirius similarly has concluded that music programming is its biggest draw, SX Trial Ex. 35 at 17, its "most appealing aspect." *id.* at 30, and is what its subscribers listen to the most, *id.* at 22. Sirius's surveys reported that [REDACTED] of its subscribers would cancel their service if there were no music programming. SX Trial Ex. 33 at 5. Despite the alleged importance of Howard Stern, Sirius data shows that [REDACTED] of subscribers who joined in June 2006 – the last month for which Sirius has provided has data – joined because of either music programming or commercial-free music, and only [REDACTED] of subscribers joined because of talk and entertainment programming. SX Trial Ex. 35 at 17. Subscribers citing sports [REDACTED] and news [REDACTED] programming as a reason for being interested in satellite radio were even rarer. *Id.*

11. The XM and Sirius internal survey data is consistent with a study commissioned by SoundExchange and conducted by Dr. Jerry Wind of the Wharton School. Wind WDT, SX

Trial Ex. 51. The study found – by every measure of value – that music programming is more valuable than non-music programming. For example, respondents in the Wind survey were asked to name the types of programming that were “most critical” to their “decision to subscribe.” The figure below shows music’s high draw compared to other programming (Wind WDT at 29-32, SX Trial Ex. 51):

Figure 1. Music Has A Far Greater Draw Than Any Other Programming Type



12. Respondents were also asked to name the types of programming that were “most critical” to their decision to “continue to subscribe.” *Id.* at 33. Again, 59 percent of respondents cited music programming. *Id.* Talk and entertainment programming was the next highest, and was cited by just 21 percent of respondents, with sports and news trailing at 19% and 5% respectively. *Id.*

The SoundExchange Benchmarks and Economic Analysis

13. The question remains how the Court is to put a dollar figure on the substantial value of sound recordings to the SDARS, pursuant to the four statutory factors. All parties agree that it is appropriate to begin the analysis under § 801(b) with reference to appropriate benchmarks. Woodbury WDT at 3, XM Trial Ex. 8; Ordover WDT at 35, SX Trial 61; Pelcovits WDT at 5, SX Trial Ex. 68. The economic experts sponsored by SoundExchange examined a range of the most relevant marketplace benchmarks. Over and over again these different benchmarks pointed to a range of rates at or above the rate that SoundExchange proposes at the end of the rate period.

14. Dr. Pelcovits explained that the amount that the SDARS pay in open market transactions for content other than sound recordings is highly instructive in determining the amount that the SDARS would pay for music in the marketplace. In the end, content adds value by attracting and retaining customers, making music content and non-music content reasonably substitutable inputs. Pelcovits WDT at 9-10, SX Trial Ex. 68; 7/09/07 Tr. 299:19-300:3 (Pelcovits). The amounts that the SDARS pay for non-music content, in light of their own cost structures, thus is a powerful indication of how they would value music. 7/09/07 Tr. 54:18-56:3 (Pelcovits).

15. Dr. Pelcovits first analyzed Sirius's deal with Howard Stern. His approach was straightforward: Determine what Sirius is paying Stern for the incremental subscriber revenue that he generates for the service, and assign to music the same share of the incremental subscriber revenue for which *it* is responsible. Using Sirius's data, Dr. Pelcovits determined that Stern receives 50% of the incremental subscriber revenue that he attracts to Sirius. Dr. Pelcovits also drew on evidence from Dr. Wind's survey showing that music is responsible for 56% of the

SDARS' total revenue. Dr. Pelcovits then calculated a market rate for sound recordings of 23% of the SDARS' revenues, or \$2.76 per subscriber per month. Pelcovits Amended WDT at 8, SX Trial Ex. 70; 7/09/07 Tr. 71:3-72:7 (Pelcovits); Pelcovits WDT at 14, SX Trial Ex. 68.

16. In addition to analyzing the payments made to Howard Stern, Dr. Pelcovits also examined the payments made by the SDARS in the aggregate for non-music content. Dividing the sum of the SDARS' non-music content payments, excluding Howard Stern, by the sum of their revenues reveals that in 2006 non-music content providers were paid 18.3% of the SDARS revenues. Dr. Pelcovits then adjusted that figure to deduct the amount paid by the SDARS for musical works rights and the costs of music production and programming costs incurred by the SDARS. 7/09/07 Tr. 81:3-81:10 (Pelcovits). The resulting music royalty at which Dr. Pelcovits arrived was 13.3% of total revenue. 7/09/07 Tr. 278:1-279:13 (Pelcovits). By adding back in the 2006 pro-rata share of the Howard Stern deal, the applicable implied percent of revenue rate increases to 22%. *See infra* Section V.B.3.

17. Dr. Ordover reached similar results by studying the rates that music and other content commands across a broad spectrum of digital services, including portable and non-portable interactive subscription services, music downloads, cellular or wireless downloads, and interactive and non-interactive music video streaming services. Ordover WDT at 43-52, SX Trial Ex. 61. Dr. Ordover made a series of adjustments to those rates to account for the value of interactivity, the value of immediate mobile access to the music, and differences in the services' retail rates. *Id.* In addition, in order to ensure that he properly took account of any costs that are unique to the SDARS among music delivery services, Dr. Ordover separately examined the rates that direct broadcast satellite television ("DBS") providers pay for the content they deliver. Ordover WDT at 38-43, SX Trial Ex. 61. Having surveyed the landscape of digital services, Dr.

Ordoover concluded that sound recordings licensed by the SDARS should command between 19% and 28% of the SDARS' revenue or \$2.48 per subscriber per month. Ordoover WDT at 50-52, SX Trial Ex. 61 (as amended by SX Trial Ex. 119 at SX Exhibit 210 RP).

18. Examination of the record companies' opportunity costs – the money they lose when consumers listen to music on the SDARS rather than buy music from the record companies through other channels – confirms the benchmark analysis. As SDARS' own witness Professor Noll put it, the price for sound recordings “should not be less than marginal costs,” including the “opportunity costs . . . arising from substitution affecting other distribution channels.” Noll WRT at 19, SDARS Trial Ex. 72. In other words, the money that sound recording holders lose through substitution represents a lower bound on a fair royalty rate: it is the compensation necessary just to break-even.

19. The SDARS clearly substitute for other sales of recording music. The evidence is overwhelming, and includes the following:

- *The SDARS FCC Filings:* The SDARS themselves have publicly stated to government agencies their understanding that their services are substitutional. In a July 2007 filing with the FCC, the SDARS argued that there is “*substantial substitution among satellite radio and various other services and devices.*” SX Trial Ex. 106 at 37 (emphasis added). The SDARS explained that “[w]hen people activate a satellite radio subscription, they substitute satellite radio programming for other audio entertainment to which they historically listened.” SX Trial Ex. 106 at 37. The SDARS' FCC filing details at length how “satellite subscribers can and do substitute” for “many other popular audio entertainment options,” including “CD players,” “MP3s and iPods,” “mobile phones that

can receive and play audio and video content,” and “Internet Radio.” SX Trial Ex. 106, Ex. A, at 11-12.

- *The Mantis Survey*: On behalf of SoundExchange, survey expert George Mantis conducted a survey of 690 satellite radio listeners to determine whether and to what extent satellite radio affected their purchases of CDs and downloads. The survey relied on a before and after methodology that is well-accepted in the marketing community. Mr. Mantis found that satellite radio caused subscribers to purchase 2.6 fewer CDs per year than they otherwise would. Mantis WRT at 2, SX Trial Ex. 132.
- *The Pelcovits Testimony*: Dr. Pelcovits reviewed and in his expert opinion deemed reliable a study by Dr. Wind, who conducted a telephone survey of current and potential future SDARS subscribers. Pelcovits WRT at 31, SX Trial Ex. 124. The Wind survey asked respondents to recall when their two most recent CD and MP3 purchases took place, and how many CDs and MP3s they purchased on those occasions. The results show that the current subscribers purchased 2.7 fewer CDs and 4 fewer downloads per year than considering subscribers. *Id.* Because the only relevant difference between these groups is that one group includes only current subscribers who listen to satellite radio, and the other group includes only respondents who have not yet subscribed and therefore do not listen to satellite radio, Dr. Pelcovits concluded that the significantly greater number of music purchases by the non-subscriber group demonstrates that satellite radio has a substitutional effect. Pelcovits WRT at 31, SX Trial Ex. 124; *see also* 8/30/07 Tr. 98:20-98:7 (Herscovici).
- *The XM and Sirius Surveys*: XM and Sirius both conducted surveys for internal business purposes that demonstrate satellite radio’s substitutional effect. Both surveys

measure listening time to CDs and MP3s before and after getting satellite radio. Prior to getting XM, subscribers reported that CD listening comprised [REDACTED] of their audio listening time, and that MP3s comprised another [REDACTED] of listening time. SX Trial Ex. 15 at 35. After getting XM, CD listening time [REDACTED], and [REDACTED]. *Id.* In total, CD and MP3 listening time was [REDACTED] [REDACTED]. Sirius data is similar. Prior to getting Sirius, respondents spent [REDACTED] in their vehicles listening to CDs or MP3s. SX Trial Ex. 35 at 26. After getting Sirius, CD/MP3 usage [REDACTED]. *Id.* Dr. Wind explained at trial that listening time was highly correlated with purchase behavior. Those who listen less are likely to purchase less. 8/29/07 Tr. 119:13-21 (Wind). The SDARS agree; their FCC filing makes this precise point. They argue that their own listening studies “demonstrate that there is substantial demand substitution between satellite radio and other audio entertainment devices.” SX Trial Ex. 106 at 37.

- *The NARM Survey*: Dr. Wind reviewed a March 2007 study commissioned by the National Association of Recording Merchants (“NARM”) that examines, among other things, the CD and MP3 buying habits of satellite radio subscribers. [REDACTED] [REDACTED]. *See* Wind WRT at 20-22, SX Trial Ex. 129. [REDACTED] [REDACTED] [REDACTED] [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]. *Id.* at 22. *See also* 8/29/07 Tr. 158:1-159:9 (Wind).

20. The economic effect of this substitution is substantial. Dr. Pelcovits found, upon reviewing the evidence described above, that satellite radio is responsible for causing subscribers to purchase 2.6 fewer CDs per year. Using CD margin data obtained from one of the record companies, Dr. Pelcovits calculated that satellite radio accordingly causes record companies to lose \$1.29 per subscriber per month. 8/28/07 Tr. 118:5-19, 120:12-21 (Pelcovits). Notably, the SoundExchange rate proposal proposes a royalty fee of only \$0.85 per month per subscriber, until the number of subscriptions reach 9 million. In other words, even under SoundExchange's rate proposal, record companies and performers lose money in the early years of the license period. Only as the SDARS subscriber base grows and the royalty fee increases under the SoundExchange rate proposal does this net loss becomes a modest net profit. Pelcovits WRT at 34 and n. 60, SX Trial Ex. 124.

21. As a complement to his benchmarking analysis, Dr. Pelcovits also conducted a modeling analysis using a widely endorsed economic modeling tool known as the Shapley solution to cooperative game theory. Pelcovits WDT at 13-30, SX Trial Ex. 68. The Shapley solution attempts to determine how a coalition of parties brought together to perform some business activity would be compensated, based on the value that each brings to the coalition rather than on strategic considerations such as bargaining power or the order in which each arrives at the bargaining table. 7/09/07 Tr. 95:6-95:22, 99:8-100:4 (Pelcovits). The Shapley cooperative game solution attempts to measure the "fairest" outcome in which each participant is compensated in proportion to the value of its contribution to the endeavor. As a result, Shapley

is uniquely well-suited to offering meaningful guidance in setting a rate under § 801(b). 7/09/07 Tr. 95:3-96:10, 229:8-229:12 (Pelcovits).

22. Based on inputs taken in large part from the SDARS' own financial documents produced in discovery, and on other record evidence showing the paramount importance of music to the SADR's service, Dr. Pelcovits's Shapley analysis revealed that music should receive 62% of the economic "surplus" in 2012, which translates to 24% of revenue. Pelcovits WDT at 30, SX Trial Ex. 68. After making appropriate downward adjustments to account for the musical works royalty and the SDARS' own music production costs, Dr. Pelcovits concluded that the Shapley model yielded a fair royalty rate of 18% of revenue or \$2.37 per subscriber. Pelcovits WRT at 38-39 & n.64, SX Trial Ex. 124.

23. The analysis of the economists retained by SoundExchange, taken together, presents mutually reinforcing evidence that sound recordings in the marketplace typically command rates at or above SoundExchange's rate proposal, and nowhere approach the SDARS' "near zero" rate. Their revenue share and per-subscriber minimum results are summarized in the following chart:

Method	% of Revenue	Per Subscriber Per Month
"Howard Stern" Benchmark (Pelcovits) ¹	23%	\$2.76
Non-Music Content Benchmark (Pelcovits)(including Howard Stern) ²	22%	n/a
Non-Music Content Benchmark (Pelcovits) ³	13.3%	n/a
Digital Music Services (Ordover) ⁴	19-28%	\$2.48-\$2.81
Satellite Television Analysis	18.5-23.5%	\$2.17-\$2.70

¹ Pelcovits Amended WDT at 8, SX Trial Ex. 70.

² See *infra* Section V.B.3

³ 7/09/07 Tr. 278:1-279:13 (Pelcovits).

⁴ Ordover WDT at 46-51, SX Trial Ex. 61, amended by SX Trial Ex. 119 at SX Exhibit 210 RP.

(Ordover) ⁵		
Shapley Model Analysis ⁶	18%	\$2.37
Opportunity Cost Floor ⁷	n/a	\$1.29

The SDARS Benchmarks

24. The SDARS' economist, Dr. Woodbury, uses as his primary benchmark the 7.25% rate negotiated for the pre-existing subscription services ("PSS" or "PES") in 2003. There are myriad reasons to reject it. First, because there is no relevant evidence in the record as to what the product of the negotiation represents, Dr. Woodbury himself could not say with any modicum of certainty whether it represents a market rate, the parties' own interpretation of the § 801(b) factors, or the parties' attempt to *avoid* the application of § 801(b) altogether. *E.g.*, 8/23/07 Tr. 55:10-57:19 (Woodbury); 8/28/07 Tr. 132:5-14, 133:11:134:7 (Pelcovits); Ordover WRT at 4-5, SX Trial Ex 119.

25. To the extent that the PSS rate reflects the § 801(b) considerations at all (as Dr. Woodbury assumes), it reflects the § 801(b) considerations *as the they pertain to the PSS services*, which are not remotely comparable to the SDARS under any measure. Pelcovits WRT at 35-36, SX Trial Ex. 124. The PSS is a wholesale service that is tethered to the television, that could not be successfully offered to the public at all as a stand alone service, and that yields its providers only [REDACTED] per subscriber per month (XM and Sirius [REDACTED] [REDACTED]), while the SDARS charge almost \$13.00 per subscriber per month. Ordover WRT at 17, SX Trial Ex. 119; Pelcovits WRT at 13, SX Trial Ex. 124; 8/23/07 Tr. 292:7-293:21 (Ordover). The value and the dynamics of the two services could not be less comparable.

⁵ Ordover WDT at 41-42, SX Trial Ex. 61.

⁶ Pelcovits WRT at 38-39 & n.64, SX Trial Ex. 124.

⁷ 8/28/07 Tr. 118:5-19, 120:12-21 (Pelcovits).

26. Second, Dr. Woodbury's reliance on the PSS rate founders because his analysis is based a faulty assumption that music has an "inherent value" that dictates how it is priced regardless of the context in which it is being sold or consumed. *See, e.g.*, 6/12/07 Tr. 359:5-360:2 (Woodbury); 6/13/07 Tr. 8:21-9:5 (Woodbury). That is not how music or any other intellectual property is priced in the marketplace, and it is not as a matter of economics a pricing regime that can operate without bankrupting the owners of intellectual property. It is settled economics – indeed it is the whole point of copyright law – that intellectual property owners must be compensated above their marginal or incremental cost of production. Ordover WDT at 14-17, SX Trial Ex. 61. The only way that copyright owners and creators of other intellectual property could ever recover their initial investment and make a profit (and thus create more works in the future) is when the rights owner is able to capture some part of the value to the consumer of the product that makes use of its intellectual property – a regime of value-based pricing.

27. That, in fact, is precisely how the markets for sound recordings work. The record in this proceeding is replete with evidence showing that sound recordings command significantly different rates from music services depending on the value to the consumer of the product or service in which it being used. *See, e.g.*, Eisenberg WDT at 18, SX Trial Ex. 53. *See also* Ordover WDT at 44-45, SX Trial Ex. 61; Kenswil WDT 10-13, SX Trial Ex. 66; Eisenberg WDT at 17-21, SX Trial Ex. 53. For example, where an interactive subscription delivery service offers both portable and non-portable version of its service, the rate received by the record companies for the portable service is [REDACTED] what it receives for the non-portable service. *See, e.g.*, 6/18/07 Tr. 162:2-21 (Eisenberg). Dr. Woodbury had no cogent explanation when

confronted with the irrefutable market place evidence that disproved as a matter of fact the commodity pricing assumption underlying his analysis.

28. The other benchmark that the SDARS have put in the record is the musical works rate. This is the same benchmark this Court previously rejected in the webcasting context. It is a different right, operating in a different market. The evidence shows that in every context, there is no pattern or relationship between the rates obtained by sound recording copyright holders and the rates obtained by musical works copyright holders – except for one: the rates obtained by sound recording copyright holders are invariably *higher*. Eisenberg WRT at 1-10, SX Trial Ex. 126. That is because the sound recording is simply more valuable to the consumer, and therefore to the service, than is the musical work. It also because, as the record amply reflects with virtually un rebutted evidence, the production of sound recordings demands far greater investment, costs and risk than does the production musical works. Ciongoli WRT at 5-11, SX Trial Ex. 118. All of the reasons the Court found that the musical works rate was an unacceptable benchmark in the context of webcasting apply fully here. The Court should reject this benchmark just as it did in its previous decision.

***Comparison Of The SDARS Proposal Rates
And The SoundExchange Proposed Rates***

29. For the purposes of comparison, Dr. Pelcovits converted the SDARS' proposed rate and the SoundExchange proposed rates into a per play rate, similar to the type of per play rate metric used by this Court in its Webcasting Determination. Pelcovits WRT at 15-17, SX Trial Ex. 124. The results appear in the table below (*see id.* at 17):

	2007	2008	2009	2010	2011	2012
Statutory Webcasting Per-Play Rate	\$.0011	\$.0014	\$.0018	\$.0019	\$.0019	\$.0019
SoundExchange Per-Play Rate	\$.00092	\$.00120	\$.00156	\$.00161	\$.00206	\$.00265
SDARS Per-Play Rate ⁸	\$.00014	\$.00015	\$.00015	\$.00016	\$.00016	\$.00016

30. As the comparison shows, the SoundExchange proposed rate is similar to the rate established by this Court in its Webcasting Determination, while the SDARS rate is less than one-tenth of the webcasting rate. As Dr. Pelcovits noted, the disparity between the SDARS rate and the webcasting rate is striking. But webcasting and the SDARS have one significant difference – the SDARS offer mobility and the webcasters generally do not. Because mobility is highly valued and typically results in higher royalty rates in the market, *see, e.g.*, 6/18/07 Tr. 162:2-21 (Eisenberg), the fact that the SDARS’ proposed rate is a small fraction of the webcasting rate (approximately one-tenth) confirms that the SDARS’ benchmark analysis is deeply flawed. 8/28/07 Tr. 90:3-18 (Pelcovits).

The Section 801(b) Factors

31. Analysis of the § 801(b) factors confirms that there is no reason to adjust SoundExchange’s benchmarks in light of these factors, and, to the contrary, that SoundExchange’s royalty at a level equal to or below the benchmarks best implements the four statutory factors.

32. The first § 801(b) factor seeks to “maximize the availability of creative works to the public” and it has consistently been interpreted to mean that copyright holders must be fully compensated for their creative efforts and continue to be incentivized to create additional works.

⁸ The figures in this row have been changed from those in Dr. Pelcovits’s written rebuttal testimony to reflect the SDARS’ amended rate proposal, which was filed simultaneously with Dr. Pelcovits’s rebuttal testimony.

See, e.g., Adjustment of Royalty Payable Under Compulsory License for Making and Distributing Phonorecords; Rates and Adjustment of Rates (“Phonorecords”), 46 Fed. Reg. 10466, 10479 (Feb. 3, 1981) (the first factor is to provide “an economic incentive and the prospect of pecuniary reward” for the copyright owner’s “creative efforts”). The courts, the Librarian, and the former Copyright Royalty Tribunal have repeatedly rejected claims that those who use and disseminate copyrighted works are entitled to some reduction to the market rate based on this factor. As Dr. Herscovici and Dr. Ordover explained, a higher rate will, all else being equal, most effectively advance the first statutory factor – maximizing the availability of creative works to the public. Herscovici WRT at 17, SX Trial Ex. 130; Ordover WDT at 22-23, SX Trial Ex. 61.

33. The second § 801(b) factor looks to provide the copyright owner with a fair return and the copyright user a fair income. As prior tribunals examining this factor have found, this concept of fairness is best accomplished by replicating to the greatest extent possible the returns that would exist in workably competitive markets, where producers and distributors are rewarded for their risks and for the value of what they bring to the market. *See, e.g., Phonorecords*, 46 Fed. Reg. at 10479 (“We find that the copyright owner’s right to receive a fair rate or return for the compulsory use of his song derives from Congress’ decision to afford commercial protection to the author of a creative work [I]n most instances, the rate of return afforded the copyright owner is determined on the free market.”). A market rate is “fair” because the parties have voluntarily agreed to it, and because it does not distort the competitive playing field to favor one party to the transaction over another and generates transaction surplus for both, to the benefit of the listening public. A below-market rate would have the undesired effects of both giving the SDARS an undue competitive advantage *vis-à-vis* other distributors of music, and

weakening the incentives for production of new recordings and for efficient distribution of music in the new media. Ordover WDT at 27-28, SX Trial Ex. 61.

34. The third statutory factor seeks to accomplish precisely the sort of considerations captured by marketplace negotiations. Market prices, by their very nature, “reflect the relative roles of the copyright owner and the copyright user ... with respect to creative contribution, technological contribution, capital investment, cost, risk, and contribution to the opening of new markets. It is the marketplace and the role of negotiations in the marketplace that place value on the parties’ relative contribution, their investments, and the risks that they face.” 8/30/07 Tr. 27:19-28:9 (Herscovici). Very similar terms to those set out in the third statutory factor are present in the “willing buyer/willing seller” standard applied by this Court in the Webcasting case. In that case, reviewing this language, the Court properly concluded that no further adjustment was necessary to the benchmarks since the marketplace itself took account of these factors. *Webcasting II*, 72 Fed. Reg. at 24092. The same is true here.

35. Finally, the courts and rate-setters uniformly have construed the fourth statutory factor to require that rates be increased gradually to avoid any disruption that might be caused by a sudden increase. *See, e.g., Amusement & Music Operators v. Copyright Royalty Tribunal*, 676 F.2d 1144, 1149 (2d Cir. 1982). SoundExchange’s rate accordingly increases gradually over the rate period, and only in the last year approaches a rate that would be justified by the benchmarks.

36. The SDARS, however, offer a novel construction of the fourth factor. They claim it requires the Court to avoid disrupting the expectations of their *shareholders*, and that it permits or even requires the Court to attempt to use the royalty rate to adjust the projected results on the SDARS’ balance sheets to achieve a particular financial result. *See, e.g., Musey WDT*, XM Trial Ex. 9.

37. Thus, according to the SDARS' expert Armand Musey, "from a capital markets perspective," a rate increase beyond the [REDACTED] level expected by investment analysts would be disruptive to investor expectations in that it would reduce expected stock price increases. Musey WDT at 2, 29, XM Trial Ex. 9. Mr. Musey's logic is impeccable: royalty rates are a cost, and if a company's costs increase beyond what investors expect, all else being equal that will likely drive down the price of the stock. Equally impeccable is Mr. Musey's math. Analysts expect the SDARS' stock to increase over 50% in value over the next 12-18 months, but if the royalty rate is set, for example, at around [REDACTED], analysts will revise their expectations and will predict that the stock will increase only approximately 20% in value.

38. Sirius's own CFO David Frear on cross examination acknowledged that such changes in stock price are entirely irrelevant to the SDARS underlying businesses, and he as much as dismissed Mr. Musey's entire analysis as irrelevant. 6/12/07 Tr. 150:11-15, 157:19-21 (Frear). Even Mr. Musey on cross-examination acknowledged that his testimony provided only an investor's point of view, and that the investor's point of view always will be that it prefers lower costs to higher costs. 6/13/07 Tr. 210:20-211:4 (Musey). The Court did not need an expert to figure that out, and it tells the Court nothing about at what level to set a rate in this case. As to the four statutory factors, Mr. Musey has never even seen them.

39. In any event, under Mr. Musey's calculations, the SDARS stock price will rise substantially even at a royalty rate of [REDACTED] just not as substantially as it would at a lower rate that stockholders expect. Such stockholder "disappointment" should play no part in the setting of this rate.

40. Mr. Musey, Professor Noll, David Frear and Mark Vendetti all make another point that is equally irrelevant. The SDARS historically have lost money, and the higher the

royalty, the higher those accumulated losses will become, and the longer time it will take before those accumulated losses are retired. Once again, these witnesses' logic is impeccable: the royalty is a cost, and if the SDARS' costs go up their losses will increase.

41. However, this argument bears no relation to the statutory factors, or to any reasonable calculation of the rate. The fact that the SDARS are currently losing money does not say anything about whether the SDARS are or are not successful, and it does not say anything about the extent to which they can afford to incur costs at a given level.

42. Like any business with high start-up costs but low costs associated with each new customer it brings in, the SDARS always planned to lose money in the early years until they attracted enough customers to recover those fixed start-up costs. Although the SDARS' witnesses repeatedly point to these accumulated start-up losses as evidence that they are struggling, on cross-examination, and repeatedly in public documents, they acknowledge that the opposite is true: "their financial performance is on track, and [they] are executing very well on [their] business plan." SX Trial Ex. 74 at 2 (Karmazin). Indeed, both SDARS fully expect that they will become EBITDA and free cash flow positive (regardless of the royalty rate) over the next few years.

43. The SDARS' historical financial results reflect two companies that are growing at a pace faster than any other comparable service in history, whose revenues are growing at an overwhelmingly greater rate than their costs, and who are successfully implementing their business plan. By their own account, the SDARS' likely futures are equally rosy: whether one looks at the projections offered by the SDARS themselves, or the projections offered by SoundExchange's finance expert Mr. Butson, the picture is the same: they likely will continue to grow, as they have consistently in the past, their revenues likely will continue to grow at a much

faster pace than their costs, and they likely will become profitable over time – probably a substantially shorter time than the satellite television companies which were built on a similar business model. *See infra* Section VI D.4.b. These projections are not in dispute.

44. The SDARS nevertheless argue that because they have accumulated losses, the royalty here needs to be “near zero.” The argument is made by both by Mr. Musey and Professor Noll. Professor Noll goes so far as to offer a mathematical calculation, based on the supposition that by 2012 the SDARS need to retire the deficit they necessarily will accumulate in the early years of the license period. On that basis that he concludes that the SDARS cannot afford to pay the SoundExchange royalty, or any rate higher than approximately 6%. Noll WRT at 36, SDARS Trial Ex. 72.

45. But as Mr. Butson explains, and as is clear by looking at the SDARS’ own business practices, that assumption has no basis in economics or in practical experience. It is completely arbitrary to impose such a deadline to retire the SDARS’ deficit, and it is not part of the statutory standard to use the sound recording royalty to try to assure a particular financial result on the SDARS’ accounting ledgers. The SDARS made detailed calculations when they decided to pay Howard Stern \$[REDACTED] million, Major League Baseball [REDACTED] million, or Fox News [REDACTED] million. But one thing the SDARS *never* considered in making those deals was the extent to which the deals would increase their accumulated deficits, or whether the accumulated deficits would be reduced to zero by the last year of any of those deals. They did not consider such things because they are irrelevant to a judgment of whether a particular deal was in the SDARS’ interests. As Mr. Butson explained, the accumulated deficit is simply an accounting item that sums up prior annual losses on a balance sheet. It has no business significance, and the SDARS have introduced not one piece of evidence that suggests that they have ever relied on or

even considered their accumulated deficits as a measure of significance, for this or any other purpose.

46. Finally, especially in their oral testimony at the rebuttal phase of the trial, several SDARS witnesses, including Mr. Karmazin, Mr. Frear and Mr. Vendetti stated that SoundExchange's royalty would drive them out of business. Unlike other claims the SDARS make, such a claim obviously implicates the statutory standards of fairness and disruption. But these claims are entirely unsubstantiated.

47. To begin, the SDARS case on this point assumes that the proposed merger between XM and Sirius will not be consummated. If it is, the SDARS themselves have claimed that they will reap billions of dollars in cost savings, some of it coming in the first year after the merger. The SDARS will be profitable companies with well over *3 billion* in annual revenue. And the SDARS predict that it is more likely than not that the merger *will* be consummated. If so, all of their evidence about their purported inability to pay is utterly irrelevant.

48. Even if the merger does not occur, the SDARS cannot prove their point. When forced to be specific, the SDARS assert (though never in writing) that when they have to re-finance existing debt obligations, the market will not allow them to re-finance if they have to pay the royalty rate proposed by SoundExchange. 8/15/07 Tr. at 55:7-11 (Vendetti); 6/13/07 201:3-8 Musey; 8/15/07 Tr. 207:18-22, 209:13-16 (Frear). However, much SDARS debt comes due around 2009 – a time at which under the most conservative analysis, and assuming SoundExchange's rate proposal is adopted in full, the SDARS will be approximately one year away from becoming EBITDA positive, and each will be a company with over *\$1.5 billion* in annual revenue. The assertion that companies of that size and in that financial condition would not be able to roll over existing debt (or would not, as Mr. Frear suggests, be able to borrow

enough to provide a “cushion” against unexpected losses) because this Court set a royalty rate that delayed the time at which the companies became free cash flow positive or EBITDA positive by one year is insupportable. These companies incurred that debt at a time when they were very substantially smaller, and when the prospects of achieving positive free cash flow or profitability were far more distant and uncertain. Indeed, both SDARS recently obtained *new* debt financing on highly favorable terms at a time when they generate only one billion in revenue, and at a time when even under their own rate proposals the time before they reach a state of free cash flow positive or EBITDA positive is much further away than it will be in 2009 under SoundExchange’s proposal. Their oral claims about their access to the credit market are not credible.

49. Sometimes the SDARS seem to rely on their status as a start-up companies, and their accumulated deficits, to argue or imply more generally that they are fragile “little guys” starting out, and need the protection of the Court against “big guys” like the record companies. But the SDARS are not little. They are large corporations – larger than some of the major record companies – and, by the end of the rate term are, combined, expected to be larger than half the entire record music industry. By the same token, SoundExchange does not represent only “big guys.” Half of the money it collects goes to individual artists whose income obviously is dwarfed by that of the SDARS. The other half goes to major and independent record companies, most of which are substantially smaller than the SDARS. And, the undisputed facts are that it is the SDARS which are growing, while the record industry is in decline. If any party needs a rate that amounts to a hand-out, it is not the SDARS.

50. In the end, the SDARS’ success or failure depend not on the royalty rate set by this Court, but on the SDARS continuing ability to grow their customer base and face the

competition they will meet from other services – services that pay market-based royalties to the record companies.

The Rates and Rate Structure

51. Regardless of the amount of the rate, the Court must also decide the rate structure: percentage of revenue; per subscriber; per play; or some combination. The SoundExchange rate proposal contains proposed rates for all three.

52. The SDARS have proposed what they call a “per play” rate. Importantly, their proposal does not in any way measure the actual number of plays or the actual usage of music. Instead, the SDARS suggest a rate structure under which they would pay the same amount for any one transmission of a sound recording, regardless of whether one customer listens to it, or one million customers listen to it. 8/23/07 Tr. 150:15-20 (Woodbury). Thus, the SDARS’ proposal does not do what even the SDARS’ economic experts say is appropriate – tie the royalty to the number of people who listen to each transmission of a sound recording. *See* 8/16/07 Tr. 220:13-221:22.” (Noll). *See also* Tr. 152:14-16 (Noll).

53. SoundExchange’s current rate proposal offers as one option a per play rate that comes closer to measuring the actual usage of music. That proposal offers a tiered rate, in which the most listened to broadcasts pays one rate per broadcast, and the less listened to broadcasts pay a lower rate.

54. As explained in far greater detail below, SoundExchange believes that the best approach is a percentage of revenue. In any event whichever metric or metric the Court selects, the Court should adopt the SoundExchange rate proposal.

II. BACKGROUND

A. The Parties

1. SoundExchange

55. SoundExchange is a § 501(c)(6) nonprofit performance rights organization established to ensure prompt, fair and efficient collection and distribution of royalties payable to performers and sound recording copyright owners for the use of sound recordings over satellite radio, the Internet, wireless networks, and cable and satellite television networks via digital audio transmissions. Kessler WDT at 2, SX Trial Ex. 55. *See also* 6/19/07 Tr. 35:8-10 (Kessler). The core mission of the organization is to collect and distribute statutory royalties as efficiently and accurately as possible. Kessler WDT at 4, SX Trial Ex. 55.

56. In these and many other proceedings, SoundExchange represents the artists and sound recording copyright holders (record labels and record companies) on whose behalf SoundExchange collects and distributes royalties under the Copyright Act. Kessler WDT at 3, SX Trial Ex. 55. Throughout all of the rate-setting and regulatory proceedings, SoundExchange has sought the establishment of royalties and regulations that ensure the prompt, fair, and efficient distribution of royalties to all artists and copyright owners entitled to such royalties. Kessler WDT at 3, SX Trial Ex. 55.

57. SoundExchange is governed by an 18-member Board of Directors that consists of an equal number of artist and sound recording copyright owner representatives. Kessler WDT at 3, SX Trial Ex. 55. SoundExchange works with approximately 120,000 distinct artists and thousands of different labels and copyright owners in its collection and distribution business. 6/19/07 Tr. 36:15-22 (Kessler). The organization has over a million identified sound recordings,

maintains about 120 million accounting transaction records in its distribution system, and has processed nearly two billion performances. 6/19/07 Tr. 36:15-22 (Kessler).

58. Currently, SoundExchange maintains licensee accounts for more than 3,200 webcast, cable, and satellite services that play sound recordings originating from all over the world. SoundExchange distributes royalties to nearly 25,000 copyright owner and performer accounts every quarter. Kessler WDT at 11, SX Trial Ex. 55.

59. Over time, SoundExchange's business has continued to grow as more digital music services have come on line. As a result, there has been an increase in the volume of performances and in the number of licensee accounts. 6/19/07 Tr. 37:4-13 (Kessler). The number of performances processed will continue to grow as SoundExchange begins to receive reports of use from webcasting services. Kessler WDT at 11, SX Trial Ex. 55.

60. Although SoundExchange is a non-member corporation, it frequently refers to those copyright owners and performers that have specifically authorized SoundExchange to collect royalties on their behalf as "members." SoundExchange does not, however, discriminate between members and non-members, allocating and distributing royalties in the same manner to members and non-members alike. Kessler WDT at 3, SX Trial Ex. 55.

61. By statute, statutory royalties collected by SoundExchange are divided according to a formula that gives 50% of the royalties to copyright owners, 45% to featured artists, 2½% to an escrow account for distribution to non-featured musicians, and 2½% to an escrow account for distribution to non-featured vocalists. 17 U.S.C. § 114(g).

2. The Record Companies

62. The recording industry is comprised of four major record companies as well as hundreds of smaller independent record companies. In 2005, independent record labels

comprised approximately 22% of the overall United States market share. SDARS Trial Ex. 51 at 2. For example, the Court heard testimony from Edward Chmelewski, President of Blind Pig Records, one of the premier Blues and American roots music labels in the world. Chmelewski WDT at 1, SX Trial Ex. 64. This independent label has a catalog consisting of 150 titles from over 70 artists, and its gross revenues in 2005 were about [REDACTED]. Chmelewski WDT at 2, 5, SX Trial Ex. 64.

63. The four major record companies make up the remaining approximately 77% of the United States market. In 2005, Universal Music Group (“UMG”) had 30% of the market share, SONY BMG Music Entertainment (“SONY BMG”) had 23%, Warner Music Group (“WMG”) had 16%, and EMI Recorded Music (“EMI”) had 11%. SDARS Trial Ex. 51 at 2. Each of these major record companies consists of multiple record labels. Bronfman WDT at 1, SX Trial Ex. 59; Kenswil WDT at 1, SX Trial Ex. 66; Eisenberg WDT at 2-3, SX Trial Ex. 53.

64. Record companies generally own the copyrighted sound recordings that are the subject of the statutory licenses and, by statute, receive 50% of the royalties owed under the § 114 license. 17 U.S.C. § 114(g). Record companies not only own the copyrights at issue here, but play a central role in the creation of sound recordings enjoyed by listeners to satellite radio. Kushner WDT at 2, SX Trial Ex. 65.

3. The Recording Artists

65. SoundExchange collects and distributes royalties for artists as well as for record companies. Kessler WDT at 3, SX Trial Ex. 55. Under 17 U.S.C. § 114(g), recording artists or their representatives receive 50% of the royalties under the § 114 statutory license to be distributed as follows: 45% to featured artists, 2½% to an escrow account for distribution to

non-featured musicians, and 2½% to an escrow account for distribution to non-featured vocalists. 17 U.S.C. § 114(g).

66. Recording artists provide the content that is critical to the satellite radio services. Navarro WDT at 9, SX Trial Ex. 63. In doing so, artists contribute substantial amounts of time and money to create the sound recordings at the heart of these proceedings. Navarro WDT at 3, SX Trial Ex. 63. Artists work with the record companies to record them, mix them, market and promote them. Navarro WDT at 3-6, SX Trial Ex. 63.

67. The relationship between recording artists and record companies is generally defined by a contract negotiated between the record company and recording artist. Kushner WDT at 6, SX Trial Ex. 65. In exchange for ownership of the copyrights to sound recordings, record companies provide advances on future royalties and investments in recording, marketing and other costs to benefit recording artists. Kushner WDT at 6, SX Trial Ex. 65; 6/26/07 Tr. 11:5-13:1 (Chmelewski). Competition to sign recording artists is often highly competitive between record companies. Kushner WDT at 6, SX Trial Ex. 65; 6/26/07 Tr. 11:5-13:1 (Chmelewski). Recording artists may sign with major record companies, independent record companies, or may have their own record labels, through which they release their own sound recordings and maintain ownership of the copyrights. Navarro WDT at 2, SX Trial Ex. 63.

68. Out of the thousands of artists in the music business, only a few enter recording agreements with the labels, and out of those who do sign, the vast majority fail commercially. Kushner WDT at 2, SX Trial Ex. 65. In fact, it is well-known throughout the music industry that only about one out of every ten artists has measurable success. Kushner WDT at 14, SX Trial Ex. 65.

4. Satellite Digital Audio Radio Services (SDARS)

69. There are currently two satellite digital audio radio services licensed by the Federal Communications Commission: Sirius Satellite Radio Inc. (“Sirius”) and XM Satellite Radio Inc. (“XM”). Karmazin WDT at 7-8, SIR Trial Ex. 1.1. Collectively, they are known as the “satellite radio companies” or the “SDARS,” which stands for “Satellite Digital Audio Radio Services.” 17 U.S.C. § 114(j)(10). Together, Sirius and XM comprise the satellite radio industry.

70. As discussed in more detail below, Sirius is a publicly traded company. Sirius Satellite Radio broadcasts a total of 130 channels, 66 of which are dedicated exclusively to music. Woodbury WDT at 6, XM Trial Ex. 8.

71. As discussed in more detail below, XM is a publicly traded company that broadcasts 170 channels, 69 of which are dedicated exclusively to music, with 5 additional music channels programmed by Clear Channel. Woodbury WDT at 7, SDARS Trial Ex. 8; Logan WDT para. 9, 12, XM Trial Ex. 2.

72. Sirius and XM are both subscription services and each charges a monthly subscription fee of \$12.95. Sirius and XM compete with each other, as well as with a broad array of other services that comprise a vast audio entertainment market, including iPods, subscription streaming services, MP3s, CDs, and terrestrial radio. SX Trial Ex. 106 at 35, 37; Woodbury WDT at 6, XM Trial Ex. 8.

73. Sirius and XM also provide music programming over the Internet and wireless carriers. XM offers a subscription webcasting services of 70 music channels to subscribers for \$7.99 per month. Herscovici WRT at 10, SX Trial Ex. 130. Sirius offers Sirius Internet Radio, which gives subscribers all of Sirius’s music channels and some (but not all) of Sirius’s non-

music channels for \$12.95 per month – the same price as Sirius’s satellite radio product.

Herscovici WRT at 10-11, SX Trial Ex. 130.

74. XM offers a subscription service with 20 music channels over the AllTel cellular network for \$7.99 per month, and Sirius offers a subscription service with 20 music channels over Sprint’s cellular network for \$6.95 per month. Herscovici WRT at 10-11, SX Trial Ex. 130.

B. History of The Proceedings

1. Prior License Period

75. There has been no prior ratesetting for the SDARS statutory license. On March 19, 2003, SoundExchange, XM, and Sirius entered into a private, confidential, non-precedential settlement setting rates and terms for the SDARS services under the § 112 and § 114 statutory licenses for the period through December 31, 2006. *Notification of Settlement and Motion to Suspend CARP Proceeding and Notice and Recordkeeping Rulemaking Applicable to Preexisting SDARS*, Docket No. 2001-1 CARP DSTRA2 & Docket No. RM 2002-1 (filed jointly on Mar. 19, 2003). The Copyright Office accepted the settlement and suspended the CARP proceeding on March 21, 2003. *Order*, Docket No. 2001-1 CARP DSTRA2 (Mar. 21, 2003).

76. The parties agreed that the 2003 settlement would “be non-precedential, and shall not be admissible as evidence or otherwise taken into account in any administrative, judicial, or other government proceeding.” *Notification of Settlement and Motion to Suspend CARP Proceeding and Notice and Recordkeeping Rulemaking Applicable to Preexisting SDARS* at 3-4, Docket No. 2001-1 CARP DSTRA2 & Docket No. RM 2002-1 (filed jointly on Mar. 19, 2003).

2. Period of Voluntary Negotiation

77. On January 9, 2006, the Copyright Royalty Judges published a Notice announcing the commencement of a proceeding to set the rates and terms for preexisting subscription

services and satellite digital audio radio services for the term starting in 2007 and ending in 2012 pursuant to the statutory licenses set forth in 17 U.S.C. §§ 112 and 114. 71 Fed. Reg. 1454 (Jan. 9, 2006). A three-month period of voluntary negotiations ensued. However, these negotiations were not successful. Consequently, written direct statements were due to the Court on October 30, 2006.

3. The Direct Cases

78. On October 30, 2006, the following parties filed written direct statements in this proceeding: SoundExchange, Sirius, and XM, as well as Royalty Logic Inc. and Music Choice.

79. Royalty Logic Inc. withdrew from the proceeding prior to discovery. Music Choice withdrew from the proceedings prior to presenting its direct case at trial after reaching a settlement agreement with SoundExchange.

80. Direct testimony was taken from June 4, 2007 through June 27, 2007, with one final witness testifying on July 9, 2007 due to illness.

a. Witnesses for SoundExchange's Direct Case

81. During the direct phase of the proceeding, SoundExchange presented written and oral testimony from the following thirteen witnesses:

82. Dr. Yoram (Jerry) Wind is the Lauder Professor and Professor of Marketing at The Wharton School at the University of Pennsylvania, where he has taught courses since 1967. He received his Ph.D in Marketing from Stanford University in 1967. He has been on the editorial board of every major marketing journal, has authored 21 books and over 250 papers on marketing, and has lectured widely on the topics of marketing, consumer preference and marketing research. Dr. Wind has served as an expert witness on marketing survey issues in numerous cases. Wind WDT at 1, SX Trial Ex. 51. Dr. Wind testified before the Court during

the direct phase of the trial on Thursday, June 14, 2007, Vol. 8 (“6/14/07 Tr. (Wind)”), and on Monday, June 18, 2007, Vol. 9 (“6/18/07 Tr. (Wind)”). The Court accepted Dr. Wind as an expert in marketing, marketing strategy, and marketing research. 6/14/07 Tr. 57:2-9 (Wind).

83. Mark Eisenberg is the Executive Vice President, Business and Legal Affairs, in the Global Digital Business Group at SONY BMG Music Entertainment (“SONY BMG”). In that capacity, Mr. Eisenberg oversees the digital distribution and licensing of SONY BMG’s music and other intellectual property, and he is directly involved in developing Sony’s policies and procedures related to new technologies. Mr. Eisenberg’s employment at SONY BMG or its predecessors dates back to 1994 when he joined Sony Music as Counsel in the Sony Music Law Department. Eisenberg WDT at 1-2, SX Trial Ex. 53. Mr. Eisenberg testified before the Court in the direct phase of the trial on Monday, June 18, 2007, Vol. 9 (“6/18/07 Tr. (Eisenberg)”) and on Tuesday, June 19, 2007, Vol. 10 (“6/19/07 Tr. (Eisenberg)”).

84. Barrie Kessler is the Chief Operating Officer of SoundExchange, which collects and distributes royalty payments to performers and sound recording copyright owners. Ms. Kessler oversees the collection and distribution of the royalty payments for the performance of sound recordings on webcast, cable, and satellite services. She supervises the receipt of the payments, the determination of the amounts owed to the copyright owners and performers, and the distribution of these royalties. Ms. Kessler also oversees SoundExchange’s license compliance activities and manages the budget. Kessler WDT at 1-2, SX Trial Ex. 55. Ms. Kessler testified before the Court during the direct phase of the trial on Tuesday, June 19, 2007, Vol. 10 (“6/19/07 Tr. (Kessler)”).

85. Sean Butson is a consultant and Chartered Financial Analyst with over ten years of experience in both debt and equity capital markets. He has regularly acted as a commercial

lender and advises institutional investors on equity markets. Mr. Butson has performed and published extensive valuation and competitive landscape analyses in complex financial models and written reports. He covered the wireless and communications tower industries, as well as the media industry. Mr. Butson was one of the first analysts to cover the satellite radio industry and has since authored dozens of reports on this industry. Butson WDT at 1-2, SX Trial Ex. 57. Mr. Butson testified before the Court during the direct phase of the trial on Tuesday, June 19, 2007, Vol. 10 (“6/19/07 Tr. (Butson)”). The Court accepted Mr. Butson as an expert witness as a financial analyst in satellite radio. 6/19/07 Tr. 136:13-16 (Butson).

86. Edgar Bronfman, Jr., is the Chairman and Chief Executive Officer of Warner Music Group Corporation (“WMG”). WMG is one of the world’s largest music companies and is composed of several different record labels. Prior to joining WMG, Mr. Bronfman served as the Executive Vice Chairman of Vivendi Universal, which owns Universal Music Group, as well as many other entertainment companies. Bronfman WDT at 1, SX Trial Ex. 59. Mr. Bronfman testified before the Court during the direct phase of the trial on Wednesday, June 20, 2007, Vol. 11 (“6/20/07 Tr. (Bronfman)”).

87. Simon Renshaw has been involved in the music business since 1974 and is currently the President of Strategic Artist Management. He has been a full-time manager of artists since 1986, and currently manages such artists as the Dixie Chicks, Anastacia, Clay Aiken, and Miranda. Renshaw WDT at 1, SX Trial Ex. 60. Mr. Renshaw testified before the Court during the direct phase of the trial on Thursday, June 21, 2007, Vol. 12 (“6/21/07 Tr. (Renshaw)”).

88. Dr. Janusz Ordover is a Professor of Economics and former Director of the Masters in Economics Program at New York University, where he has taught since 1973. Dr.

Ordover specializes in industrial organization economics, particularly in antitrust and regulatory economics. He has served as an advisor on antitrust to many organizations, and has provided economic testimony in policy hearings at the Federal Trade Commission and the United States Senate. Dr. Ordover also served as Deputy Assistant Attorney General for Economics at the Antitrust Division for the United States Department of Justice. He has consulted and testified on a wide range of antitrust and regulatory matters, including matters dealing with the distribution and pricing of content. Throughout his academic career, one focus of Dr. Ordover's research has been the incentives for the creation and dissemination of intellectual property. Ordover WDT at 2-3, SX Trial Ex. 61. Dr. Ordover testified before the Court during the direct phase of the trial on Thursday, June 21, 2007, Vol. 12 ("6/21/07 Tr. (Ordover)"). The Court accepted Dr. Ordover as an expert in industrial organization economics, competition policy, regulatory economics, and the pricing of intellectual property. 6/21/07 Tr. 90:17-91:10 (Ordover).

89. Dan Navarro is a recording artist, songwriter, performer, and member of SoundExchange. Mr. Navarro has been writing, recording, and performing songs for twenty years, and has his own label, Red Hen Records. Navarro WDT at 1, SX Trial Ex. 63. Mr. Navarro testified before the Court during the direct phase of the trial on Monday, June 25, 2007, Vol. 13 ("6/25/07 Tr. (Navarro)").

90. Edward Chmelewski is the Co-Founder and President of Blind Pig Records, one of the premier Blues and American roots music labels in the world. Blind Pig Records began in the 1970's and since that time, the company has grown into a leading independent Blues label that releases approximately eight to ten albums per year. Chmelewski WDT at 1-2, SX Trial Ex. 64. Mr. Chmelewski testified before the Court during the direct phase of the trial on Tuesday, June 26, 2007, Vol. 14 ("6/26/07 Tr. (Chmelewski)").

91. Michael Kushner is Senior Vice President, Business and Legal Affairs at Atlantic Music Group, a record label owned by WMG. In that capacity, Mr. Kushner directs the legal and deal making aspects of the company. Mr. Kushner has held various positions within the record industry since 1987. Kushner WDT at 1-3, SX Trial Ex. 65. Mr. Kushner testified before the Court during the direct phase of the trial on Tuesday, June 26, 2007, Vol. 14 (“6/26/07 Tr. (Kushner)”).

92. Lawrence Kenswil is the President of Universal eLabs, a division of Vivendi Universal’s UMG. Prior to holding that position, Mr. Kenswil was the Executive Vice President, Business and Legal Affairs, at UMG. He serves on the Board of Directors of the Recording Industry Association of America. Kenswil WDT at 1, SX Trial Ex. 66. Mr. Kenswil testified before the Court during the direct phase of the trial on Wednesday, June 27, 2007, Vol. 15 (“6/27/07 Tr. (Kenswil)”).

93. Charles Ciongoli is Executive Vice President and Chief Financial Officer for Universal Music Group North America (“UMG”), and in that position, he is ultimately responsible for all of the financial activities of the company. Prior to holding his current position, Mr. Ciongoli was the Senior Vice President of Finance for UMG, and before that, he was the Vice President of Finance for MCA Records and also served as Vice President and Group Controller for both MCA Records and MCA Music Publishing. Ciongoli WDT at 1, SX Trial Ex. 67. Mr. Ciongoli testified before the Court during the direct phase of the trial on Wednesday, June 27, 2007, Vol. 15 (“6/27/07 Tr. (Ciongoli)”).

94. Dr. Michael Pelcovits is a Principal of Microeconomic Consulting & Research Associates, Inc., a consulting firm specializing in the analysis of antitrust and regulatory economics. He received a Ph.D in Economics from the Massachusetts Institute of Technology,

where he was a National Science Foundation fellow. Dr. Pelcovits has prepared reports and testimony on a broad range of applied microeconomics issues, and has lectured widely on telecommunications regulation and international economics. He testified as an expert witness in Docket Nos. 2005-1 CRB DTRA and 2005-5 CRB DTNSRA, and has also provided testimony before the Federal Communications Commission, state regulatory commissions, and international governmental agencies. Pelcovits WDT at 1, SX Trial Ex. 68. Dr. Pelcovits testified before the direct phase of the trial on Monday, July 9, 2007, Vol. 16 (“7/9/07 Tr. (Pelcovits)”). The Court accepted Dr. Pelcovits as an expert in applied microeconomics. 7/9/07 Tr. 8:12-22 (Pelcovits).

95. In addition to these witnesses, SoundExchange also submitted written direct testimony from James Griffin and David Hughes, but subsequently withdrew their testimony from the direct case.

b. Witnesses for the Services’ Direct Cases

i. Sirius Satellite Radio, Inc.

96. During the direct phase of the trial, Sirius Satellite Radio Inc. submitted written and oral testimony from the following nine witnesses:

97. Mel Karmazin. Direct Testimony of Mel Karmazin, June 6, 2007, Vol. 3 (“6/6/07 Tr. (Karmazin)”) and Direct Testimony of Mel Karmazin, June 7, 2007, Vol. 4 (“6/7/07 Tr. (Karmazin)”).

98. Terrence Smith. Direct Testimony of Terrence Smith, June 7, 2007, Vol. 4 (“6/7/07 Tr. (Smith)”).

99. Doug Wilsterman. Direct Testimony of Doug Wilsterman, June 7, 2007, Vol. 4 (“6/7/07 Tr. (Wilsterman)”).

100. Jeremy Coleman. Direct Testimony of Jeremy Coleman, June 7, 2007, Vol. 4 (“6/7/07 Tr. (Coleman)”).

101. Steve Cohen. Direct Testimony of Steve Cohen, June 7, 2007, Vol. 4 (“6/7/07 Tr. (Cohen)”) and Direct Testimony of Steve Cohen, June 11, 2007, Vol. 5 (“6/11/07 Tr. (Cohen)”).

102. Steven Blatter, Direct Testimony of Steven Blatter, June 11, 2007, Vol. 5 (“6/11/07 Tr. (Blatter)”).

103. Christine Heye. Direct Testimony of Christine Heye, June 11, 2007, Vol. 5 (“6/11/07 Tr. (Heye)”).

104. Michael Moore. Direct Testimony of Michael Moore, June 11, 2007, Vol. 5 (“6/11/07 Tr. (Moore)”).

105. David Frear. Direct Testimony of David Frear, June 11, 2007, Vol. 5 (“6/11/07 Tr. (Frear)”) and Direct Testimony of David Frear, June 12, 2007, Vol. 6 (“6/12/07 Tr. (Frear)”).

106. In addition, Sirius submitted the written direct testimony of Robert Law, but did not present Mr. Law as a witness at trial. 6/13/07 Tr. 124:20 - 126:5.

ii. XM Satellite Radio, Inc.

107. During the direct phase of the trial, XM Satellite Radio Inc. submitted written and oral testimony from the following five witnesses:

108. Gary Parsons. Direct Testimony of Gary Parsons, June 4, 2007, Vol. 1 (“6/4/07 Tr. (Parsons)”) and Direct Testimony of Gary Parsons, June 5, 2007, Vol. 2 (“6/5/07 Tr. (Parsons)”).

109. Eric Logan, Direct Testimony of Eric Logan, June 5, 2007, Vol. 2 (“6/5/07 Tr. (Logan)”).

110. Mark Vendetti. Direct Testimony of Mark Vendetti, June 5, 2007, Vol. 2 (“6/5/07 Tr. (Vendetti)”) and Direct Testimony of Mark Vendetti, June 6, 2007, Vol. 3 (“6/6/07 Tr. (Vendetti)”).

111. Stephen Cook. Direct Testimony of Stephen Cook, June 6, 2007, Vol. 3 (“6/6/07 Tr. (Cook)”).

112. Anthony Masiello. Direct Testimony of Anthony Masiello, June 6, 2007, Vol. 3 (“6/6/07 Tr. (Masiello)”).

iii. Joint Witnesses

113. During the direct phase of the trial, Sirius and XM submitted written and oral testimony from the following two jointly sponsored witnesses:

114. John R. Woodbury. Direct Testimony of John R. Woodbury, June 12, 2007, Vol. 6 (“6/12/07 Tr. (Woodbury)”) and Direct Testimony of John R. Woodbury, June 13, 2007, Vol. 7 (“6/13/07 Tr. (Woodbury)”).

115. Armand Musey. Direct Testimony of Armand Musey, June 13, 2007, Vol. 7 (“6/13/07 Tr. (Musey)”).

116. In addition, Sirius and XM had submitted written direct testimony from Roger Rusch, but subsequently withdrew that testimony during the trial. 6/6/07 Tr. 6:9-22.

4. The Rebuttal Cases

117. On July 24, 2007, the participants filed their written rebuttal cases. Witness testimony in the rebuttal phase began on Wednesday, August 15, 2007 and concluded on Thursday, August 30, 2007. There were ten days of rebuttal witness testimony.

a. Witnesses for SoundExchange's Rebuttal Case

118. SoundExchange filed written rebuttal testimony from ten witnesses, seven of whom had also testified during the direct phase of these proceedings: Mr. Ciongoli testified before the Court in the rebuttal phase of the case on Thursday, August 23, 2007, Vol. 22 ("8/23/07 Tr. (Ciongoli)"); Dr. Ordover testified before the Court in the rebuttal phase of the case on Thursday, August 23, 2007, Vol. 22 ("8/23/07 Tr. (Ordover)") and on Monday, August 27, 2007, Vol. 23 ("8/27/07 Tr. (Ordover)"); Mr. Butson testified before the Court in the rebuttal phase of the case on Monday, August 27, 2007, Vol. 23 ("8/27/07 Tr. (Butson)") and on Tuesday, August 28, 2007, Vol. 24 ("8/28/07 Tr. (Butson)"); Dr. Pelcovits testified before the Court during the rebuttal phase of the case on Tuesday, August 28, 2007, Vol. 24 ("8/28/07 Tr. (Pelcovits)"); Mr. Eisenberg testified before the Court during the rebuttal phase of the case on Tuesday, August 28, 2007, Vol. 24 ("8/28/07 Tr. (Eisenberg)") and on Wednesday, August 29, 2007, Vol. 24 ("8/29/07 Tr. (Eisenberg)"); Ms. Kessler testified before the Court during the rebuttal phase of the case on Wednesday, August 29, 2007, Vol. 25 ("8/29/07 Tr. (Kessler)"); and Dr. Wind testified before the Court during the rebuttal phase of the case on Wednesday, August 29, 2007, Vol. 25 ("8/29/07 Tr. (Wind)").

119. SoundExchange also presented the rebuttal testimony of the following three witnesses who did not testify during the direct phase of the proceeding:

120. Bruce Elbert is the President of Application Technology Strategy, Inc., a company that assists users and providers of satellite technology. Prior to his position with Application Technology Strategy, Mr. Elbert worked for 25 years at Hughes Electronics, the company that both invented and built the first geostationary satellite, as well as produced and operated ground electronics and networks to control and utilize such satellites. While at Hughes, Mr. Elbert

developed the design and service offering for mobile satellite programs, as well as managed the service marketing, operations, and engineering of the Galaxy cable TV satellite network. He also assisted with the start-up of DirecTV. Mr. Elbert has taught a variety of technical courses related to satellite communications, and has written eight books related to communications technologies. He has led and presented on numerous technical panels and workshops throughout his career concerning communications satellites and their applications. Elbert WRT at 1-3, SX Trial Ex. 122. Mr. Elbert testified before the Court during the rebuttal phase of the case on Monday, August 27, 2007, Vol. 23 (“8/27/07 Tr. (Elbert)”). The Court accepted Mr. Elbert as an expert in the design, engineering, construction, operation, and management of satellite communications systems. 8/27/07 Tr. 165:21-166:3, 169:20 (Elbert).

121. Steven Herscovici is a Managing Principal at Analyst Group, Inc., an economic and financial research and consulting firm. Dr. Herscovici specializes in the application of microeconomic theory, econometrics, and data analysis to complex business problems. He has testified or consulted in numerous matters related to the music industry. Dr. Herscovici received his B.A., M.A., and Ph.D. in economics from the University of Chicago. Herscovici WRT at 1, SX Trial Ex. 130. Dr. Herscovici has consulted in the music industry on a wide variety of issues, and has particular expertise on matters related to finance. 8/29/07 Tr. 168:11-181:13 (Herscovici). Dr. Herscovici spends approximately 500 hours per year on matters related to the music industry, including litigation and consulting matters. 8/29/07 Tr. 175:3-10 (Herscovici). He also has experience consulting for major companies in industries with economic characteristics similar to the SDARS. 8/29/07 Tr. 176:19-179:16 (Herscovici). Dr. Herscovici testified before the Court during the rebuttal phase of the case on Wednesday, August 29, 2007, Vol. 25 (“8/29/07 Tr. (Herscovici)”) and on Thursday, August 30, 2007, Vol. 26 (“8/30/07 Tr.

(Herscovici)"). The Court accepted Dr. Herscovici as an expert in economics and the economics of the music industry. 8/29/07 Tr. 182:11-183:5 (Herscovici).

122. George Mantis is the President of The Mantis Group, Inc., a marketing research and consulting firm in Chicago, IL. Mr. Mantis has worked for 30 years designing, executing, and reporting on surveys conducted for consumer and industrial product and services firms. Over the course of his career, Mr. Mantis has authored over 1,000 market research studies. He has previously been qualified as an expert in survey research, and surveys he has designed have been introduced as evidence and relied upon by many courts. Mr. Mantis holds a B.A., and M.B.A., and a J.D. Mantis WRT at 1, SX Trial Ex. 132. Mr. Mantis testified before the Court during the rebuttal phase of the case on Thursday, August 30, 2007, Vol. 26 ("8/30/07 Tr. (Mantis)"). The Court accepted Mr. Mantis as an expert in marketing survey research. 8/30/07 Tr. 114:4-10 (Mantis).

b. Witnesses for the Services' Rebuttal Cases

123. The SDARS presented written and oral rebuttal testimony from the following witnesses:

i. Sirius

124. David Frear. Rebuttal Testimony of David Frear, August 15, 2007, Vol. 17 ("8/15/07 Tr. (Frear)").

125. Mel Karmazin. Rebuttal Testimony of Mel Karmazin, August 22, 2007, Vol. 21 ("8/22/07 Tr. (Karmazin)").

ii. XM

126. Mark Vendetti. Rebuttal Testimony of Mark Vendetti, August 15, 2007, Vol. 17 ("8/15/07 Tr. (Vendetti)").

iii. Joint Witnesses

127. Roger Noll. Rebuttal Testimony of Roger Noll, August 16, 2007, Vol. 18 (“8/16/07 Tr. (Noll)”).

128. Erich Joachimsthaler. Rebuttal Testimony of Erich Joachimsthaler, August 16, 2007, Vol. 18 (“8/16/07 Tr. (Joachimsthaler)”), and August 20, 2007, Vol. 19 (“8/20/07 Tr. (Joachimsthaler)”).

129. George Benston. Rebuttal Testimony of George Benston, August 20, 2007, Vol. 19 (“8/20/07 Tr. (Benston)”).

130. Daryl Martin. Rebuttal Testimony of Daryl Martin, August 20, 2007, Vol. 19 (“8/20/07 Tr. (Martin)”), and August 21, 2007, Vol. 20 (“8/21/07 Tr. (Martin)”).

131. John Hauser. Rebuttal Testimony of John Hauser, August 21, 2007, Vol. 20 (“8/21/07 Tr. (Hauser)”).

132. Bruce Silverman. Rebuttal Testimony of Bruce Silverman, August 22, 2007, Vol. 21 (“8/22/07 Tr. (Silverman)”).

133. John Woodbury. Rebuttal Testimony of John Woodbury, August 23, 2007, Vol. 22 (“8/23/07 Tr. (Woodbury)”).

C. Background on the Industries Involved

134. The backdrop of this proceeding is that of two industries that are facing very different prospects in the coming years. The record companies are in a prolonged period of decline, with revenues declining consistently year to year. As discussed in more detail in the testimony of record company witnesses, the record companies are facing their most difficult times in recent memory, and their viability depends completely on their ability to receive

sufficient compensation from new digital revenue streams such as satellite radio. Herscovici WRT at 3-6, EX Trial Ex. 130.

135. In contrast, the satellite radio companies are in a period of dramatic investment, growth, and expansion. Although their business model requires significant upfront capital investment, followed by earning significant margins on each incremental customer, all signs are that the satellite radio companies are on the road to being highly profitable over time. Herscovici WRT at 6-7, SX Trial Ex. 130.

136. As discussed in the testimony of Dr. Herscovici and in Section VI *infra*, the background trends facing these two industries informs the analysis of the § 801(b) factors in this proceeding. Herscovici WRT at 3, SX Trial Ex. 130.

1. The Record Companies and Recording Artists

a. Record Companies Have Faced Sharp Declines in CD Sales, Making Their Business Riskier Than Ever

137. The record industry is currently undergoing substantial change. Herscovici WRT at 3, SX Trial Ex. 130; Kushner WDT at 13, SX Trial Ex. 65. The introduction and growth of satellite radio is one of a number of important changes that have occurred over the last several years in the distribution of music. Herscovici WRT at 3, SX Trial Ex. 130.

138. Over the last several years, the record industry has been changing from a physical industry to a digital industry, with record companies transforming into “music entertainment” companies. Kenswil WDT at 2, SX Trial Ex. 66. *See also* SDARS Trial Ex. 51 at 17-18 (discussing the evolution of UMG’s business model and strategies to increase revenues from digital distribution of music); Kushner WDT at 14, SX Trial Ex. 65; 6/26/07 Tr. 122:9-22 (Kushner). Consumers are shifting away from obtaining music in physical product forms and towards receiving music through electronic services instead. 6/27/07 Tr. 15:5-18 (Kenswil).

139. Currently, consumers are able to enjoy music through more services, in more places, and through more devices than ever before, including through “satellite radio, satellite and cable TV services, permanent audio download tracks and albums, streaming and conditional downloads, and webcasting, mobile and wireless services, video services, and sales of other digital products (e.g., ringtones).” Kenswil WDT at 2, SX Trial Ex. 66. *See also* SDARS Trial Ex. 51 at 12 (listing UMG’s 2006 sources of income, including CD sales, film and TV licensing, audio downloads, subscriptions, statutory radio and interactive radio, mobile, videos, ad-supported audio, artist partnerships, and podcasting); *Id.* at 13 (listing UMG’s growing list of digital partners).

140. Sales of physical media, such as CDs, have long been the primary source of revenue for the record companies and recording artists. In 1996, when the rate for the pre-existing subscription services (“PSS”) was set, record companies had seen “consistent growth in units shipped and dollar value of records, CDs, and music videos from 1982-1996.” *PSS I Librarian’s Decision*, 63 Fed. Reg. at 25407. That is no longer true.

141. Sales of CDs, which make up the vast majority of physical sales, are declining. From 2000 to 2006, sales of CDs declined by 35 percent, a rate of nearly 7 percent per year. Herscovici WRT at 3 & App. B, SX Trial Ex. 130; Kenswil WDT at 3, SX Trial Ex. 66 at SX Exhibit 004DP (RIAA 2005 year-end statistics); Kushner WDT at 13, SX Trial Ex. 65.

142. The dollar value of CD shipments has also declined significantly – 30% from 2000 to 2006, a decline of nearly 6% per year. Herscovici WRT at 3 & App. C, SX Trial Ex. 130; Kushner WDT at 13, SX Trial Ex. 65; SX Ex. 005 DP. This calculation is in nominal dollars. If one were to account for inflation, the decline would be even more steep – by approximately 20%. 8/30/07 Tr. 88:22-90:14 (Herscovici).

143. This decline in sales is continuing and even accelerating dramatically in 2007. In recent years, CD sales have been declining at a rate of approximately 20% each year, a trend that is expected to continue into the foreseeable future. 6/27/07 Tr. 16:3-17:4 (Kenswil). In the first three months of 2007, sales of CDs plunged 20% from the first 3 months of 2006. Herscovici WRT at 3, SX Trial Ex. 130.

144. This decline in sales of sound recordings cannot be explained by overall economic activity. At the same time that CD shipments fell by 35% from 2000 to 2006, real U.S. Personal Consumption Expenditures, a broad measure of consumer spending, increased by 20%, or 3% per year. Herscovici WRT at 3, SX Trial Ex. 130. From 2000 to 2006, the Real Gross Domestic Product, perhaps the broadest measure of economic activity, increased by 16% or 2.5% per year. Herscovici WRT at 3-4, SX Trial Ex. 130.

145. As a result, in real dollars, the record industry is making *less than it was in 1990*, despite the fact that the gross national product increased significantly from 1990 to 2006. 8/30/07 Tr. 90:15-92-10 (Herscovici); SDARS Trial Ex. 99. At the same time that sound recording sales have declined in real dollars from 1990 to 2006, the U.S. GDP has increased by approximately 50-60% in real dollars. 8/30/07 Tr. 92:11-18 (Herscovici).

b. Digital Revenue Streams Like Satellite Radio Are Growing and Are Critical to the Record Industry's Future, But Do Not Make Up for the Declines in Sales of Physical Product.

146. The decline in revenues to record companies and the increased risks that they face is not from a reduction in interest or love of music or the sound recordings that are being released. Kushner WDT at 21, SX Trial Ex. 65. Music consumption is actually on the rise. Kushner WDT at 23, SX Trial Ex. 65. Music is being consumed by more people, in more places, and in more ways than at any time previously. Kushner WDT at 21, SX Trial Ex. 65. Music

remains a central focus in the lives young people and the music “scene” continues to grow and thrive, with many new ways to listen to music (such as the SDARS). Kushner WDT at 21, SX Trial Ex. 65.

147. One reason why physical sales and revenues are down is that there is a proliferation of new outlets for people to consume music; the SDARS are one of them. Kushner WDT at 22, SX Trial Ex. 65. If record companies are unable to receive a sufficient return from these new ways of listening to music, like the SDARS, they will be unable to continue to invest in new sound recordings and new artists, thereby reducing the music available to consumers. Kushner WDT at 22, SX Trial Ex. 65.

148. The development of digital services is intimately connected with the decline in CD sales. Many of these new services – including satellite radio – actually substitute for the sales of other products, including CDs. Kenswil WDT at 3, SX Trial Ex. 66. Satellite radio displaces time that consumers would otherwise spend listening to CDs or other services that provide greater remuneration to the record companies, a logical corollary of which is that these consumers are purchasing fewer CDs and spending less money on other products as a result. Kenswil WDT at 3, SX Trial Ex. 66. *See also* 6/27/07 Tr. 20:6-18 (Kenswil). Moreover, through their 70-plus music channels, the SDARS are “narrowcasting” music, rather than broadcasting it; niche channels dedicated to very specific genres of music – which are narrowcast at a high quality – satisfy consumers’ musical tastes, thereby replacing their need to purchase CDs or to invest in other services that provide a greater rate of return to the record companies than does satellite radio. Kenswil WDT at 3, SX Trial Ex. 66.

149. At the same time that physical sales have declined sharply, digital revenue streams, such as satellite radio, continue to grow and become more and more important to the

record companies. These revenue streams include digital downloads, ringtones, on-demand subscription services, music video services, Internet radio, and satellite radio. Herscovici WRT at 4, SX Trial Ex. 130.

150. These revenue streams have grown at an annual rate of over 200% between 2004 and 2006, increasing from almost nothing in 2003 to 16 percent of overall industry revenues by 2006. Herscovici WRT at 4 & App. D, E, SX Trial Ex. 130. Despite the increases in digital music revenues, that growth has not offset the revenue lost from declining sales of physical sound recordings. 8/29/07 Tr. 216:20-218:9 (Herscovici); 6/27/07 Tr. 17:8-18:3 (Kenswil); 6/26/07 Tr. 125:8-14 (Kushner).

151. As a result, annual sales of U.S. recorded music have declined at a rate of nearly 4% per year since 2000. This decline is in nominal dollars, and thus would be greater if inflation was considered. Herscovici WRT at 4, SX Trial Ex. 130.

152. SONY BMG, for example, has seen its net revenue decline from [REDACTED] in 2000 to [REDACTED] in 2006 (in nominal dollars), despite the fact that BMG acquired another significant label (Zomba) in 2002. SDARS Trial Ex. 14 at SE0203204. From 2000 to 2006, SONY BMG had [REDACTED] *Id.*

153. The change-over from physical to digital sales reflects a fundamental change in the record music industry, as record companies go from selling a single type (or small number of types) of physical product to earning revenues from myriad digital revenue streams. Herscovici WRT at 4, SX Trial Ex. 130.

154. There is no dispute among record companies, commentators, and analysts that the decline in physical sales will continue and perhaps accelerate, while the record industry will increasingly depend on receiving sufficient income from digital revenue sources. Herscovici

WRT at 4, SX Trial Ex. 130; 8/29/07 Tr. 219:5-220:5 (Herscovici); Kenswil WDT at 2, SX Trial Ex. 66. Because of this transition to the digital distribution of music, it is imperative for record companies to receive a fair return on their music from digital music services. Kenswil WDT at 2-3, SX Trial Ex. 66; 6/18/07 Tr. 191:7-13 (Eisenberg). Satellite radio is a key part of the record industry's future as an important digital revenue source. Herscovici WRT at App. E at 4, SX Trial Ex. 130.

155. As explained by Edgar Bronfman Jr., CEO of Warner Music Group, the future viability of the record companies depends on receiving a fair value from all of these new digital streams, including from digital downloads of single tracks and albums, online subscription services, custom and non-interactive webcasting streaming of music videos, downloads of music videos, and all forms of ringtones. Bronfman WDT at 12, SX Trial Ex. 59. "Ultimately, revenue from services such as XM and Sirius *are* the future of the industry, and only by receiving fair compensation from such services will the record industry be able to thrive and continue to create the music that is so important to the lives of so many people around the world." Bronfman WDT at 12, SX Trial Ex. 59.

c. The Challenges Facing the Record Industry Can Be Seen By Looking at the Decline in Sales of Hit Records, Which Historically Have Funded Investment in Future Sound Recordings.

156. The vast majority of record albums – approximately 90% – never earn a profit. Herscovici WRT at 4, SX Trial Ex. 130; Kushner WDT at 14, SX Trial Ex. 65. As a result, the few albums that do have success are essential to fund the investment in and creation of new sound recordings. Herscovici WRT at 4, SX Trial Ex. 130. The decline in album sales, to the extent not offset by increases in digital revenue sources, means there is less money available to

invest in the creation of sound recordings and fewer sound recordings are created. Herscovici WRT at 4, SX Trial Ex. 130; Chmelewski WDT at 11-12, SX Trial Ex. 64.

157. The evidence strongly demonstrates that sales of blockbuster albums – those that are essential to the ability of record companies to invest in future sound recordings – is decreasing rapidly. In 2007, sales of the number 1 album in the country were the lowest that they have been at any point since such sales began to be measured in 1991. In prior years, it was not uncommon for a number 1 album to sell 500,000 to 600,000 copies in a week. Today, the number 1 album sells 60,000-65,000 copies in a week. Herscovici WRT at 5, SX Trial Ex. 130.

158. Another measure of this decline can be seen from the gold, platinum, multi-platinum, and diamond certifications from the Recording Industry Association of America. The number of albums certified as gold (or higher) in 1996 was 710, increasing to 861 in 1999. In 2006, only 406 albums were certified gold or higher. Herscovici WRT at 5 & App. G, SX Trial Ex. 130. *See also* Kushner WDT at 15, SX Trial Ex. 65 (examining slightly different measure of the number of albums released in a particular year that have been certified as gold, platinum, and multi-platinum and showing significant declines over time).

159. The effect of the drastic reduction in sales of “hit” records is enormous. Record companies need to make significant profits on a “hit” in order to make up for the many sound recordings that lose money and to fund investment in new sound recordings. Kushner WDT at 15, SX Trial Ex. 65. Albums generally become profitable only when they reach Gold status (selling 500,000 units), and high-profile releases may not become profitable until they reach Platinum status (selling over 1 million units). Kushner WDT at 15, SX Trial Ex. 65.

160. For many years, record companies relied on Multi-Platinum releases to make up for the losses they receive on most albums. Kushner WDT at 15, SX Trial Ex. 65. In 1997, it

was not unusual for an album to be Multi-Platinum. Today, it is a rarity. Kushner WDT at 15, SX Trial Ex. 65. The trend of declining sales of even the most popular records continues today. Kushner WDT at 15, SX Trial Ex. 65.

161. The impact of the decline in hit records is that record companies face greater risks – they must spend the same amount of money, still have many failures, but the upside of a successful sound recording is less than it used to be. 6/26/07 Tr. 123:12-124:19 (Kushner). Hit albums are the source of the funds needed to reinvest in new artists, and new sound recordings in the future. A decline in the revenues received from hits means less money for investment, fewer artists being brought to the public, and fewer sound recordings made. 6/26/07 Tr. 124:20-125:7 (Kushner); Chmelewski WDT at 11-12, SX Trial Ex. 64.

162. Artists' careers are now shorter and even established artists are able to sell only a fraction of the sales volume they were able to generate previously. Kushner WDT at 2, SX Trial Ex. 65.

163. The decline in catalog sales also reflects the challenges faced by the record industry today. Catalog sales are sales that happen after a big marketing push is over, generally a year or more after release. For years, record companies relied on catalog sales to buoy them in the toughest times. But catalog sales have declined precipitously over the last several years. In 2000, Atlantic sold [REDACTED] units of catalog; that number declined to [REDACTED] units in 2005; and, in 2006, to [REDACTED] units through Oct. 15, 2006. Kushner WDT at 16, SX Trial Ex. 65.

164. Many catalog retailers, such as Tower Records, have gone out of business, and the retailers that continue to exist will not sell catalog recordings unless they are offered at steep discounts, further eroding the ability of record companies to earn revenues. Kushner WDT at 17,

SX Trial Ex. 65; 6/26/07 Tr. 125:15-126:14 (Kushner). Although albums are now available on the Internet, that has not made up for the decline in catalog sales. 6/26/07 Tr. 126:19-22 (Kushner).

d. Despite the Decreases in Revenues From Traditional Sales and the Insufficient Revenues To Date from Digital Revenue Streams, the Cost of Making Sound Recordings Remains the Same or Greater Than It Has Been.

165. At the same time that revenues are declining, the costs of creating sound recordings have not changed or are increasing. Herscovici WRT at 6, SX Trial Ex. 130; Kushner WDT at 2, SX Trial Ex. 65; Kenswil WDT at 3, SX Trial Ex. 66. Record companies expend large sums of money on the A&R (“Artist and Repertoire”) function, which involves identifying new artists, creating sound recordings, and bringing them to market. Atlantic Records spent [REDACTED] on A&R in 2006 and an additional [REDACTED] in overhead for the A&R function in 2006. Kushner WDT at 19, 5, SX Trial Ex. 65. Although record sales and revenues are down, the costs of making sound recordings remains largely unchanged, with Atlantic’s A&R investment being typically around [REDACTED] per year. Kushner WDT at 19, SX Trial Ex. 65.

166. Indeed, many of the costs faced by record companies have increased. The cost of marketing artists and sound recordings has increased. Kushner WDT at 2, SX Trial Ex. 65. With increasing costs and declining revenues, there has been significant dislocation in the record industry, including widespread lay-offs of personnel and reductions of artist rosters. Herscovici WRT at 6, SX Trial Ex. 130.

167. At the same time that record companies are seeing growth of revenues from digital sources, they nonetheless must maintain the infrastructure to support their declining physical business. Kushner WDT at 5, SX Trial Ex. 65; 6/26/07 Tr. 115:13-16:6 (Kushner).

Record companies do not currently save costs as a result of digital distribution. 6/26/07 Tr.

115:13-18 (Kushner). For the foreseeable future, record companies will not see any significant

cost savings as a result of the transition to digital distribution. 6/26/07 Tr. 116:1-11 (Kushner).

In any case, even if digital distribution fully replaces physical distribution of sound recordings, any cost savings may not accrue to record companies, but instead to consumers who will receive the savings, as they do now, in the form of lower prices from distribution of sound recordings in digital form. 6/26/07 Tr. 116:11-11:2 (Kushner).

e. The Declining Ability to Recover Revenues from the Use of Their Sound Recordings Has Resulted in Cuts in Staffing and Artist Rosters, Resulting in the Creation of Fewer Sound Recordings.

168. The statistics on declining sales of hit records and revenues generally means that there has been a steep decline in the average profit margin of record companies. To survive, they have no choice but to reduce staff, control A&R costs, and reduce marketing costs. But the decline also means that there is less money to sign new artists and make new sound recordings. Kushner WDT at 15-16, SX Trial Ex. 65. As a result, fewer artists are signed and fewer sound recordings are made. 6/26/07 Tr. 123:1-11 (Kushner). Record industry payrolls have shrunk as record companies have sought to cut costs to deal with their declining revenues.

169. Record companies have consolidated, with the number of major record companies shrinking from 6 to 4 over the last decade, resulting in large reductions in staff. Kushner WDT at 13, SX Trial Ex. 65.

170. Within individual record companies, venerable record labels have been dissolved over the last two decades. 6/26/07 Tr. 120:6-121-2 (Kushner). This includes the merger of Atlantic and Elektra, the merger of Capital and Virgin Records, and others. There are now fewer labels than there used to be. 6/26/07 Tr. 120:9-121:2 (Kushner).

171. Within the record industry, there has been a reduction in jobs over the past 5 to 6 years. 6/26/07 Tr. 121:3-16 (Kushner). Individual record companies have also reduced staff. Warner Music Group reduced its payroll from 9000 employees in the year 2000 to 4000 employees in October of 2006. Kushner WDT at 13, SX Trial Ex. 65. And record labels themselves have reduced staff. Atlantic and Elektra – two venerable record labels – merged and shed employees in 2004, leaving the combined label with the same number of employees of one of them prior to the merger. Kushner WDT at 13, SX Trial Ex. 65; 6/26/07 Tr. 121:3-16 (Kushner).

172. The troubles that the record industry has faced has also resulted in the reduction of artist rosters. 6/26/07 Tr. 121:3-20 (Kushner). Record companies are signing and maintaining fewer and fewer artists on their roster. 6/26/07 Tr. 121:3-20 (Kushner). After Elektra and Atlantic merged, they reduced their artist roster by half. 6/26/07 Tr. 121:21-22:8 (Kushner).

173. The reductions in staff and artist rosters have been caused by the decline in sales of physical products and the fact that digital sales have not yet made up the difference. Kushner WDT at 13, SX Trial Ex. 65. The ability for record companies to survive depends on their ability to manage the shift from physical to digital distribution of music. Kushner WDT at 13, SX Trial Ex. 65. And that ability depends on record companies receiving royalty rates for the use of sound recordings at reasonable rates consistent with the marketplace value of the sound recordings. Kushner WDT at 14, SX Trial Ex. 65.

2. The Satellite Radio Companies – XM and Sirius

a. The Companies and Their Service

i. Generally

174. Satellite radio is the biggest development in the radio industry since FM was introduced more than four decades ago. Much like cable revolutionized television, satellite is transforming the radio industry. The satellite radio companies offer hundreds of channels of narrowly tailored music for practically all tastes, along with other programming. In addition to offering a service with wide consumer appeal, satellite radio's attractive duopoly structure, large addressable market, compelling content, inexpensive pricing, and high incremental margins are ingredients for a successful industry. Butson WDT at 2-3, SX Trial Ex. 57.

175. XM and Sirius offer more than 100 channels each of diverse high-quality audio content nationwide to portable and stationary devices for car, home, boat, aircraft, small businesses, and personal use. While most terrestrial radio stations provide a limited selection of local and some national audio content, the SDARS offer a broad range of nationwide content. The vast majority of each of the companies' over 60 music channels operate with no commercials (Sirius has none and XM only has a few) as compared to about 15-20 minutes of commercials per hour for broadcast radio stations. The basic monthly subscriber price for satellite radio is currently \$12.95, with both companies offering various discounts for multiyear subscribers and family plans. Butson WDT at 6-7, SX Trial Ex. 57.

176. The SDARS provide a different listening experience than traditional broadcast radio, especially in respect to the breadth of the content offered. Over half of all broadcast radio stations use only one of six programming formats (country, news/talk, religion, contemporary Christian, Spanish, and oldies). Butson WDT at 7 & App. E, SX Trial Ex. 57.

177. Likewise, in comparison to the over 100 channels offered by each SDARS, terrestrial radio offers, for example, only 44 FM stations in New York City and 49 in Los Angeles, the two largest radio markets in the U.S. Satellite radio, therefore, is able to offer not only mass audience content, but also customized channels that appeal to a particular demographic, such as world music and folk music. In most markets, such channels will effectively be “exclusive” – at least in comparison to terrestrial radio. Also, because the FCC’s indecency regulations do not apply to satellite radio, the SDARS have attracted subscribers with programming that would not be permissible on terrestrial radio. This includes an opportunity to play sound recordings in their original, unedited, form unavailable to broadcast radio. Butson WDT at 7, SX Trial Ex. 57.

178. The channel lineups of the two companies are similar. Both rely heavily on music programming, which is relatively similar between the two services. XM and Sirius also offer a variety of talk radio, sports, and other special interest programming. Butson WDT at 7-8, SX Trial Ex. 57.

179. Radio delivered by satellite has the advantage of being able to serve additional subscribers, nationwide, at no additional transmission cost. Satellite radio has the ability to serve the 110 million households in the U.S., as well as the country’s roughly 140 million cars, 95 million trucks, 23 million small businesses, and 18 million boats, for a total addressable market of nearly 390 million subscribers. Butson WDT at 24 & App. M, SX Trial Ex. 57.

180. The vast majority of auto subscribers are sourced through promotions (*i.e.*, 3 months free from XM and 6-12 months free from Sirius). The SDARS have had great success with these promotional offers - fully 50% of promotional auto subscribers begin paying for the service themselves after the end of the promotional term. Butson WDT at 25, SX Trial Ex. 57.

181. SDARS products are also available in all major electronics stores (Best Buy, Circuit City, RadioShack), a number of large discount stores (Wal-Mart, Target), numerous truck stops (Pilot, Truckstops of America, Petro, and Flying J), and marine locations. Butson WDT at 10, SX Trial Ex. 57.

182. Sirius competes with pre-recorded entertainment such as CD's, traditional AM/FM radio, HD radio, and XM radio. It also faces vigorous competition from subscription and advertising based music services available over the Internet, and over wireless telephones. Technologies like WiMax will make Internet-based services more pervasive, and other improvements will make Internet radio an even more significant competitor in the future. SIR Trial Ex. 47 at 12; Vendetti WRT, Ex. 1, at 10-11, XM Trial Ex. 10 (noting that XM competes with broadcast radio, with downloading devices such as the Apple iPod, with Internet radio, and with services that allow customers to download music over their cell phones).

ii. Sirius

183. Sirius began to invest in its business in 1990. Frear WDT at 6, SIR Trial Ex. 39. It became a public company in 1994. Butson WDT at 4, SX Trial Ex. 57. The FCC granted a 12.5 MHz Digital Audio Radio Service (DARS) licenses in the 2.3 GHz band to Sirius in October 1997. Butson WDT at 4, SX Trial Ex. 57.

184. Sirius launched its satellites in late 1999. Butson WDT at 4, SX Trial Ex. 57. Sirius commenced its service in 2002. By 2003 it had approximately 120,000 subscribers. 6/12/07 Tr. 16:9-12 (Frear).

185. Sirius offers 69 channels of commercial free music; 54 channels of sports, news, talk and entertainment, and 11 channels of traffic and weather. SIR Trial Ex. 47 at 2-3. Sirius is available over satellite radio, and also over the Internet, to certain subscribers over the DISH

satellite television system, and to certain subscribers using the Sprint PCS Network. SIR Trial Ex. 47 at 3.

186. Sirius currently is available as a factory and dealer-installed option in 132 vehicle models, and as a dealer-only installed option in 17 vehicle models. SIR Trial Ex. 47 at 3. Sirius radio is available through more than 25,000 retail locations. SIR Trial Ex. 47 at 3.

187. Sirius designs but does not manufacture Sirius radios. Third-party vendors manufacture in-dash Sirius radios, plug and play Sirius radios that can be used in cars or at the home, Sirius home units that connect to stereo systems, and Sirius portable radios. SIR Trial Ex. 47 at 9.

iii. XM

188. The FCC granted a 12.5 MHz Digital Audio Radio Service (DARS) licenses in the 2.3 GHz band to XM in October 1997. Butson WDT at 4, SX Trial Ex. 57. XM became a public company in 1999. Butson WDT at 4, SX Trial Ex. 57.

189. XM launched its satellites in early 2001, and commenced its service later that same year. Butson WDT at 4.

190. XM offers 69 channels of commercial free music, 5 channels of music with commercials, 37 news, talk and entertainment channels, 38 sports channels, 21 traffic and weather channels, and one emergency alert channel. Vendetti WRT, Ex. 1, at 1.

191. XM has partnerships with General Motors, Honda/Acura, Toyota/Lexus/Scion, Hyundai, Nissan/Infiniti, Porsche, Suzuki and Isuzu and is available in more than 140 different vehicle models for model year 2007. Vendetti WRT, Ex. 1, at 1. XM is also available through Avis, National, Alamo and Zipcar car rentals. *Id.* at 7. XM is available on 90% of GM's 2006 models. Butson WDT at 11, SX Trial Ex. 57.

192. XM offers car stereo, home stereo, plug and play and portable handheld products. Vendetti WRT, Ex. 1, at 1.

193. In addition to satellite radio services, XM offers service over DirectTV, and on the Internet through XM Online, through its relationship with Napster, and through America Online. Vendetti WRT, Ex. 1, at 6-7.

b. SDARS' Business Model: Invest Now and Profit Later

194. The outlook for the satellite radio companies is highly favorable. Because it is a business marked by high fixed costs and low variable costs, each subscriber yields high incremental margins. Once the Services reach a sufficient number of customers, expected within this license period, they will be highly profitable. Herscovici WRT at 7, SX Trial Ex. 130. As Sirius CEO Mel Karmazin explained it, "there's a bunch of years where you have losses before you make any money." 6/6/07 Tr. 325:22-326:2 (Karmazin).

195. For the same reasons, because the companies operate with very low variable costs, with every new subscriber, a significant portion of the revenue each brings in falls to the bottom line of the companies. 6/19/07 Tr. 147:19-21 (Butson). The business model of the industry is, therefore, to focus on rapid subscriber growth, because once the fixed costs are covered, profit generation through incremental subscribers will be substantial. 6/19/07 Tr. 147:3-21 (Butson). This model is typical of various subscription-based businesses, allowing for analogies with industries such as cable TV and mobile wireless. Butson WDT at 12, SX Trial Ex. 57.

196. The financial success of the SDARS therefore hinges on their ability to grow their subscriber bases profitably. Butson WDT at 12; 6/13/07 Tr. 162:15-18 (Musey). The two principal variables that affect the SDARS' ability to become profitable are its ability to attract

subscribers, and its ability to do so at a reasonable cost per gross addition. 6/6/07 Tr. at 24:2-7 (Vendetti).

197. Because the SDARS have very stable fixed costs and high incremental margins (on the order of 70%), they will become increasingly profitable as they grow in size. The result is that the SDARS gain significant operating leverage by virtue of their structure, and EBITDA losses shrink each year. 6/12/07 Tr. 64:9-13, 65:11, 15-16; 94: 3-9 (Frear); SX Trial Ex. 43 at 6; SX Trial Ex. 28 at 5. For example, Sirius's operating results are very clearly scaling. In the first quarter of 2007, its fixed costs increased only 9% while it achieved a 61% growth in revenue. SX Trial Ex. 28 at 5. Similarly, XM anticipates that its capital spending will decline on an annual basis after 2007, while its revenues will continue to grow rapidly. XM Trial Ex. Vendetti Ex. 14. 6/5/07 Tr. at 3340:7-12 (Vendetti).

198. Due to the high investments in their infrastructures, and losses associated with the industry's launch, the SDARS are presently asset-rich, but equity-poor. Both XM and Sirius are now in a "negative equity" position, meaning that their liabilities exceed their assets. This accounting phenomenon is without significance in the financial analysis of the industry, because it does not take into account the value of the subscriber base or future subscriber growth, profitability, and cash flow. Butson WDT at 22, SX Trial Ex. 57.

199. Over time, the SDARS expect long-term EBITDA margins of 40-50%, SX Trial Ex. 41 at 27; 6/12/07 Tr. 60:7-10; 66:1-2 (Frear). *Id.* 66:12-13.

c. The SDARS Are Growing

i. Enormous Growth in Subscribers and Revenue

200. In contrast to the record industry, the satellite radio industry is growing rapidly. Since 2002, XM and Sirius have annual growth rates of 100% and 200% respectively.

Herscovici WRT at 6 & App. H, SX Trial Ex. 130. By the end of 2006, XM and Sirius combined had 14 million subscribers, with a forecast of more than 17 million subscribers by the end of the year. Herscovici WRT at 6 & 14, SX Trial Ex. 130. That makes them one of the fastest growing subscription production in history and also one of the fastest growing audio products in history, in terms of consumer adoption. Herscovici WRT at 6, SX Trial Ex. 130; 6/19/07 Tr. 145:15-17 (Butson).

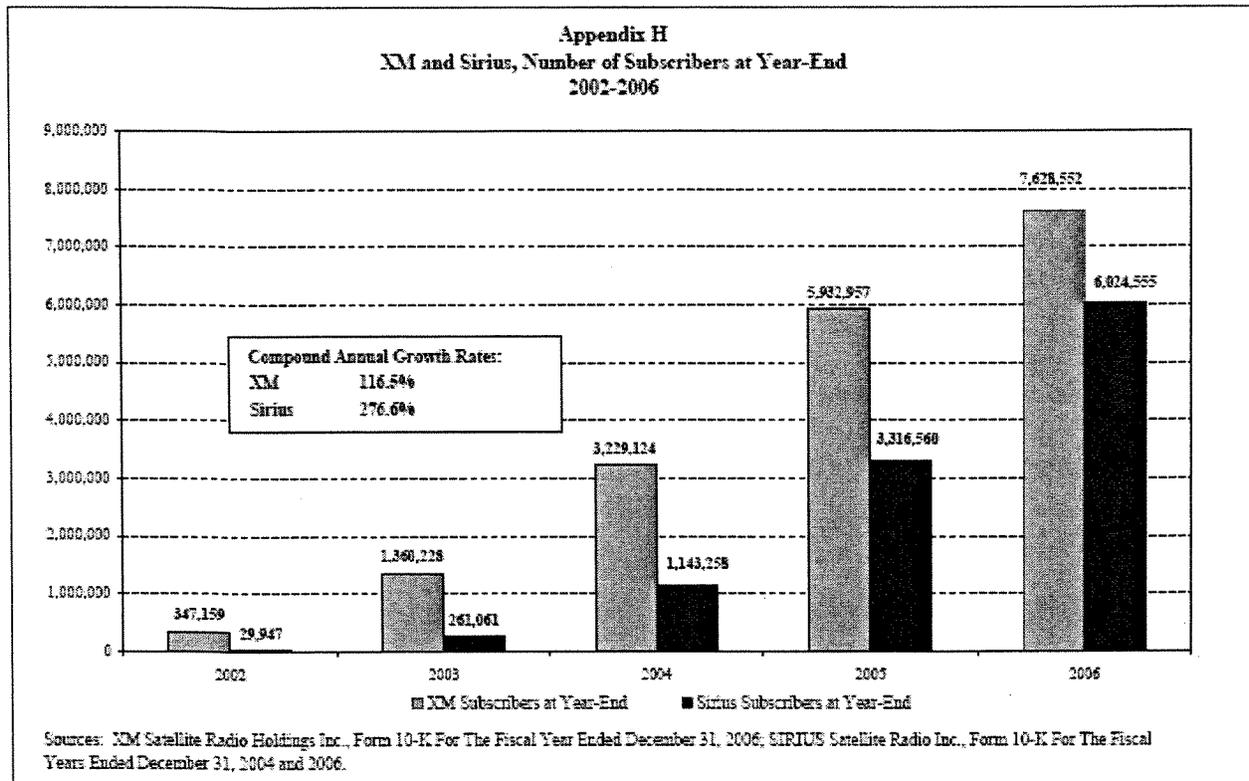
201. Satellite radio is now a multi-billion dollar industry. XM and Sirius's revenues have grown even faster than their subscribers because, in addition to subscriber growth, they are increasing their revenue per subscriber. Herscovici WRT at 6 & App. I, SX Trial Ex. 130. The increase in subscribers leads both to growth in subscription fees and to increases in advertising revenues as advertisers desire access to a larger and more valuable audience. Herscovici WRT at 6, SX Trial Ex. 130.

202. The SDARS suggest that they are struggling companies that cannot afford to pay the rate proposed by Sound Exchange. The record does not support this suggestion. *Infra* __.

203. To the contrary, the SDARS have been an incredible success compared to many of the other new digital media services that have developed over the past several years. 6/18/07 Tr. 111:11-112:6 (Eisenberg). Since their launch, they have acquired over 14 million subscribers, compared to the two million that services such as Napster or Yahoo!Music, and they have earned approximately \$1.5 billion in revenue in 2006, as compared to the other digital services which earned approximately \$200 million. 6/18/07 Tr. 111:11-112:6 (Eisenberg).

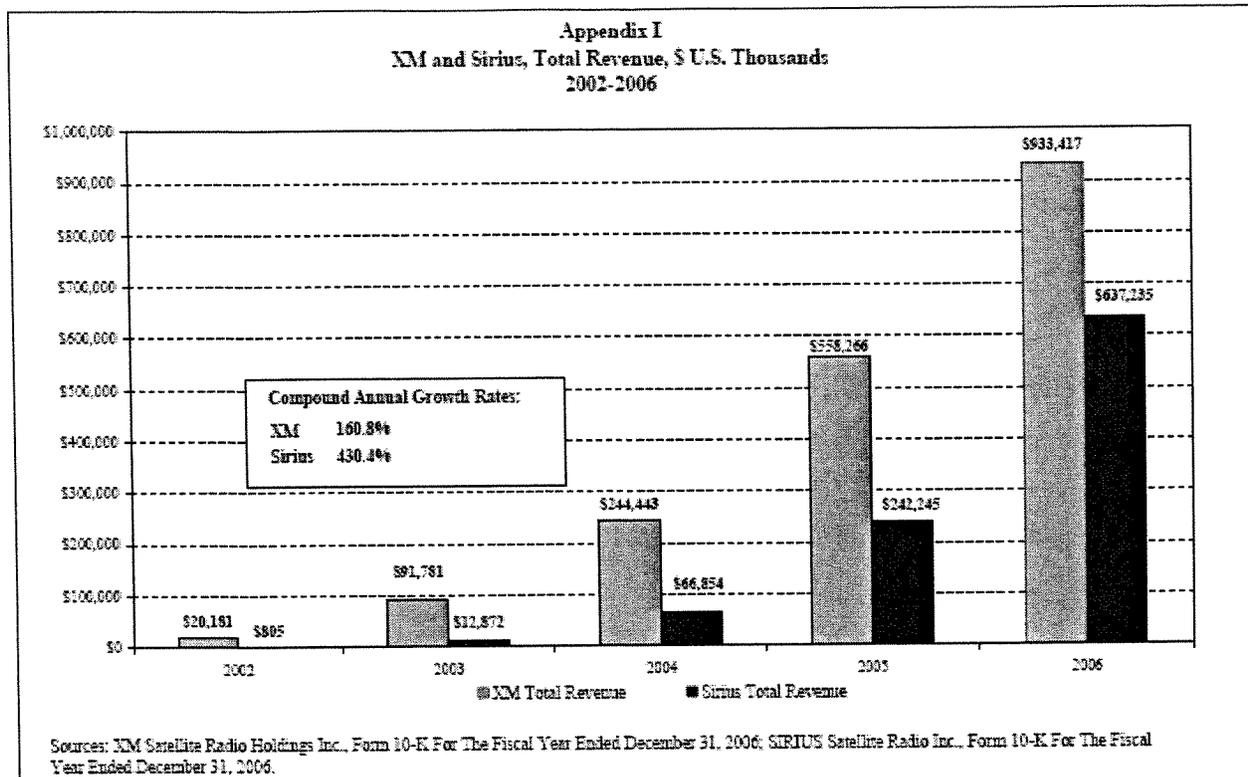
ii. Sirius

204. Sirius's subscribers increased from 1.1 million at year end 2004 to 3.3 million at year end 2005 to 6.0 million at year end 2006. SIR Trial Ex. 47 at 27. Sirius currently has approximately 6.6 million subscribers. SX Trial Ex. 28 at 2; SIR Trial Ex. 57 at 24.



Hercovici WRT at App. H, SX Trial Ex. 130.

205. Sirius also has experienced extraordinary revenue growth. Sirius's annual revenue has grown on an annual basis to \$.8 million in 2002, \$12.9 million in 2003, \$66.9 million in 2004, \$242.2 million in 2005, and \$637.2 million in 2006. SIR Trial Ex. 47 at 26. It expects to reach \$1 billion in revenue in 2007. 6/12/07 Tr. 100:3-5. Sirius will achieve \$1 billion in revenue faster than any company in the history of radio. SX Trial Ex. 74 at 2.



Herscovici WRT at App. I, SX Trial Ex. 130.

206. The vast majority of Sirius's revenue comes from subscription fees, although advertising revenues are also increasing. Sirius's advertising revenue increased from \$0.9 million in 2004, to \$6.1 million in 2005, to \$31 million in 2006. SIR Trial Ex. 47 at 33. While advertising revenue was down in the first quarter of 2007 as compared to the first quarter of 2006, this was related to factors specific to that quarter and not generally applicable. 8/15/07 Tr. 95:11-18 (Frear).

As Sirius has explained, its operating results are scaling. Contribution margin (revenue less customer service and billing, revenue sharing, royalties and cost of equipment) exceeds 70% of revenue. SX Trial Ex. 74 at 4. Thus, the SDARS business model of high fixed costs and high incremental margins is working – as its customer base grows, its profitability increases. SX Trial Ex. 74 at 2.

iii. XM

207. XM is one of the fastest growing consumer products in history, having reached five million subscribers faster than new technologies such as cable television, Internet, cell phones, and MP3 players. Vendetti WRT, Ex. 1, at 1.

208. XM grew from 3.2 million subscribers in 2004 to 5.9 million subscribers in 2005 to 7.6 million subscribers in 2006. Vendetti WRT, Ex. 1, at 37. This represents an increase of 29% from 2005 to 2006. *Id.* at 35.

209. XM had 7.9 million subscribers at the end of the first quarter of 2007, up from 6.5 million subscribers at the end of the first quarter of 2006. Vendetti WRT, Ex. 2, at 31. XM's total revenue grew from \$244 million in 2004, to \$558 million in 2005 to \$933 million in 2006. This represents an increase of 67% from 2005, and a 128% increase from 2004. Vendetti WRT, Ex. 1, at 38.

d. The SDARS Are Improving Dramatically on All Relevant Financial Metrics.

i. ARPU

210. The SDARS generate the vast majority of their revenue from subscription fees, making the subscription price and the number of subscribers to the service the primary drivers of revenue. While the satellite radio providers also generate revenue from activation fees, direct equipment sales, and advertising, these amounts are currently fairly small. Butson WDT at 11-12, 15, SX Trial Ex. 57.

211. ARPU (average revenue per user) is the weighted amount of revenue realized per subscriber per month from all the different subscription plans. The advertised monthly subscription rate of the satellite radio providers is \$12.95, but both SDARS offer various discounts, rebates, and promotions. For example, XM and Sirius both offer a 1-year subscription

for \$142.45, which effectively provides 1 month of service free and reduces the ARPU for certain subscribers to \$11.87. Other adjustments to ARPU result from various other special and promotional offers. 6/19/07 Tr. 165:15-166:17 (Butson). Mr. Butson calculated the average 2006 ARPU for both SDARS to be \$11.34, which includes subscription, activation, advertising, equipment, and other revenue, Butson WDT at 16, SX Trial Ex. 57, and in his models he separately breaks out and calculates subscription and total ARPU. 6/19/07 Tr. 166:7-17 (Butson).

212. Although advertising is not currently a primary source of revenue for the SDARS (it accounted for about 5% of total revenue in 2Q06), it could account for 10% of total revenue in the long term. As a reference point, Comcast generates about 10% of its cable television revenues from advertising even though it does not receive ad revenue from its broadcast channels (NBC, CBS, ABC, FOX, and CW). Advertising is attractive because it provides a high margin revenue source, resulting in a disproportionate benefit at the margin level compared to subscriber income. Butson WDT at 16-17, SX Trial Ex. 57.

213. Activation fees represent one-time revenue opportunities when subscribers sign up for service. Sirius and XM both charge \$15 for activation of each radio (\$10 online), and these fees are amortized over the life of the average subscriber (42 months for Sirius and 40 months for XM). While a small percentage of overall revenues, activation revenues are a stable and high margin source of income for the SDARS. Butson WDT at 17, SX Trial Ex. 57.

214. For both XM and Sirius, revenue solely from subscriptions has also been increasing over time as fewer discounts are required to encourage users to sign up. XM's average monthly subscription revenue per customer increased from \$8.68 in 2004 to \$9.51 in 2005 to \$10.09 in 2006 to \$10.15 in the first quarter of 2007. Vendetti WRT, Ex. 1, at 37;

Herscovici WRT at App. Q, SX Trial Ex. 130; Vendetti WRT, Ex. 2, at 31. Sirius's average monthly subscription revenue per customer increased from \$9.39 in 2002 to \$10.02 in 2004 to \$10.06 in 2005 to \$10.44 in 2006. Herscovici WRT at App. Q, SX Trial Ex. 130.

ii. Cost Structure

215. The financial reporting of the SDARS do not break out the costs of the companies clearly between variable and fixed costs, and XM and Sirius classify and combine costs differently, which complicates the task of analyzing the reported financials and projecting their future financial performance. Butson WDT at 17, SX Trial Ex. 57.

216. Variable Costs. The principal variable costs of the SDARS include subscriber acquisition costs (dubbed "subsides and distribution" at XM), customer service and billing, revenue share, and royalties. Butson WDT at 18, SX Trial Ex. 57.

217. The largest variable cost item is subscriber acquisitions costs (SAC). During 2006, SAC expenses likely will account for 60% of total industry variable costs. SAC includes the various subsidies involved in manufacturing and selling satellite radios. In particular, the subsidies that are accounted for in the subscriber acquisition cost line include the cost of the chipset, the cost of the radio, the cost to install radios in automobiles, hardware-related promotions, and retailer commissions. While SAC will always remain a substantial variable cost item, as the industry matures, with the number of new subscribers becoming a lesser percentage of total subscribers, this cost item will decline as a percentage of revenue. Butson WDT at 18, SX Trial Ex. 57.

218. The SDARS each closely track and report the SAC costs, which have declined significantly over time and are expected to continue to do so. XM's SAC costs declined from \$116 in 2002 to \$75 in 2003 to \$62 in 2004 to \$64 to \$64 in 2006. Sirius's SAC costs have been

higher, but continue to decline more steeply from \$668 in 2002 to \$293 in 2003 to \$177 in 2004 to \$139 in 2005 to \$114 in 2006. Herscovici WRT at App. O, SX Trial Ex. 130.

219. The combination of falling costs to acquire subscribers and increased revenue per subscriber means that XM and Sirius will be able to capitalize on the expenditures they have made to date. Currently, on average, a new subscriber pays for itself and contributes to gross margin in about a year. Herscovici WRT at 35, SX Trial Ex. 130.

220. Customer service and billing is the second largest variable cost, and likely accounted for approximately 14% of total industry variable costs in 2006. This line represents the cost to service customer phone calls, Internet requests, billing, and information technology for front office applications. It is often quoted as a per subscriber per month figure (XM reported \$1.30, and Sirius reported \$1.05, in customer service and billing in 2Q06). Total customer service and billing costs typically grow with the number of subscribers and, therefore, the amount of revenue, but there are some economies of scale that result in a decline as a percentage of sales over time. Butson WDT at 18-19, SX Trial Ex. 57.

221. Semi-Variable Costs. Advertising and marketing expenses are semi-variable costs. Marketing is a discretionary cost, so it is not properly considered a fixed cost. At the same time, while many variable costs are incurred simultaneously with revenue recognition, discretionary marketing expenses are usually incurred in advance of revenue and the amount does not always correspond to revenues, as is the case with pure variable costs. These costs thus share some of the characteristics of fixed costs and some of variable costs. While marketing expenses will grow faster than fixed expenses (which over time should follow inflation), they should decline as a percentage of revenue as the industry grows. Butson WDT at 19-20, SX Trial Ex. 57.

222. Fixed Costs. The key fixed cost items for the SDARS are programming and content; satellite and terrestrial transmission; engineering, design, research and development; and general and administrative expenses. Programming and content accounts for the largest portion of fixed costs (estimated to be close to half of fixed costs in 2006) and primarily represents the cost of non-music related content made available to subscribers. Butson WDT at 20, SX Trial Ex. 57.

223. Satellite and terrestrial transmission costs relate to the operation (but not the upfront cost) of the satellite infrastructure and the network of terrestrial repeaters needed to ensure signal coverage. These costs account for roughly 18% of total industry fixed costs. The various categories of engineering and development costs, expended to maintain and improve the service and devices from a technical standpoint, are about 12% of fixed costs, with general and administrative costs, the in-house marketing staff, and various miscellaneous items accounting for the rest. As fixed costs, they necessarily decline as a percentage of revenue as revenue increased. Butson WDT at 20, SX Trial Ex. 57.

iii. Cash flow / EBITDA

224. Among the financial measures used to evaluate the SDARS are “free cash flow” and “EBIDTA.”

225. Free cash flow is an estimation of the actual cash going in and out of a company. It is an important metric because it indicates whether the company has enough capital to be able to continue as a going concern, and is also important in valuing the company. 6/19/07 Tr. 176:9-177:14 (Butson). For companies that are investing, however, one expects that they will be cash flow negative as they build their businesses, eventually turning positive and then increasingly so. That is certainly the trajectory that the SDARS are on. Butson WRT at 14-16, SX Trial Ex. 123.

226. [REDACTED]

[REDACTED]. 6/12/07 Tr. 82:15-22 (Frear); SX Trial Ex. 43 at 6, 28. [REDACTED]

[REDACTED] 6/12/07 Tr. 92:19-93:15 (Frear). [REDACTED]

[REDACTED] SX Trial Ex. 77 at 16.

227. EBITDA (earnings before interest, taxes, depreciation and amortization) is used to determine the operating cash flow of companies in the investment and financial communities. It measures how the company is performing on an operational basis, and excludes the items relating to the cost of debt, taxes, and the on-going noncash annual accrual expense and depreciation associated with capital expenditures. 6/19/07 Tr. 173:4-15 (Butson).

228. As with free cash flow, one would expect a company that was investing in building its business to have a negative EBIDTA, but that EBIDTA would turn positive and increasingly so once the company had built a sufficient customer base. Once again, this is the trajectory that each of the SDARS are on, with positive EBIDTA expected within this license period under any scenario. Butson WRT at 14-16, SX Trial Ex. 123.

229. Because the companies are continuing to invest in growth, their free cash flow numbers and EBIDTA numbers do not fully reflect the strength of their businesses and potential profitability. The SDARS' themselves tout "pre-SAC EBIDTA" or "pre-marketing EBIDTA" which is EBITDA excluding subscriber acquisition costs ("SAC") as a useful measure of the progress of the SDARS business, since under accounting requirements subscriber acquisition costs must be expensed when they are incurred, but new subscribers benefit the business throughout their expected lives. Excluding these costs therefore give a good sense of how the

businesses' costs and revenues relate to each other at a given moment in time. 6/12/07 Tr. 96:3-14 (Frear). XM's CFO has explained that pre-marketing EBIDTA is "a key indicator of our ability to generate positive cash and self-sustainability." Herscovici WRT at 36, SX Trial Ex. 130.

230. Pre-marketing EBIDTA thus measures the success of the business if it were to cease seeking new customers and only seeking to service existing customers. 8/29/07 Tr. 222:13-223:20 (Herscovici). Using pre-marketing EBIDTA as a measure, i.e., removing the investments the Services are making to get new customers, they would actually be EBIDTA-positive today. Both XM and Sirius are pre-marketing EBIDTA-positive in 2006 – \$253 million for XM and \$129 million for Sirius. Herscovici WRT at 36, SX Trial Ex. 130.

231. Sirius was pre-SAC EBITDA positive for the second quarter of 2007, SX Trial Ex. 74 at 4, and expects to be pre-SAC EBITDA positive for the entire year in 2007. 6/12/07 Tr. 96:20 (Frear); SX Trial Ex. 43 at 6, 23.

232. Sirius is currently "fully funded," which means that it has sufficient cash on its balance sheet, or access to sufficient credit, to meet all of the cash requirements of its existing business plan. 6/12/07 Tr. 139:9-14 (Frear).

233. XM expects to be fully funded on a going forward basis and will not need to add additional liquidity to continue operations. Vendetti WRT, Ex. 1, at 52, XM Trial Ex. 10; Vendetti WRT, Ex. 2, at 44, XM Trial Ex. 10.

iv. Deals with Car Manufacturers to Ensure Future Subscribers

234. The potential target market for the SDARS is enormous. There are 16-17 million new cars and truck sold each year, and the SDARS also serve shopping malls, office buildings, restaurants and retail storefronts, resulting in an addressable market which is three and one-half

the size of the cable or satellite TV market. SX Trial Ex. 41 at 7. XM believes that its target market includes more than 240 million registered vehicles, including the 16.5 million new cars sold each year, as well as over 110 million households. Vendetti WRT, Ex. 1, at 1, XM Trial Ex. 10.

235. The SDARS are well positioned for the growth that they require, because there are significant barriers to entry for additional competitors, and because of their broad OEM and retail distribution. SX Trial Ex. 41 at 6; 6/12/07 Tr. 59:8-11 (Frear) (Sirius).

236. The SDARS' agreements with automobile manufacturers are an important part of their future because they help XM and Sirius get in front of customers at moment when the consumer may consider subscribing to satellite radio. Within the next 5 years, about two-thirds of all new cars and trucks will come with an XM or Sirius radio pre-installed. Butson WDT at 11, SX Trial Ex. 57.

237. Sirius's automobile partners put Sirius radios in an increasing number of their new cars. In 2005 10% of the manufacturers cars included Sirius radios, in '06 that number rose to 23%, and in '07 Sirius expects 34% OEM penetration. This data is significant because it shows a growing comfort by Sirius's automobile partners with the value associated with Sirius, SX Trial Ex. 44 at SIR 47050; 6/12/07 Tr. 131:1-10 (Frear); SX Trial Ex. 28 at 2, and reflects that Sirius is becoming a key marketing influencer to the vehicle buyer. SX Trial Ex. 28 at 3.

238. Moreover, Lincoln, Mitsubishi, Audi, Land Rover and MINI will make Sirius standard in additional models in the future, and Mercedes will install Sirius in 80% of its models in 2007 and 90% in 2008. SX Trial Ex. 28 at 2. Chrysler recently announced Sirius will be installed in more than 70% of its production for model year 2008. SX Trial Ex. 74 at 3.

239. Much of the growth of the SDARS will be associated with auto sales. Autos produced for sale in the United States will increase from approximately 17 million cars and trucks in 2005 to about 20 million in 2020, equating to a 1% compound annual growth rate. Both auto line availability and the installation rate for satellite radio likely will hit 90%-100% over this period of time, as many OEMs make satellite radio standard equipment. At the same time, the conversion rate likely will fall from the current 55% level to the high 40s as satellite radio is built into lower priced autos. These factors result in an expectation of auto satellite radio subscribers increasing from about 4.2M in 2Q06 to approximately 36 million in 2020, or a 13% penetration of the 270 million autos expected in the U.S. at that time. Butson WDT at 25-26 & App. N, SX Trial Ex. 57.

v. Prolific Spending on Non-music Content

240. Among the SDARS' investments in content are hundreds of millions of dollars spent on non-music content, discussed in much more detail below. At the same time that the SDARS claim that they cannot afford significant fees for sound recordings, they have spent prolifically on other types of content. The chart below provides an overview of just some of the SDARS' investment in non-music programming:

phenomenon was largely due to weakness in the retail channel, whereas the automobile channel continues to perform very well. However, the auto market will be key to the success of the SDARS, and all indications are that this channel is continuing its strong growth. Butson WRT at 5, SX Trial Ex. 123.

242. Although subscriber growth was below initial projections in the fourth quarter of 2006, Sirius's 2006 revenue and EBITDA came in better than expected in terms of the analysts consensus and the companies' guidance. Butson WRT at 5, SX Trial Ex. 123.

243. Sirius achieved positive free cash flow for the first time in the fourth quarter of 2006, four years after adding its first subscriber. SIR Trial Ex. 47 at 27.

244. 2006 was the first year since at least 2002 in which XM's operating losses declined. Vendetti WRT, Ex. 1, at 32, XM Trial Ex. 10.

245. The principal differences between the evidence relating to the financial situation of the SDARS in October 2006 and the evidence in August 2007 is that the SDARS' retail sales were weaker than the SDARS and the analysts expected in the fourth quarter of 2006. Other financial results were as the analysts (including Mr. Butson) had predicted. The first and second quarter 2007 results also were essentially as the analysts had predicted they would be. 8/27/07 Tr. at 271:4-272:20 (Butson).

246. The difference relating to retail sales between the SDARS and the analysts' short term projections in October 2006, and the actual results of the fourth quarter of 2006, was not normal. It is more common that the SDARS perform as their short-term guidance predicts, as occurred in the first and second quarter of 2007. But such divergence does occur from time to time. 8/27/07 Tr. 288:10-22 (Butson).

vii. Strong 2007 Numbers

247. Whatever the shortfall in subscriber growth in the fourth quarter of 2006, both XM and Sirius have shown strong growth in 2007 and each has met expectations.

a) Sirius

248. Sirius's public guidance for the 2007 year, reiterated after the first quarter 2007 results were made public, was for revenue approaching \$1 billion, subscribers over 8 million, average monthly churn of 2.2-2.4%, and SAC per gross add of approximately \$95. 6/12/07 Tr. 136:19-137:9 (Frear).

249. Sirius had a successful first quarter of 2007. It was believe to be true in transcript to reiterate all of the guidance it issued at the end of the fourth quarter 2006. 6/12/07 Tr. 136:6-12 (Frear). Sirius's first quarter 2006 revenue was approximately \$127 million. Its first quarter 2007 revenue was approximately \$204 million. SIR Trial Ex. 57 at 1. Sirius's net losses improved from the first quarter 2006 to the first quarter 2007 by 68%. SX Trial Ex. 28 at 2.

250. Sirius attracted 556,000 net new customers in the first quarter of 2007, [REDACTED], and 988,000 new customers on a gross basis. SX Trial Ex. 44 at SIR47050; 6/12/07 Tr. 129:22-130:6 (Frear); SX Trial Ex. 28 at 2, 3.

251. All of Sirius's key financial metrics improved in the second quarter of 2007: SAC per gross add, customer service and billing cost per sub, contribution margin, fixed costs as a percentage of revenue, and free cash flow. SX Trial Ex. 74 at 3.

252. In the second quarter of 2007, Sirius reported healthy subscriber growth of approximately 561,000 net additions, topping its first quarter results and leading to a 53% increase in its ending subscriber base from the end of the second quarter of 2006. SX Trial Ex. 74 at 1. That result was well above consensus estimates. SX Trial Ex. 74 at 3.

253. At the end of the second quarter of 2007, Sirius had 7.14 million subscribers, reflecting an addition of 1.1 million new subscribers in 2007. Sirius is on target to meet its goal of more than 8 million subscribers by the end of 2007. SX Trial Ex. 74 at 1.

254. Sirius achieved more than \$226 million in revenue in the second quarter of 2007, and over \$430 million in the first six months of the year. SX Trial Ex. 74 at 2. While Sirius's second quarter 2007 revenue grew at 51% compared to 2006, its total operating costs grew only 6% over the same period, leading to a decrease of 44% in net losses. SX Trial Ex. 74 at 2. During the first six months of 2007, Sirius's OEM growth was stronger than expected, and represents over 70% of year to date subscriber growth. SX Trial Ex. 74 at 2.

255. In the second quarter of 2007, Sirius's free cash flow improved by over \$53 million year to year. As CFO David Frear told investors: "we promised you cost-effective growth and we have delivered on that promise, but we have done so while continuing to make investments in the business." SX Trial Ex. 74 at 4.

256. Sirius also offers public guidance that it will attract over 8 million subscribers by year end 2007, an average monthly churn of approximately 2.2-2.4%, and SAC per gross add to approach \$100. SX Trial Ex. 74 at 4; SX Trial Ex. 28 at SIR00046002; 6/7/07 Tr. 17:1-20:17 (Karmazin). Sirius's public guidance is that it expects to generate approximately \$1 billion in revenue in 2007. It is on target to meet that projection and will achieve \$1 billion in revenue faster than any company in the history of radio. SX Trial Ex. 74 at 2.

b) XM

257. XM's total revenue grew to \$264 million in the first quarter of 2007, up from \$208 million revenue at the end of the first quarter of 2006. Vendetti WRT, Ex. 2, at 31, XM Trial Ex. 10.

258. XM's operating losses for the first quarter of 2007 as compared to the first quarter of 2006 declined from \$101 million to \$88 million. Vendetti WRT, Ex. 2, at 3, XM Trial Ex. 10. XM's adjusted operating losses decreased from \$49 million in the first quarter of 2006 to \$27 million in the first quarter of 2007. Vendetti WRT, Ex. 2, at 31, XM Trial Ex. 10.

259. "Adjusted EBITDA" is a measure of net loss before interest income, interest expense, income taxes, depreciation and amortization, excluding losses from de-leveraging transactions, loss from impairment of investment, and certain other losses. XM believes adjusted EBITDA is a useful measure of its operating performance, and it is used by XM management for that purpose. Vendetti WRT, Ex. 1, at 49, XM Trial Ex. 10. XM's adjusted EBITDA loss decreased from \$404 million in 2005 to \$166 million in 2006. Vendetti WRT, Ex. 1, at 36, 39, XM Trial Ex. 10.

260. XM projects that it will have between 9.0 and 9.2 million subscribers by the end of 2007, 6/5/07 Tr. at 314:3-5 (Vendetti); Vendetti WRT at 5, XM Trial Ex. 10, growing to the "high teens" by 2010. 6/6/07 Tr. at 24:15-21 (Vendetti); Vendetti WRT, Ex. 3 at 6, XM Trial Ex. 10. XM's public guidance is that it expects to generate approximately \$1 billion in revenue in 2007. Butson WRT App. B, SX Trial Ex. 123.

261. Through the second quarter of 2007, XM is on track to meet these subscriber estimates, even though it has not achieved as many "after market" sales as it has previously anticipated. Vendetti WRT at 6, XM Trial Ex. 10. It is staying close to its plan for fiscal year 2007, even if it is getting there differently than anticipated. 8/15/07 Tr. at 56:6-16 (Vendetti).

e. The SDARS' Future Prospects Are Strong

262. All indications are that the satellite radio companies will be increasingly profitable over time. 8/29/07 Tr. 221:11-222:12 (Herscovici).

263. Analysts project that Sirius will have over \$1 billion in cash flow from operations by 2012. Sirius has projected that it will reach \$1 billion in free cash flow two years earlier – by 2010. Herscovici WRT at 7 n.11, SX Trial Ex. 130. XM projects it will have almost \$1 billion in pre-marketing cash flow by 2010. Herscovici WRT at 7 n.11, SX Trial Ex. 130.

264. According to CEO Mel Karmazin, Sirius's second quarter 2007 financial and operating results were "once again very solid and continue to demonstrate strong customer demand for our service, as well as excellent execution by our team." SX Trial Ex. 74 at 1. Mr. Karmazin continues, "demand for Sirius continues to be strong, our financial performance is on track, and we are executing very well on our business plan." *Id.* at 2.

265. In May 2007, when asked to comment on previous longer term public company guidance that Sirius would have \$3 billion of revenue and \$1 billion of free cash flow by 2010, Mel Karmazin stated that his "viewpoint is that nothing has changed in my outlook on how I see the Company longer term." SX Trial Ex. 28 at 9.

266. Karmazin is hopeful about Sirius's future, testifying that when he joined the company, he "saw a path based on where the company was going that the company would be a profitable company, and maybe be a very profitable company somewhere down the line." 6/6/07 Tr. 325:18-21 (Karmazin).

267. In May 2007, Sirius reported that demand for Sirius continues to be strong, its financial performance on track, and its business plan is being executed successfully. SX Trial Ex. 28 at 2.

268. Analysts covering XM on whom XM relies agree that XM's subscribers will grow to over 9 million in 2007, and predict that XM's subscriber base will increase to over 17 million in 2012. Vendetti WRT at 10, XM Trial Ex. 10; Vendetti WRT at Ex 3 at Performance vs.

Guidance and Consensus Average Section 1, XM Trial Ex. 10. Analysts covering XM on whom XM relies predict that XM's total revenue will grow to over \$2 billion in 2010, and to over \$2 1/2 billion in 2012. Vendetti WRT at 10, XM Trial Ex. 10.

269. On every measure – net income, cash flow, EBIDTA – the projections by analysts are that the Services will be highly profitable in the near future and increasingly profitable over time. 8/29/07 Tr. 223:21-224:13 (Herscovici). This does not change if SoundExchange's rate proposal is adopted. Herscovici WRT at 41, SX Trial Ex. 130.

270. As the license period continues, the satellite radio industry will begin to rival the record industry in size. By 2010, XM and Sirius are projected to have revenues of over \$5 billion, which is nearly half the annual revenue of the entire U.S. recorded music industry today – which is in the midst of a prolonged decline. Herscovici WRT at 6-7, SX Trial Ex. 130; 8/29/07 Tr. 220:13-221:10 (Herscovici).

III. THE § 801(B) STANDARD

A. Introduction

271. This section addresses the theoretical underpinnings of SoundExchange's interpretation of the four statutory factors, as well as the process that this Court should undertake in setting a rate consistent with Congress' command in 17 U.S.C. § 801(b). Section VI, *infra*, provides further refinements of the underlying economics and discusses application of the statutory factors to the record evidence.

272. The Court is required to set a rate that implements the four statutory criteria set out in 17 U.S.C. § 801(b). Both the economist testimony in this proceeding from SoundExchange and from the SDARS, and the courts and adjudicators that have applied § 801(b) in the past agree that best way to set rates under § 801(b) is to begin with an examination

of comparable rates that are the result of arms-length transactions, and then consider and possibly adjust in those rates in light of the § 801(b) statutory standards. Point B, *infra*.

273. As discussed in more detail in SoundExchange's Proposed Conclusions of Law, prior tribunals have found that starting with marketplace rates is the best way to implement the objectives of § 801(b). It makes sense to start with marketplace rates, because it is simply not possible to derive a rate simply by looking at the statutory factors in the abstract and considering, for example, the record evidence concerning the parties' respective technological contributions. In considering where, then, to start, the expert economist retained by SoundExchange, Dr. Janusz Ordoover, has demonstrated that the first three factors in particular point to outcomes that are typically achieved through market allocation of resources. Dr. Herscovici reviewed the statutory factors and the record evidence in detail to reach the same conclusion. *See* Section VI *infra*.

274. Thus, the most appropriate course for the Court to take here is to review market benchmarks, and then make any adjustments necessary under the fourth statutory factor concerning disruption. Point C, *infra*. This view is shared by SDARS witness Dr. Benston, who agrees that marketplace evidence is relevant to determining a rate under § 801(b). 8/20/07 Tr. 189:22-190:4 (Benston). For example, he testified, with respect to § 801(b)(1)(B) that, "[i]n terms of fairness, and how does one define 'fairness,' and economists, as Dr. Ordoover said, would define fairness in terms of market transactions. So in that sense, its relevant." 8/20/07 Tr. 192:12-19 (Benston).

275. A more focused consideration of each of the four statutory factors reinforces this conclusion. Thus, the first factor requiring the Court to maximize the availability of creative works to the public requires principally that the record companies and artists receive sufficient compensation to incent the creation and dissemination of new works. Congress enacted the

Copyright Act to further just this goal, so that markets in which artists and record companies with their legal copyrights negotiate with services over license terms will yield rates that most faithfully implement this statutory factor. Point D (1), *infra*.

276. The second statutory factor requires fairness to both parties. Prior adjudications under this factor too have found that “proposed marketplace benchmarks” best address this factor. *See, e.g., Phonorecords*, 46 Fed. Reg at 10479. Point D (2), *infra*.

277. The third statutory factor considers the relative roles of the copyright owner and the copyright user with respect to their relative creative and technological contributions, cost, risk, and contribution to the opening of new markets for creative expression. Both sides’ economic experts agree that the public policy goals of this objective too are best attained by setting the license fee in a manner that reflects the level of the fees that would be set in the market, since markets properly reward and take account of capital investment, the costs and risks involved in deploying the facilities and infrastructure necessary to produce a good or service, and each of the other considerations listed in this factor. This Court too has previously concluded that very similar statutory terms that applied under the “willing buyer/willing seller” standard need not be separately addressed: “[b]ecause we adopt a benchmark approach to determining the rates, we agree with *Webcaster I* that [these] considerations ‘would have already been factored into the negotiated price’ in the benchmark agreements.” *Webcasting II*, 72 Fed. Reg. at 24092. In light of this, the Court determined that these factors are “implicitly accounted for in the rates that result from negotiations between the parties in the benchmark marketplace.” *Id.* at 24095. Here too, then, market rates are the best indication of rates that satisfy the third statutory criteria. Point D (3), *infra*.

278. Finally, the fourth statutory objective calls for the Court to set a rate that minimizes any disruptive impact on the structure of the industries involved and on generally prevailing industry practices. Of all of the statutory factors, the fourth factor is the one that is least likely to be reflected in rates set through the operation of market dynamics. 6/21/07 Tr. at 122:14-19 (Ordovery). The courts agree that this is the one statutory objective that “marketplace evidence, standing alone, does not address.” *Amusement & Music Operators*, 676 F.2d at 1157. Dr. Ordovery therefore understands this fourth factor to promote a policy of setting a rate that minimizes disruption by phasing in rates resulting from changes in regulatory policy. Courts have reached the same conclusion, finding that a “phasing-in approach to fee increases” “adequately reflect[s]’ concern for the impact of the change on all parties involved” under the fourth statutory factor.” *Amusement and Music Operators*, 676 F.2d at 1149. *See also Juke Box Decision*, 46 Fed. Reg. at 889; PES I CARP, Slip Op. at ¶ 186. On the other hand, the fourth objective is not intended to be used as a lever to maintain the SDARS’ current margins on the theory that any change in margins would be disruptive to industry operations, or to guarantee the profitability of an inefficient distribution technology which otherwise might not survive on its own in competition with alternative channels of music distribution. Indeed, on this last point both Dr. Herscovici and Dr. Noll agree – a rate can only be disruptive if it threatens the long-term viability of the SDARS or the record companies and recording artists. Point D (4), *infra*.

B. The Court Should Follow All Parties’ Approach and Begin With Market Rates Because There is No Other Place To Start, and Because Market Outcomes In This Case Would Best Satisfy the First Three Statutory Factors.

279. The economist testimony in this proceeding – from both SoundExchange’s economists and from Dr. Woodbury – is that the best way to set rates under § 801(b) is to begin with an examination of comparable rates that are the result of arms-length transactions, and then

to consider and possibly adjust in those rates in light of the § 801(b) statutory standards. *See, e.g.,* Ordover WDT at 21-22, SX Trial Ex. 61; Pelcovits WDT at 5, SX Trial Ex. 68; Woodbury WDT at 3, XM Trial Ex. 8. In so concluding, the economists' preferred approach mirrors the approach taken by prior adjudicators under § 801(b). *See Amusement & Music Operators*, 676 F.2d at 1148 (approving tribunal's decision under § 801(b) to "rely[] primarily on marketplace analogies" designed to determine "fees charged for comparable rights in a regime of competition"); *Phonorecords*, 46 Fed. Reg. 10466 at 10479 ("statutory rate should work to ensure the full play of market forces, while affording individual copyright owners a reasonable rate of return for their creative works"); *Juke Box Decision*, 46 Fed. Reg. at 889; *PES I*, 63 Fed. Reg. at 25399 (once the Court has established the appropriate benchmark rates or range or rates from which to set a reasonable royalty, it must then "evaluate" that rate to ensure that it achieves the statutory objectives set forth in § 801(b)(1)).

280. The SDARS accuse SoundExchange of ignoring the four statutory factors. In truth, other than Dr. Woodbury's recent attempt to contradict the testimony he gave in the *PSS I* proceeding, the economists are in agreement about how to proceed: start with a rate or rates observed in the marketplace, and then evaluate those rates to assure they best achieve the statutory objectives. That is Dr. Pelcovits opinion, 7/09/07 Tr. 51:4-51:15 (Pelcovits), Dr. Ordover's opinion, Ordover WDT at 21-22 SX Trial Ex. 61, and Dr. Herscovici's opinion, Herscovici WRT at 13, SX Trial Ex. 130, and has been Dr. Woodbury's opinion as well. Even under Dr. Woodbury's new view of the world, he agrees that "in these kinds of rate-setting proceedings, the identification of useful benchmarks provides a sound starting point for determining the appropriate payment between the parties for the sound recording performance right in accordance with § 801(b) of the Act. I, like other economists, would regard rates

negotiated at arms-length as a promising start to developing the rate in question.” Woodbury WDT at 3, XM Trial Ex. 8.

281. There are two reasons to proceed by starting with market rates. First, there is no better place to start. The statutory factors, in isolation, do not point to any specific rate. The SDARS propose a rate of approximately 1%, SoundExchange proposes a rate starting at 8% and rising to 17%. Nothing in the words of the four factors could lead the Court to accept one rate over the other without reference to some real-world evidence, and the most directly relevant evidence is rates in closely analogous settings. The *only* practical way to evaluate the parties’ respective rate proposals is to compare them first to rates observed in the marketplace, which is precisely the case law suggests.

282. Second, the first three factors in particular point to outcomes that are typically achieved through market allocation of resources. Ordover WDT at 12-13, SX Trial Ex. 61; Herscovici WRT at 13, SX Trial Ex. 130. Specifically, each of the factors call for a balancing of one set of interests against the other: in the first factor revenue to incent creators is to be balanced against revenue necessary for distributors to distribute creative products. Ordover WDT at 22-23, SX Trial Ex. 61. In the second factor it is the copyright owner’s fair return versus the copyright user’s fair income. Ordover WDT at 26, SX Trial Ex. 61. And, in the third it’s a rate that reflects the relative roles of the two sets of parties in relation to various contributions. 8/30/07 Tr. 26:14-27:7 (Herscovici).

283. As Dr. Ordover explained in detail in his direct testimony (testimony that was not seriously disputed in the proceeding), it is *markets* that balance those very interests and produce exactly the results that best promote the objectives that are specified under the first three factors. To an economist, market prices are signals that enable buyers and sellers to rationally make their

supply and purchasing decisions in a way that overall helps economic efficiency and that satisfies the terms of the first three factors. Market rates would maximize the availability of creative works, it would be fair to all of the parties, and it would account for the risk and investments borne by the parties. 6/21/07 Tr. 110:14-111:4 (Ordovery). Only by observing the forces of supply and demand reaching equilibrium can one sensibly determine whether a rate strikes the proper balance necessary to promote the policy goals of the first three factors. *Id.* Tr. 104:6-19. Moreover, it is through markets that such things as cost, risk, and investment of the parties are actually valued. 8/30/07 Tr. 27:19-28:9 (Herscovici).

284. Rates arising from voluntary transactions best satisfy in principle the policy objectives set out by the first three statutory factors, and promote economic welfare that reflects the interests of listeners, record companies, copyright users, and other relevant parties. Although markets for the rights to perform recorded music do not resemble the stylized model of “perfect competition,” voluntary transactions between record companies and various licensees in the marketplace nonetheless provide useful guidelines for setting rates for the distribution of sound recordings by the SDARS. Ordovery WDT at 35, SX Trial Ex. 61. Absent strong evidence justifying a deviation to meet the objectives set forth by Congress, these first three factors are likely to lead to a similar result.

285. The economic principles that underlie that conclusion are laid out in detail in Dr. Ordovery’s direct written testimony. Ordovery WDT at 5-21, SX Trial Ex. 61. Dr. Noll acknowledges the soundness of these economic principles, Noll WRT at 18, SDARS Trial Ex. 72, and Dr. Woodbury does not dispute them either, although at times he states that the Court is able to skip a step by relying on a market rate that has already been adjusted for the § 801(b) factors. *See, e.g.*, 6/13/07 Tr. 72:4-6 (Woodbury). The essential market dynamic at work is that

consumers strive to maximize the satisfaction they derive from the services available for their use, Ordover WDT at 5, SX Trial Ex. 61, sellers attempt to maximize their profits, and markets efficiently intermediate between these buyers and sellers. *Id.* at 7-13.

286. As Dr. Ordover states in his report, the general presumption in economics (and in public policy) is that voluntary transactions between buyers and sellers as mediated by the *market* are the most effective way to implement efficient allocations of societal resources. Ordover WDT at 12, SX Trial Ex. 61. When buyers attempt to depress prices below levels that generate reasonable returns to suppliers, available output will be curtailed and incentives to innovate will be suppressed. Similarly, when sellers attempt to extract supra-competitive returns, consumers will substitute away from the products in question while new firms will find it profitable to come into the market and lower prices. Thus, prices act as signals that guide buyers and sellers regarding their consumption and production decisions in a manner that conduces to economic efficiency. *Id.*

287. There are two situations which would lead an economist to conclude that market-based rates do *not* necessarily satisfy the first three statutory criteria. 6/21/07 Tr. 111:11-20 (Ordover); Ordover WRT at 4, SX Trial Ex. 119. One such situation may arise when voluntary transactions in the unregulated market would result in prices that provide substantially and persistently distorted pricing signals, and thereby result in significantly *inefficient* allocations of resources. 6/21/07 Tr. 113:5-20 (Ordover). For example, such intervention may be warranted when the supplier is a monopolist in the relevant market and thus can persistently extract “monopoly” rents from buyers.⁹ In such a case, there is no reason to believe that the adjustment

⁹ See, e.g., Ordover WDT at 12 n.4, SX Trial Ex. 61 (citing R. D. Willig, “Economic principles to guide post-privatization governance,” chap. 8 in F. Besanes, et al., (eds.), *Can*

of supply and demand achieved through the mediation of the market achieves a result that is optimal from the point of view of social welfare, or from the point of view of the first three statutory factors. *Id.*

288. The second situation would be the existence of an external harm or benefit not recognized by the market. Ordover WRT at 4, SX Trial Ex. 119. Subsidies, such as subsidy built into the telephone regulation to assure that the poor and those living in rural areas (where the cost of providing service is very high) have access to affordable telephone service, is an example of such an externality. 6/21/07 Tr. 111:21-112:22 (Ordover). In that case, society believes that the social benefit of providing subsidized access to the service outweighs the social cost of distorting the price that is the inevitable result of any subsidy. *Id.* Tr. 113:1-4. However, economists and policy makers recognize that the very process of regulating a market is costly and can (in intended or unintended ways) create its own distortions in resource allocation.¹⁰ Accordingly, for an economist, absent a public policy decision actually to *distort* pricing structure (through taxes or subsidies), the fundamental objective in a rate setting proceeding such as this one should be to “mimic” what an effectively competitive marketplace accomplishes in an unregulated setting – to find the price that minimizes inefficiencies and thereby maximizes economic welfare, subject to current and likely future economic conditions. Ordover WDT at 12, SX Trial Ex. 61.

289. After considering the four factors and studying these markets, Dr. Ordover concluded that there was no basis under either of these considerations to depart from the kind of

Privatization Deliver?, Johns Hopkins U. Press (1999), for a succinct statement of preconditions for regulation).

¹⁰ See, e.g., R.G. Noll, “The Politics of Regulation,” chap. 22 in R. Schmalensee and R. Willig (eds.) *Handbook of Industrial Organization* (Vol. 2), North Holland (1989); D. Carlton and J. Perloff, *Modern Industrial Organization* (3rd ed.), chap. 20, Addison-Wesley (2000).

rates one would expect to find as the result of an arms-length transaction between each of the SDARS and each of the record companies. 6/21/07 Tr. 114:8-115:5 (Ordover). Dr. Herscovici reached the same conclusion after an extensive review of the record evidence concerning these industries. Herscovici WRT at 42, SX Trial Ex. 130. Thus, in each of their opinions, not only is the marketplace the best place to start, but in this case it is the best place to finish upon examination of the first three factors.

290. Dr. Woodbury reached the identical conclusion at least in the *PSS I* proceeding. Thus, in his 1996 CARP testimony he made the following statements (6/13/07 Tr. 69:20-70-16, 74:11-74:21 (Woodbury)):

[My testimony] discusses the use of a competitive market rate as a framework for assessing the reasonableness of a proposed performance fee. This approach would seem to be consistent with the literal language of the objectives of the Act as enumerated in Section 801;

An estimated market rate for performance rights that mimics the outcome of competition can assist the CARP in advancing its objectives under Section 801 of the Act, in three important ways.

291. Dr. Woodbury continues to agree with this position “as a general matter.” Thus, while Dr. Woodbury now believes that a market rate that has already been adjusted for the § 801(b) factors (though relating to a different service at a different time) is the best place to start, it remains his view competitive market rates are a “framework for assessing the reasonableness of a proposed performance fee” and “consistent with the literal language of the objectives of the Act as enumerated in Section 801.” 6/13/07 Tr. 71:3-5, 72:9-19, 73:3-74:21 (Woodbury).

292. Of course, there is no such thing as a perfectly competitive market, and market rates may not yield efficient outcomes if market participants have substantial market power. Here, however, there is a substantial body of marketplace evidence that establishes that this potential abuse of market power is not a concern. Time and again record companies have been

able to negotiate rates with other distributors of content at levels that have permitted these other services to emerge and thrive, to the benefit of these distributors and to the listening public. This is not a case in which market failure should lead the Court to depart from a market-based approach and reliance upon rates that have emerged through negotiations between record companies and music distributors. Ordoover WDT at 20, SX Trial Ex. 61.

293. Once again, there is no dispute among the parties on this point. The SDARS have made no arguments that market benchmarks should not be used because of the record companies' bargaining power. They could hardly make such arguments, since they themselves rely on a bargain struck with RIAA (which *does* represent one entire side of the market), and since they themselves are a statutory duopoly.

294. In the end, although the SDARS complain that SoundExchange ignores the statutory factors in favor of a market-based approach, the SDARS proceed in the same two-step manner as SoundExchange. Specifically, both sides start with benchmarks. The SDARS rely essentially on only one agreement, between RIAA and the PSS, while SoundExchange relies on hundreds of agreements between individual record companies and a variety of different music services, as well as agreements between the SDARS themselves and non-content providers, and a host of other marketplace evidence providing a benchmark for the value of content. Each side then makes claims that its benchmark or benchmarks provide(s) the best benchmark because it is closest to the target market, and each side then makes adjustments to the benchmark market rate to attempt to take account of acknowledged differences between the benchmark and target market. The SDARS also claim that their benchmark is preferable because it has the § 801(b) factors already "baked in," while SoundExchange shows that that fact is not clearly so, and, in any event since those factors are time and place specific, it makes the PSS rate a less useful

benchmark, not a more useful one. *See* Section VII *infra*. Then, in step two, each side considers its adjusted benchmark rate in light of the four statutory factors. In fact, each side picks a rate at the low end of the range of rates identified as the benchmark as a result of their respective consideration of the four statutory factors. *Compare* Ordover WDT at 52, SX Trial Ex. 161, *with* Woodbury WDT at 41, XM Trial Ex. 8.

295. Of course, each side's analysis has yielded very different rates. But that is based principally on the fact that each side started with very different benchmarks, and has little to do with subsequent adjustments made to the respective benchmark rates based on application of the four statutory factors. In sum, the dispute in this case involves the parties' respective claims that *their* benchmarks market is a better measure of the true value of the sound recordings at issue, and not on any different evaluation of the four statutory factors. For the reasons we set out in Section VII, *infra*, SoundExchange believes it is clear that the PSS rate is of virtually no use as a benchmark and that the PSS market is different in the most fundamental ways from the SDARS market, most of all because consumers value the PSS service so very differently (and so much less) than they value the SDARS service. The SDARS no doubt will have their arguments about SoundExchange's benchmarks. But it is *that* dispute, and not any dispute about the meaning of the four statutory factors and their relationship to market dynamics, that are principally at issue in this case.

C. Consideration of the Four Statutory Factors

296. As stated above, Dr. Ordover concluded that absent some kind of market failure not present here, the first three statutory factors are best implemented by rates that would be reflected in open market transactions. In his testimony, Dr. Ordover provided a detailed explanation as to why this is so.

297. In his testimony, Dr. Ordover uses these basic economic principles governing pricing of intellectual property to assess the economic implications of each of the four policy objectives set out in § 801(b), and so translated each objective into economic criteria for establishing a rate for the license at issue. Dr. Ordover concluded that the first three factors focus on the trade-off between the need for incentives to create content such as music and the goal of ensuring its dissemination to the listening public. He concluded that rates that reflect rates that would arise in a hypothetical market transaction between each of the record companies and each of the SDARS would best satisfy the first three policy factors. Ordover WDT at 21-22, SX Trial Ex. 61.

1. Factor One

298. The first statutory objective is to maximize the availability of creative works to the public. In principle, this objective is best advanced by a market-based rate that sends the correct incentives both to copyright holders and to distributors of creative content. Dr. Ordover concluded that this factor has a clear economic interpretation in terms of the principles discussed in his report. Ordover WDT at 22-23, SX Trial Ex. 61. He understood that this panel's precedent establishes this first objective as principally focused on the adequate provision of incentives for the "production" of *new* creative works.¹¹ *Id.* at 22. These incentives are most potent when creators of content receive sufficient compensation for their creative efforts, while the distributors of content have sufficient incentives to deliver the content to potential users. *Id.* at 23. Put another way, as Dr. Ordover understand it, this objective should not be interpreted as compelling a blanket license to access a given stock of sound recordings that maximizes distributors' profits; rather, the objective is best interpreted to promote creation of new content

¹¹ *PESI*, 63 Fed. Reg. 25394, 25406-25407 (May 8, 1998).

while maintaining the viability of distribution channels that are attractive to the listening public.

Id. at 23.

299. In order to satisfy this policy objective, the blanket license rate must be high enough so that it does not constrict the future supply of sound recordings below the socially efficient level, but not so high as to expropriate the SDARS' competitive returns. Ordover WDT at 23, SX Trial Ex. 61. At the minimum, this requires that expected risk-adjusted returns for creating new sound recordings as determined by license revenues from feasible distribution channels should at least recover the associated expected fixed and variable costs incurred by the creators of new sound recordings in the aggregate. *Id.* In addition, the blanket rate should not undermine record companies' earnings in other channels or create competitive distortions among channels. *Id.*

300. According to the economic principles governing the pricing of intellectual property, Dr. Ordover also concluded that to satisfy the first statutory objective, the license fee contribution from any given distribution channel should reflect the value of sound recordings in that channel as measured by the elasticity of demand for sound recordings, and the cross-elasticities of demand between the channel under consideration and the alternative modes of distribution. Ordover WDT at 23, SX Trial Ex. 61.

301. The copyright law grants the author a "monopoly" over a particular form of expression of an idea: it gives the owner the right to exclude non-payers from using the property (assuming that anyone actually wants to pay anything for it). This legal regime leads to a market setting in which the owner of the copyright does not face competition from an identical product (unlike a producer of steel or wheat, for example). *Id.* Because Congress granted the copyright holder substantial property rights in the first instance, and thus potentially substantial negotiating

power, market-based rates provide the copyright holder with as much of the surplus (value) generated through the use of its intellectual property as the marketplace will permit. In that way – by creating the right to exclude and the right to an expression – Congress itself has created a system designed to maximize the availability of creative works to the public, and that system is based on the operation of market forces under the umbrella of copyright law. Ordoover WDT at 25, SX Trial Ex. 61. By providing protection for performances of sound recordings, Congress intended to ensure that record companies were adequately compensated to enable them to continue to produce creative works for public enjoyment. *See* S. Rep. 104-128 at 11 (the performance right may become an “incentive to[] the creation of” sound recordings).

302. As SoundExchange describes in its proposed Conclusions of Law, previous tribunals have agreed that the principal way to achieve this objective is to assure that copyright holders are fully compensated for their creative efforts and continue to be incentivized to create additional works. *See, e.g., Phonorecords*, 46 Fed. Reg. at 10479 (the first factor is to provide “an economic incentive and the prospect of pecuniary reward” for the copyright owner’s “creative efforts”). As the Supreme Court has recognized – and the Librarian has affirmed – the goal of maximizing the availability of creative works is achieved by allowing the copyright owners to receive a fair return for their labors. *Twentieth Century Music v. Aiken*, 422 U.S. 151, 156 (1975) (“The immediate effect of our copyright law is to secure a fair return for an ‘author’s’ creative labor. But the ultimate aim is, by this incentive, to stimulate artistic creativity for the general public good.”); *PES I*, 63 Fed. Reg. at 25406.

303. Market benchmarking is necessary to determine whether a rate satisfies this first statutory factor. There is no way to know how a rate will effect the amount of creative work available to the public other than by observing particular market outcomes. One cannot tell just

by looking at the first factor in the abstract whether a rate of, for example, 10% or 20% of revenue will be high enough to incent artists, or so high that it suppresses demand. 6/21/07 Tr. 103:11-104:1 (Ordover). Only by observing the forces of supply and demand achieving equilibrium can one sensibly determine whether a rate strikes the proper balance necessary to promote creative work. *Id.* Tr. 104:6-19.

304. For all of these reasons, Dr. Ordover concluded that the best way to determine whether a rate satisfies the first factor is to look to rates for licensing of music that have been established in a functioning marketplace through arm's length negotiations, and then inquire whether these rates can inform the rates at issue here. 6/21/07 Tr. 105:14-22 (Ordover).

2. Factor Two

305. The second policy objective requires “fair” returns and income for the copyright owner and the copyright user, respectively, under “existing economic conditions.” Dr. Ordover’s opinion is that “fairness” is not a core economic concept. Insofar as it has a basis in economics, it relates to the outcomes that arise through unfettered market interactions in workably-competitive markets, that is, in markets that are not distorted by undue exercise of monopoly (seller) or monopsony (buyer) power. A rate that gives a party more or less than it would receive in a competitive market is unfair. From that perspective, then, “fairness” too is achieved by maintaining consistency with rates that are the result of market-based transactions. Ordover WDT at 25-26, SX Trial Ex. 61; 6/21/07 Tr. 107:8-22 (Ordover).

306. Dr. Woodbury agrees that in general competitive markets will produce an outcome that is more likely than not to provide a fair return to the copyright owner and a fair income to the copyright user. 6/13/07 Tr. 110:1-111:17 (Woodbury). As described in SoundExchange’s Proposed Conclusions of Law, the courts agree as well: *See, e.g.,*

Phonorecords, 46 Fed. Reg. at 10479 (“We find that the copyright owner’s right to receive a fair rate of return for the compulsory use of his song derives from Congress’ decision to afford commercial protection to the author of a creative work [I]n most instances, the rate of return afforded the copyright owner is determined on the free market.”). *See also PES I*, 63 Fed. Reg. at 25409 (“proposed marketplace benchmarks” address the second factor).

307. A market transaction occurs only if both sides find it desirable as compared to the alternative, *i.e.*, not transacting with each other. *Ordover WDT* at 26, SX Trial Ex. 61. Since market transactions are voluntary, it follows that prices that emerge through this voluntary process should be deemed fair in this basic sense. *Id.* From the social welfare standpoint, prices determined by unfettered marketplace interactions reflecting users’ willingness to pay and suppliers’ production costs can be said to result in a “fair” outcome for both sides. *Id.* Such a pricing outcome also is efficient in the sense that it may not be possible to change these allocations through regulatory or other interventions without at the same time reducing *aggregate* economic welfare. *Id.* Therefore, the equilibrium price arrived at through unfettered marketplace interactions can be said to result in a “fair” division of benefits from transactions over the long run. *Id.*

308. A market rate is “fair” because it does not distort the competitive playing field to favor one party to the transaction over another and generates transaction surplus for both, to the benefit of the listening public. A bargained-for rate is not so high that the potential user decides to forego licensing the rights. Nor is the rate so low that the content provider is injured by cannibalization of sales from other channels of distribution for recorded music. *Ordover WDT* at 35, SX Trial Ex. 61.

309. In Dr. Ordovery's opinion, fairness also has a horizontal dimension. Thus, marketplace evidence on the terms of freely negotiated contracts with other content providers is relevant to assessing the willingness and ability of the SDARS to pay for attractive content. Ordovery WDT at 27, SX Trial Ex. 61. *See also* Herscovici WRT at 21, SX Trial Ex. 130.

310. Dr. Ordovery sees no basis on "fairness" grounds for imposing on record companies and artists a rate in this case that would deviate from what would be freely determined through negotiations in the marketplace. Ordovery WDT at 27, SX Trial Ex. 61. Setting a blanket license rate at substantially below market rate is a prescription for inefficiency and is inimical to sound public policy. A below-market rate would amount to "subsidizing" the SDARS, which would have the undesired effects of giving the SDARS an undue competitive advantage *vis-à-vis* other distributors of music, while weakening the incentives for production of new recordings and for efficient distribution of music in the new media. Regulators rarely establish such "below-market" rates. They typically do so only when confronted with a clear legislative mandate to create such a rate. Such rates are the exception rather than the rule, and there is no sound economic or public policy reason to implement such rates through this proceeding. Deviation from a competitive market rate does not conduce to short-term and long-term economic efficiency. Ordovery WDT at 27-28, SX Trial Ex. 61.

311. Looked at in isolation, the words of the second statutory factor tell the Court nothing about the specific level of the rate that should be set. Once again, only benchmarking can do that. Absent some evidence as to what the producers and distributors of content require, there is no way to determine what is a fair rate. Accordingly, it is necessary to look at data from comparable transactions, make inferences from those, and see whether any particular adjustments or modifications are appropriate. 6/21/07 Tr. 106:16-107:4 (Ordovery).

312. In Dr. Ordovery's view, the economic consequences of setting the rate "too high" are likely to be less severe than if the rate is set "too low." Ordovery WDT at 28, SX Trial Ex. 61. The rate established through the regulatory process effectively establishes a ceiling. If this rate is so high that it undermines the SDARS' business model, the parties can negotiate a lower rate that is more conducive to dissemination of content *via* satellite radio networks. The record companies have an incentive to agree to a lower rate if the statutory rate were set too high. In contrast, if confronted with a mandated rate that is too low, the record companies have no choice but to license their sound recording repertoires, even if, as a result, they are not obtaining a warranted contribution from satellite radio to their overall return on their portfolio of recordings. While in the short-run, a blanket license that is too low likely will not affect either the demand for or the supply of already-recorded performances of music, in the long-run, an inefficiently low price will reduce the supply of new recordings, which is inimical to the public policy goals stated in the first statutory objective. *Id.*

313. Moreover, because satellite radio is, to varying degrees, substitutable for other channels through which recorded music is distributed to listeners, subsidizing satellite radio necessarily will divert sales from these other distribution channels. This diversion will occur even if these alternative modes of distribution are more efficient relative to satellite radio, and as a result society's resource costs of music distribution will needlessly increase. From the standpoint of the record companies, diversion of the sort Dr. Ordovery describes will lower their returns from both satellite radio and other distribution systems, which would be forced to lower their own rates (and ultimately lower the amount they pay to the copyright holder) in response to a subsidized rate. In sum, in considering the second factor, it is more unfair to set the rates too low than to set them too high. Ordovery WDT at 29, SX Trial Ex. 61.

3. Factor Three

314. The third § 801(b) objective requires consideration of the relative roles of the copyright owner and the copyright user with respect to their relative creative and technological contributions, cost, risk, and contribution to the opening of new markets for creative expression. In Dr. Ordovery's opinion, the public policy goals of this objective too are best attained by setting the license fee in a manner that reflects the level of the fees that would be set in the market. Markets properly reward and take account of capital investment, the costs and risks involved in deploying the facilities and infrastructure necessary to produce a good or service, and each of the other considerations listed in this factor. Ordovery WDT at 29, SX Trial Ex. 61. Dr. Herscovici agrees that it is quintessentially the role of markets to take account of such factors, as functioning competitive markets reward creative and technological contributions, and set prices that reflect capital investment, costs, and risks undertaken by businesses that contribute to that market. Herscovici WRT at 21-22, SX Trial Ex. 130. Dr. Woodbury agrees as well that competitive market transactions capture those factors. 6/13/07 Tr. 116:4-13 (Woodbury).

315. As described in more detail in SoundExchange's Proposed Conclusions of Law, this Court too concluded that very similar statutory terms that applied under the "willing buyer/willing seller" standard need not be separately addressed: "[b]ecause we adopt a benchmark approach to determining the rates, we agree with *Webcaster I* that [these] considerations 'would have already been factored into the negotiated price' in the benchmark agreements." *Webcasting II*, 72 Fed. Reg. at 24092. In light of this, the Court determined that these factors are "implicitly accounted for in the rates that result from negotiations between the parties in the benchmark marketplace." *Id.* at 24095.

316. Specifically, Dr. Ordover found that the third objective invokes several economic considerations. Ordover WDT at 29, SX Trial Ex. 61. First, the SDARS are essentially distributors of sound recordings and other third-party content. Although the SDARS develop some original programming that they provide around the music and other content, the content itself is the essential input. Moreover, sound recordings comprise a key portion of the content, as evidenced by the amount of time subscribers spend listening to music relative to other content, and as evidenced by the reasons subscribers give for choosing to subscribe to satellite radio. Without the creative input provided by the sound recording copyright holders, these services likely would not survive in the marketplace. Ordover WDT at 29-30, SX Trial Ex. 61.

317. With respect to the SDARS' roles in terms of their contributions to distribution technology, Dr. Ordover notes that the concept of distributing content *via* satellite is well-established, and hence, in some respects, the innovative aspect of the SDARS is best seen as an extension of a known distribution mode to music (and other content). Ordover WDT at 30, SX Trial Ex. 61. Obviously, the SDARS have incurred risks associated with the launch of the service, including the launch of the satellites and the marketing expenditures undertaken at a time when the success of satellite radio was not assured. Accordingly, the SDARS should be compensated for these costs and risks, as well as for all the costs they incur on a recurring basis to deliver programming to subscribers. *Id.*

318. Based on the available evidence regarding the margins that the SDARS are earning on their programming (and on the forecasts of margins that they would earn after an increase in the blanket license), one cannot reliably conclude that Court approval of the rate requested by SoundExchange would, on a forward-looking basis, push the distributors to below-competitive, risk-adjusted rates of return on their up-front investments and on their on-going

contributions to dissemination of music content. Ordover WDT at 30-31, SX Trial Ex. 61. Put another way, Dr. Ordover was aware of no evidence that the SDARS would be unable to pay on a forward-looking basis the license fees generated through imposition of the proposed rate. Nor was he aware of any evidence that such an increase in license fees paid by the SDARS would amount to an expropriation of their reasonable returns on past investments and attendant risks. And finally, he saw no evidence that the increase would necessarily substantially constrict the volume of subscribers (or undermine growth). *Id.*

319. At the same time, this objective is not a justification for setting a rate that provides either side with an assured return on their investments. The SDARS investors did not invest in a company like a regulated utility that was essentially guaranteed by regulation a certain return on investment. Nor do the terms of the third factor suggest that the music industry was intended to be a payer of last resort to assure any such return. As Dr. Ordover explained, a rate that assures the SDARS an above-competitive, risk-adjusted return on their investments may result in inefficiencies insofar as the rate would not only reduce the record companies' revenues from their recordings to below an amount available through market transactions, but also would raise the total cost of music distribution by insulating to some degree the SDARS from the rigors of competition. Ordover WDT at 31, SX Trial Ex. 61. Thus, regulatory efforts to ensure such a return would benefit only the investors in those technologies. Society as a whole would be worse off. *Id.*

320. Finally, just as with the first two factors, standing alone the words of the third factor say nothing about the specific level of a rate that satisfies the factor. The Court has no choice but to start with empirical evidence as to what the negotiated rates have been in other contexts. 6/21/07 Tr. 108:21-109:6 (Ordover).

4. Factor Four

321. The fourth statutory objective calls for the Court to set a rate that minimizes any disruptive impact on the structure of the industries involved and on generally prevailing industry practices. Of all of the statutory factors, the fourth factor is the one that is least likely to be reflected in rates set through the operation of market dynamics. 6/21/07 Tr. at 122:14-19 (Ordover). The courts agree that this is the one statutory objective that “marketplace evidence, standing alone, does not address.” *Amusement & Music Operators*, 676 F.2d at 1157.

322. It would be inefficient to use this rate proceeding to set a rate for a blanket license that would maintain the SDARS’ current margins on the theory that any change in margins would be disruptive to industry operations. Ordover WDT at 32, SX Trial Ex. 61. Indeed, both Dr. Noll and Dr. Herscovici testified that the fourth factor focuses on whether the proposed royalty rate. Herscovici WRT at 32, SX Trial Ex. 130; 8/30/07 Tr. 31:21-33:2 (Herscovici); Noll WRT at 9, SDARS Trial Ex. 72 (“[d]isruption to an industry is best measured by asking whether a proposed rate affects its long-term viability.”).

323. There is no evidence that higher rates that better reflect the value of music could not be built into the SDARS’ business models while maintaining their chances of future success. While the fourth statutory factor calls for the minimization of disruptive impacts, that command is qualified both by its own terms (“minimization” is not the same thing as “avoidance”) and by the other statutory factors with which it must be considered. *Id.* Thus, a rate that is low such that it would not disrupt one industry may well violate the other statutory factors by, among other things, failing to provide a fair return or to maximize the availability of creative works. Herscovici WRT at 41, SX Trial Ex. 130.

324. From this perspective, Dr. Ordover therefore understands this fourth factor to promote a policy of setting a rate that minimizes disruption by phasing in rates resulting from changes in regulatory policy. *Id.* In the unfettered marketplace, prices can change rapidly and quickly, and there is nothing one can do about it. In the regulatory arena, based on the fourth factor, judges have the ability to phase-in any change in a way that avoids the kind of disruption to the production of the service that might be undesirable from the social standpoint. 6/21/07 Tr. 221:17-222:3 (Ordover); Ordover WDT at 34 n.25, SX Trial Ex. 61. Courts have reached the same conclusion that a “phasing-in approach to fee increases” “adequately reflect[s]’ concern for the impact of the change on all parties involved” under the fourth statutory factor. *Amusement and Music Operators*, 676 F.2d at 1149. *See also Juke Box Decision*, 46 Fed. Reg. at 889; *PES I CARP*, Slip Op. at ¶ 186.

325. Dr. Ordover does not, however, understand this objective to require freezing regulations in place or permanently setting below-market rates that would shelter the licensees indefinitely from disruptions normally engendered by the competitive process. Ordover WDT at 32, SX Trial Ex. 61. Nor does Dr. Ordover view the fourth factor as advocating a rate that confers upon one distribution channel a prolonged and unwarranted competitive advantage *vis-à-vis* rival channels. *Id.* Here too, as explained in the Proposed Conclusions of Law, the judicial decisions find as a legal matter what Dr. Ordover concludes as a matter of economics: “The fact that an increase in the rate will increase costs is not per se an argument against raising the rate” under § 801(b)(1)(D). *Phonorecords*, 46 Fed. Reg. at 10486. *See also id.* at 10481 (“We reject the contention that any immediate increase in the mechanical royalty payable to copyright owners would be disruptive on the record industry. The record in this proceeding clearly shows that an increase in the compulsory license is necessary to afford copyright owners a fair return.”).

326. In considering a rate adjustment that minimizes disruptive impacts, in Dr. Ordovery's opinion the Court will need to balance the potential effects on each of the industries impacted by the rate. Ordovery WDT at 32-33, SX Trial Ex. 61.

327. Considering the rate's effect on the SDARS is relatively straightforward. Mr. Butson provided evidence concerning the SDARS' costs and revenues, taking into account the rates SoundExchange is proposing. If, as Dr. Ordovery understands to be the case and Dr. Herscovici confirmed from his review of Mr. Butson's analysis and those of investment analysts, those rates would not threaten the long-term viability of the SDARS, the proposed rate would not have any effect on the *structure* of the satellite radio industry. Moreover, there is no indication that higher rates would effectively curtail the ability of the SDARS to compete on the merits against other distribution channels and to continue to increase their subscriber base. Ordovery WDT at 33, SX Trial Ex. 61.

328. In this regard, the extent to which the SDARS are willing and able to pay for other, non-music, content on an unregulated basis is relevant to a consideration of the fourth factor as it applies to music content subject to the statutory license. In economic terms, from the SDARS' point of view, music content is no different than non-music content: they both are valuable because they stimulate demand for the SDARS services. If the SDARS are willing and able to pay a certain amount to attract a certain level of demand, evidently they believe those payments to be non-disruptive. Similar payments to SoundExchange to attract a similar level of demand by the same token should not be seen as disruptive either. 6/21/07 Tr. at 128:4-129:3 (Ordovery).

329. Addressing the effect of the rate on the structure of the music industry requires consideration of the fact that the industry is in flux as it transitions from a principal reliance on

CD sales for its revenue to an increasing reliance on multiple sources of revenue flowing from different channels of digital distribution of non-physical copies of sound recordings. That transition raises a host of issues relating to consideration of this fourth statutory factor: (i) how quickly the transition will occur; (ii) the extent to which any particular form(s) of digital distribution will gain market acceptance and become most prevalent in the future; and (iii) the extent to which the various forms of digital distribution are substitutes for each other, and for CD sales. Ordover WDT at 33, SX Trial Ex. 61.

330. In sum, the fourth factor recognizes that industry participants may need time to adjust to significant changes in the rate, given their existing market arrangements. Ordover WDT at 34, SX Trial Ex. 61. This recognition should not be a basis for inertia with respect to rates for access to sound recordings that the SDARS should pay. Firms in effectively competitive markets have to deal with change all the time, and those unable to adapt fall by the wayside. Dr. Ordover concludes that there is no evidence that proper phasing-in of new and higher rates either would undermine the economic viability of the SDARS or would deprive the listening public of the benefits of this mode of content distribution. At the same time, sticking with unduly depressed rates for the blanket license will adversely impact the record companies (as the satellite radio subscriber base grows) and will distort competition between the SDARS and other distribution channels. *Id.*

331. Finally, because the fourth factor is not something necessarily reflective of market dynamics, departures from the rates that would reflect the first three factors in the name of the fourth factor should be undertaken with care, because departures from rates that would be observed in the marketplace could have undesirable consequences that undermine the policy goals of the first three factors. 6/21/07 Tr. at 123:1-21 (Ordover).

IV. THE RELATIVE VALUES OF MUSIC AND NON-MUSIC CONTENT

A. Introduction – Why It Matters

332. The relative value of music and non-music programming is at the heart of this case. The SDARS have invested well over a billion dollars on non-music content in an effort to draw and retain subscribers. Yet it has been a common theme of the SDARS' arguments that music programming is worth "near-zero." *E.g.*, 8/16/07 Tr. 165:1-9 (Noll); Karmazin WDT at ¶ 3, SIR Trial. Ex. 1 (describing music as an "ubiquitous" product for which "the public generally is not willing to pay substantial subscription fees").

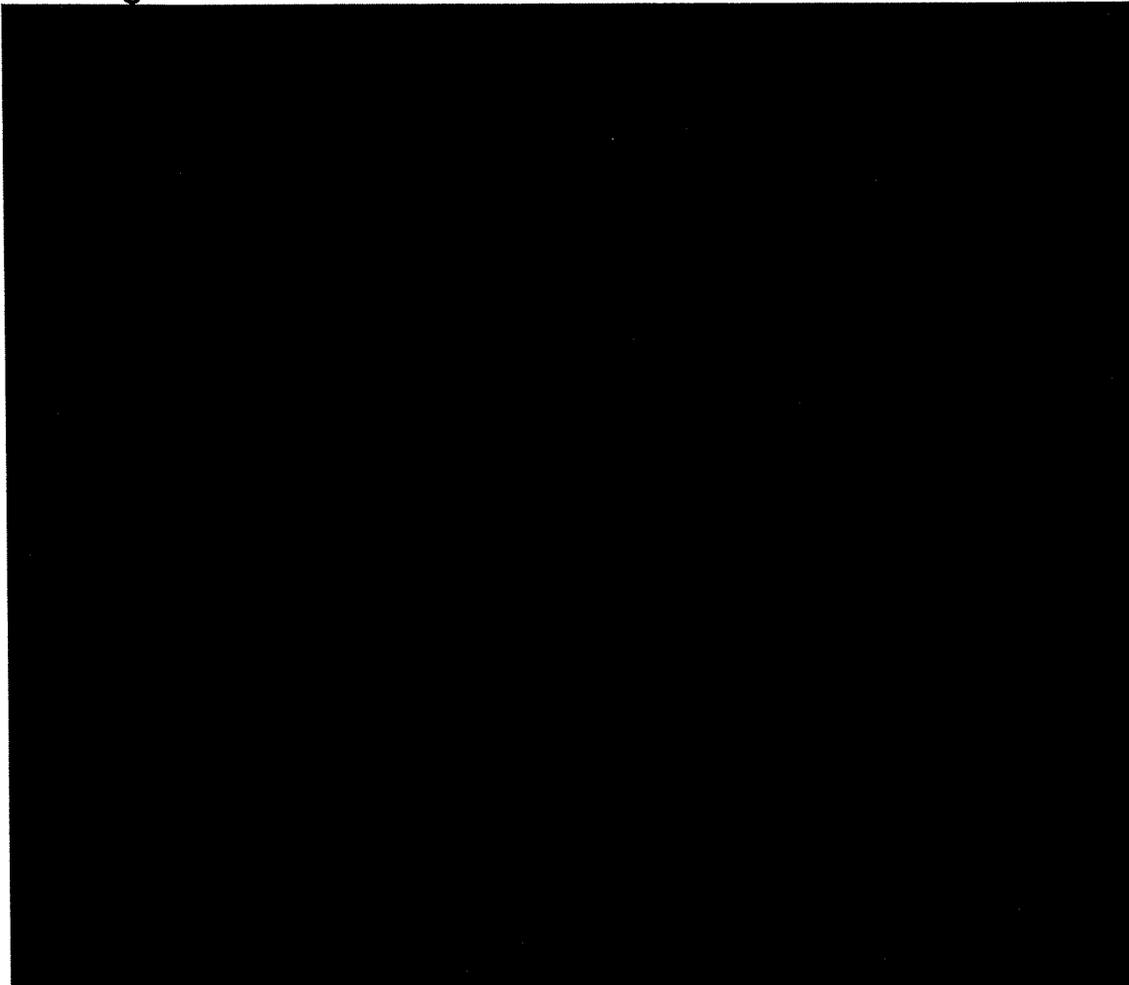
333. The facts tell a different story. The evidence before this Court demonstrates beyond a doubt that it is *music* programming, far more than the talk, sports, and news programming that the SDARS tout in this proceeding, that draws and keeps subscribers. SoundExchange commissioned an extensive study of the issue by Dr. Wind that looked at 10 different measures of value, and found that music programming was preeminent in every one. Wind WDT at 5, SX Trial Ex. 51.

334. But there is no need to take Dr. Wind's word for it. The SDARS' own witnesses candidly agree. Mr. Parsons concurred that "music is *by far* the most important type of programming for subscribers." 6/5/07 Tr. 64:15-65:2 (Parsons) (emphasis added). And the SDARS' chief economic expert, Dr. Woodbury, provided his best estimate of music's value as a percentage of the value of the SDARS's service as a whole, and concluded that it was [REDACTED] for Sirius and [REDACTED] for XM. Woodbury WDT at 19, XM Trial Ex. 8. Likewise, the SDARS' own surveys – the ones that they describe as informing their business decisions – reach precisely the same conclusions showing that music has the greatest draw and usage of any programming type.

SX Trial Ex. 35 at 17, 23; SX Trial Ex. 52 at SX Ex. 123 DR at XMCRB 00045107; SX Trial Ex. 2 at 9.

335. As Dr. Wind explains, value is a multi-dimensional concept, but when every measure of value points in the same direction, the conclusion is clear: music is the most valuable aspect of the SDARS' service. 6/14/07 Tr. 67:1-5 (Wind). It is no wonder that Sirius reports that music programming is [REDACTED] to subscribers compared to other programming types, SX Trial Ex. 35 at 36, and that XM declares (as shown in the figure below) that [REDACTED]. SX Trial Ex. 52 at SX Ex. 125 DR at XMCRB 0016479.

Figure 2. Satellite Radio Users “Are Here For MUSIC!”



SX Trial Ex. 52 at SX Ex. 125 DR at XMCRB 0016479.

336. In rebuttal, the SDARS made two attempts to minimize the value of music. The first is a survey by Dr. Hauser, who purports to correct flaws in Dr. Wind’s survey. The Hauser survey, however, concludes that post-1972 music programming is worth \$1.78/month, a conclusion well in line with SoundExchange’s rate proposal. Hauser WRT at ¶ 16, SDARS Trial Ex. 77. Moreover, Dr. Hauser’s primary assertion – that the SDARS contribute to the value of music – is one that is already reflected and accounted for in SoundExchange’s economic

analysis. But at a more fundamental level, Dr. Hauser's survey revealed just as clearly as Dr. Wind's that music programming is the most valuable aspect of the SDARS' service. When Dr. Hauser asked people how much they would pay for a service without various programming types and features, he found – just as Dr. Wind did – that the loss of music reduced people's willingness to pay for the SDARS' service more than anything else.

337. The SDARS' second rebuttal argument is that non-music content somehow provides extra value in terms of "branding." As discussed below, these claims are entirely ungrounded as a matter of methodology empirics. All three of the experts admitted that they had not even attempted to analyze or quantify the corresponding branding or advertising value of music – or even whether music had any such value at all. One presented no data whatsoever. And the two that did employed methodologies and made conclusions that ultimately showed themselves to be recklessly untrustworthy.

338. In what follows, Section B discusses the methodology and results of Dr. Wind's survey. Section C reviews the SDARS' own internal surveys. Section D reviews Dr. Hauser's survey. Section E reviews Dr. Woodbury's cancellation index. Section F discusses the evidence concerning pre-1972 sound recordings. Section G discusses the SDARS' claim that the value of their music comes from their packaging of it and not the music itself. And Section H reviews the SDARS' claims about exclusivity and branding.

B. The Wind Survey

1. Overview

339. As part of SoundExchange's direct case, Dr. Wind conducted a survey designed to test the relative value that consumers place on music and non-music satellite radio

programming. Dr. Wind reported the results of his study in his written direct testimony. Wind WDT, SX Trial Ex. 51.

340. The survey showed that by every measure, consumers placed greater value on music programming than non-music programming:

- Consumers cited music programming more often than any other programming type as a *reason for subscribing and continuing to subscribe* (*id.* at 29-34)
- Consumers cited music programming as being *more important* to them than any other programming type (*id.* at 36-38)
- Music programming had a higher *time spent listening* than any other programming type (*id.* at 39-41)
- Consumers said the loss of music programming would make them *more likely to cancel* than would losing any other programming type (*id.* at 22-23)

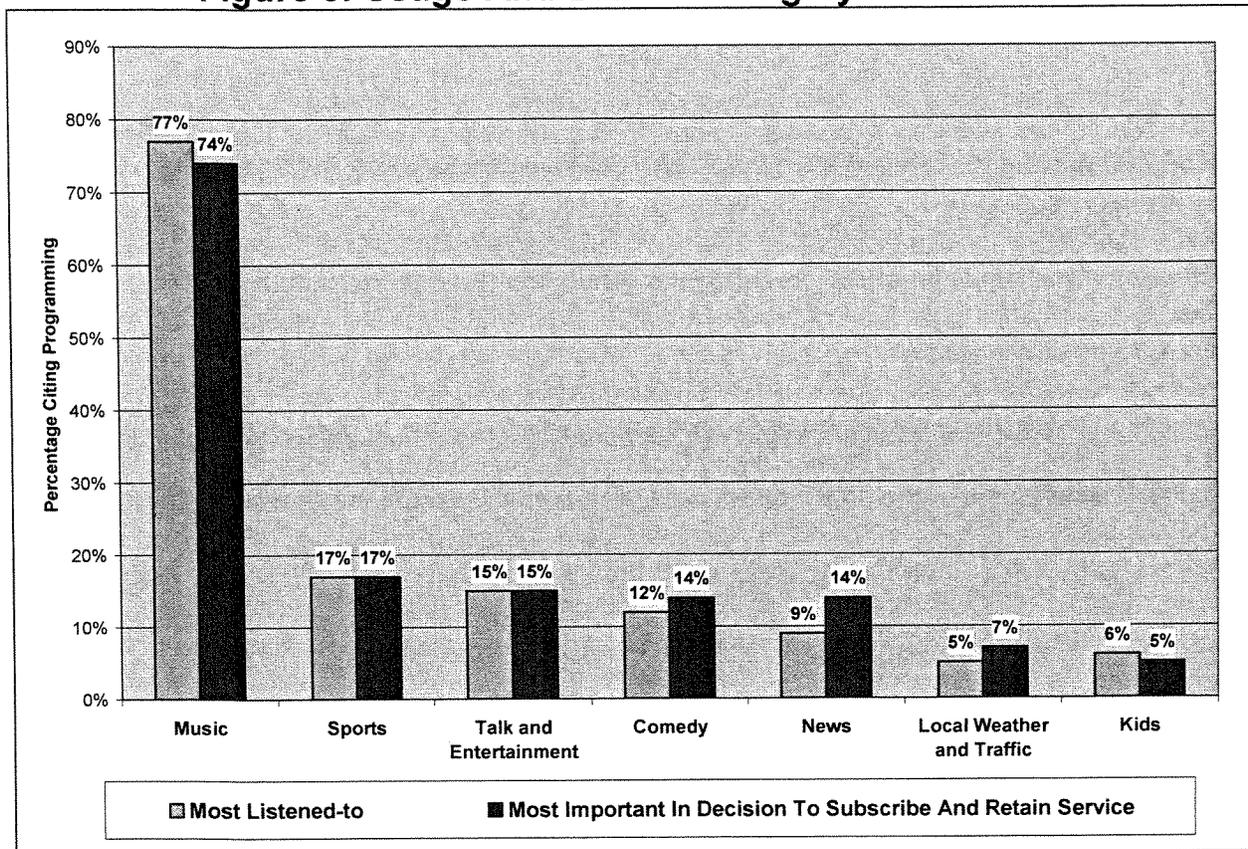
341. Dr. Wind explained that his study examines the value of music using a variety of measures, *id.* at 21, and he found that these multiple measures demonstrated music's predominance over other non-programming types in a particularly compelling way. *Id.* at 4. Consumers viewed music programming more favorably with respect to *every* measure of value. *Id.* As Dr. Wind explained at trial, "if I am getting the same conclusions from all of these different approaches, my confidence in the reliability and validity of the results are by far greater." 6/14/07 Tr. at 67:1-5 (Wind). In other words, multiple measures of value demonstrate through "convergence validity" that music is the type of programming that satellite radio users value the most. *Id.* at 67:6-19.

342. For example, any given person might have chosen to subscribe to satellite radio for a particular reason other than music programming (e.g., sports programming), but now would cancel the service only if music were dropped. Or another person might spend the bulk of her time listening to music but say that XM's talk shows were most important to her. As Dr. Wind

explained, each of these people could exist, but when the preferences of the 428 respondents were collected and looked at as a whole, it was music programming that came out on top for every measure. 6/18/07 Tr. at 85:19-88-15 (Wind). This convergence validity shows that music programming is the overall most important programming type that satellite radio offers, even if a particular person might have a variety of tastes or experiences. *Id.* at 87:20-22.

343. Indeed, Dr. Wind's evidence is indisputable that music is *both* the greatest *draw* to the SDARS and the programming that is *listened to* the most. This Court itself recognized during the trial that "the large majority of [the SDARS'] listenership is to music," that "most of the time, listeners listen to the radio, they're listening to music." 6/7/07 Tr. 265:8-266:17 (Sledge, C.J.). As Dr. Wind explained, there is a "strong association between ... usage and importance" to the listener. 6/18/07 Tr. at 89:22. That assertion is borne out even with a quick look at the data. 77% of listeners said that they spent more time listening to music than anything else, and 74% said they viewed music programming as the most important programming in causing them to subscribe. Wind WDT at 37, 41, SX Trial Ex. 51. Conversely, only 15% said they listened to talk and entertainment programming more than anything else, and the very same percentage (15%) said it was the most important programming in causing them to subscribe. *Id.* As the figure below shows, usage and draw are nearly perfectly correlated.

Figure 3. Usage And Draw Are Highly Correlated



Wind WDT at 37, 41, SX Trial Ex. 51.

344. These findings should not be surprising to the SDARS. They are corroborated in full by the course-of-business surveys the SDARS have commissioned, and by Dr. Hauser's study.

2. Study Methodology

345. Dr. Wind's study incorporated the responses of 307 subscribers to satellite radio and 121 individuals who were considering subscribing within 30 days. Wind WDT at 8, SX Trial Ex. 51. Respondents were contacted in random portions of randomly selected malls during random hours of the day. *Id.* at 7-8. Dr. Wind explained that "mall-intercept" studies of this sort

are extremely common in consumer research and are reliable, *Id.* at 7, which was an opinion shared by Dr. Hauser. 8/21/07 Tr. 141:13-16 (Hauser).

346. The study took place in October 2006, nearly a year after the launch of Howard Stern's programming on Sirius. Wind WDT at 18, SX Trial Ex. 51. The study also post-dates every survey that Sirius produced regarding consumer preferences, and all but one survey that XM produced on the subject.

347. The study employed numerous safeguards to ensure accurate results. The study was double-blind: neither the interviewers nor the respondents knew the sponsor of the study or its purpose. *Id.* at 17. Interviewers were trained in the administration of the study, and in particular, so that they would not present any bias in carrying it out. *Id.* Answers were recorded using a computer system to ensure that each question was answered and properly recorded. *Id.* A pre-test was undertaken prior to the main study to ensure that the respondents understood the questions. *Id.* at 19. And the identities of the respondents were verified after the conclusion of the survey. *Id.* at 20. Dr. Wind was assisted by Dr. Abba Krieger, chairman of the Statistics Department of The Wharton School, in conducting the statistical analysis. *Id.* at 20.

348. Dr. Wind's study used several different question formats:

- "Open-ended" questions called for the respondent to give a verbal answer that was recorded verbatim. E.g., "What types of satellite radio programming were most critical to your decision to subscribe to satellite radio?" *Id.* at 31.
- "Constant-sum" questions required the respondent to allocate 100 points among programming types to reflect their value. E.g., "[A]llocate 100 points among the seven types of programming [to reflect] the relative importance of that type of programming to you and your family's decision to subscribe and retain satellite radio." *Id.* at 37.
- "Willingness to pay" questions asked the respondent how much he would willing to pay for satellite radio if it lacked a particular programming type. *Id.* at 21.

- “Conjoint” questions asked the respondent to consider a series of hypothetical satellite radio services that varied among multiple dimensions (e.g., price, music programming, coverage, etc.). By combining the rankings given by the respondents to the hypothetical services with other responses the respondents gave, the conjoint questions reveal which aspects of satellite radio consumers value the most. *Id.* at 41.

3. Results

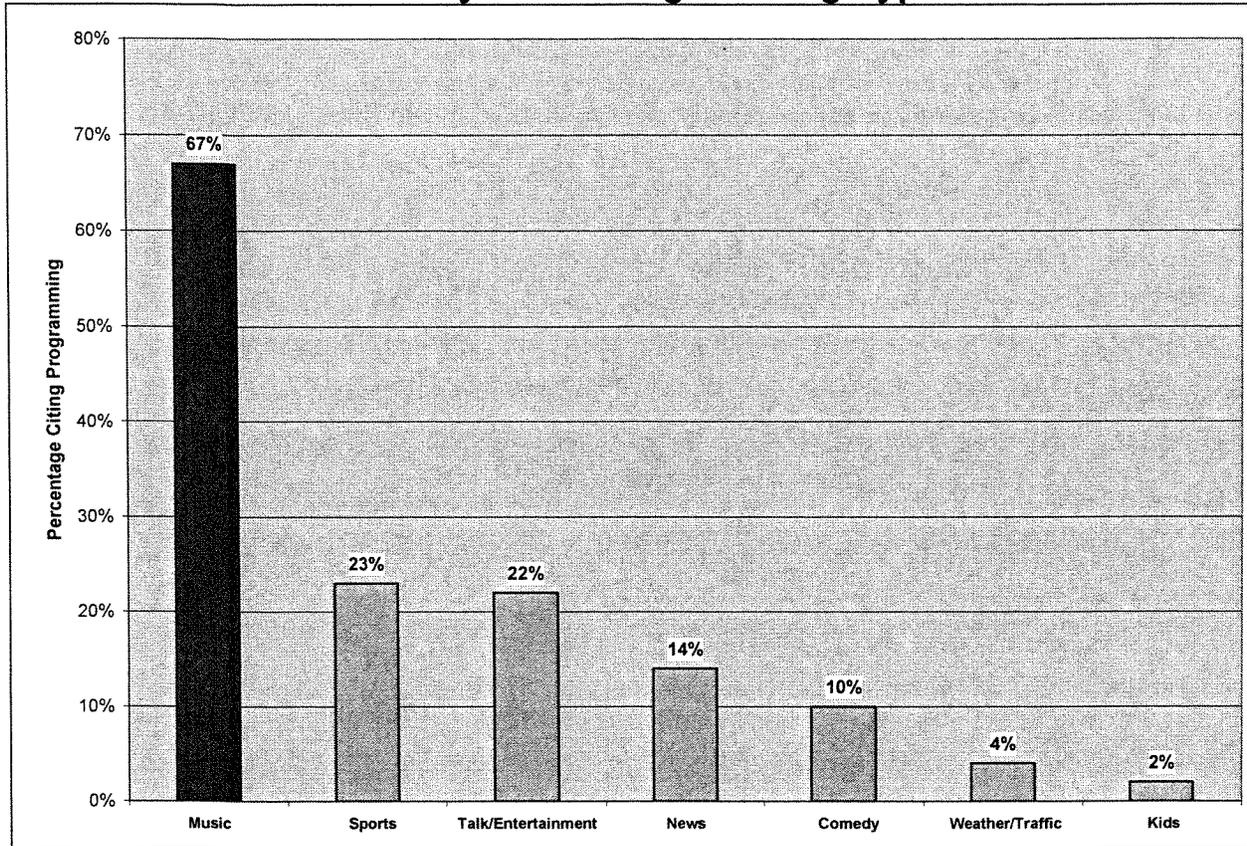
349. Dr. Wind’s study showed that – regardless of the measure of value used – consumers value music programming more (indeed, substantially more) than any other type of programming.

a. Draw and Retention.

350. Dr. Wind’s study asked a number of questions related to the reason respondents (a) subscribed to satellite radio, and (b) retained their subscription. Respondents were asked to name the types of programming that were “most critical” to their “decision to subscribe.” In response, *67 percent of respondents cited music programming. Id.* at 31. Sports programming was the next highest, and was cited by just 23 percent of respondents.¹² *Id.* The figure below shows music’s high draw compared to other programming. *Id.*

¹² Dr. Wind reported that a small percentage (at most 1%) of his open-ended answers were miscoded as a result of a programming error. Dr. Wind reported that “he re-ran the data, based on the correct numbers, and there is no difference, no significant difference between the results with before and these results.” 6/18/07 Tr. at 71:15-72:8 (Wind).

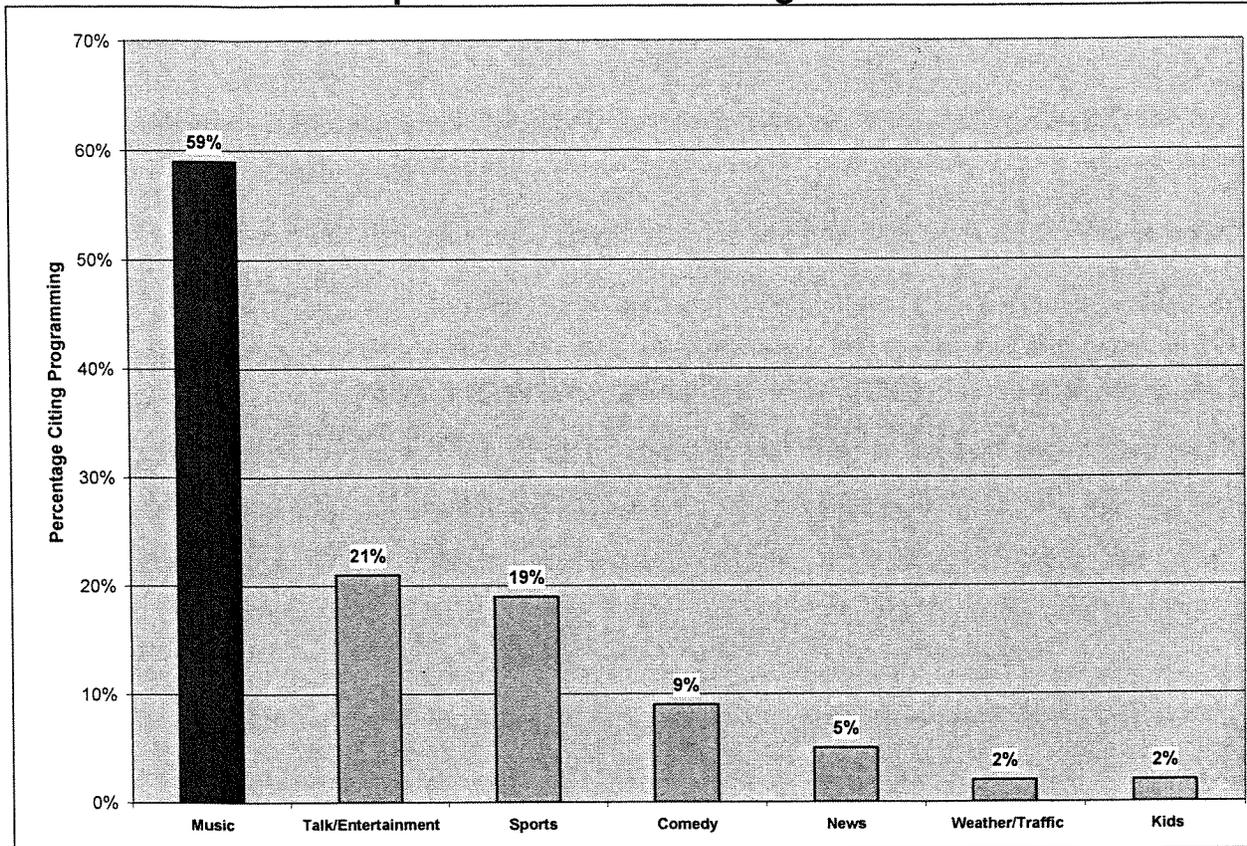
Figure 4. Music Has A Far Greater Draw Than Any Other Programming Type



Wind WDT at 31, SX Trial Ex. 51.

351. Respondents were also asked to name the types of programming that were “most critical” to their decision to “continue to subscribe.” *Id.* at 33. Again, 59 percent of respondents cited music programming. *Id.* Talk and entertainment programming was the next highest, and was cited by just 21 percent of respondents. *Id.* The figure below, based on Dr. Wind’s findings, shows that respondents cited music programming far more often than any other programming type as being most critical to their decision to subscribe. *Id.*

Figure 5. Music Is By Far The Programming Type Most Responsible For Retaining Subscribers



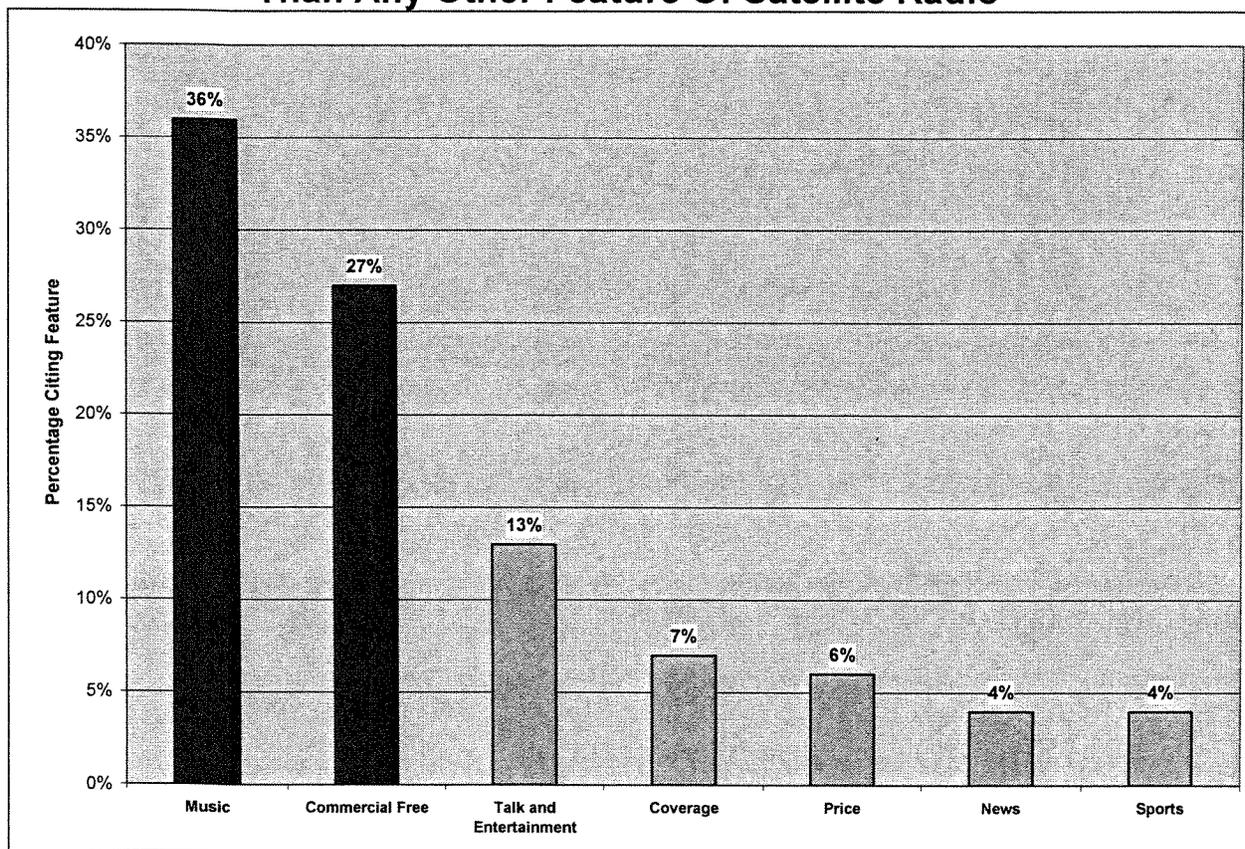
Wind WDT at 33, SX Trial Ex. 51.

352. In other words, no other programming type had anywhere near music programming's broad appeal for *drawing and retaining* subscribers.

353. Even when respondents were asked to consider all aspects of satellite radio – and not just programming types – music programming proved to be the single most important feature of the services. The first question of the Wind study asked respondents to state why they subscribed to satellite radio in the first place. *Id.* at 29. This question was highly open-ended as it did not even call for the respondent to mention a type of programming. *Id.* at 28. Yet more respondents (36 percent) mentioned music programming than any other feature – including even

non-programming features – of the service. *Id.* at 29. And the next most popular feature of the service is the fact that the music is commercial-free, which is simply another way of saying that the satellite radio services play a lot of music, which consumers highly value (music channels are the *only* commercial-free channels on the SDARS). *Id.* In contrast, as shown below, only 13 percent mentioned talk and entertainment programming and only 7 percent mentioned nationwide coverage. *Id.*

Figure 6. Music Is A Bigger Draw Than Any Other Feature Of Satellite Radio

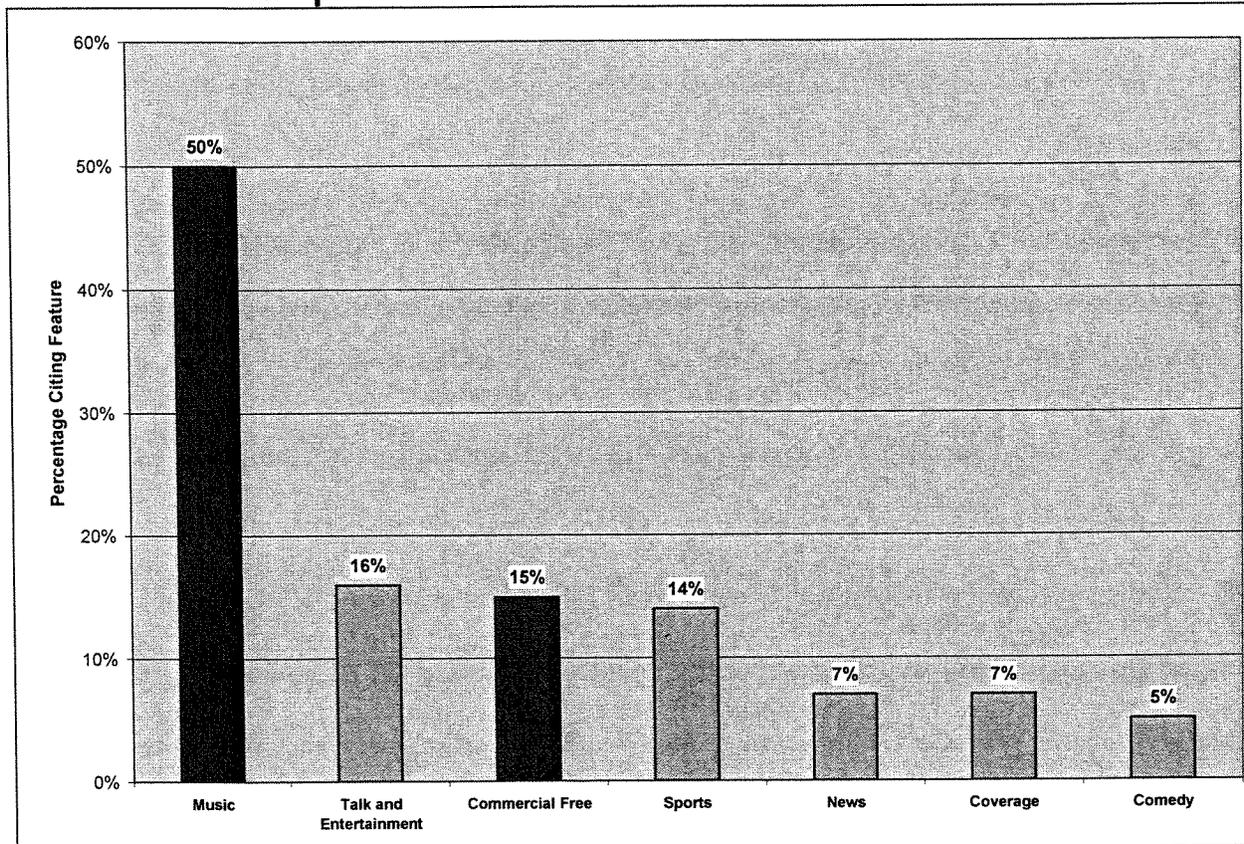


Wind WDT at 28, SX Trial Ex. 51.

354. Respondents were also asked to state the “aspect” of satellite radio that they “would miss the most” if it were taken away. *Id.* at 35. Again, the question did not even call for

a respondent to refer to a programming type, yet 50 percent of respondents cited music programming, more than triple any other answer as shown in the figure below. *Id.*

Figure 7. Subscribers Would Miss Music Far More Than Any Other Aspect Of Satellite Radio If It Were Gone



Wind WDT at 35, SX Trial Ex. 51.

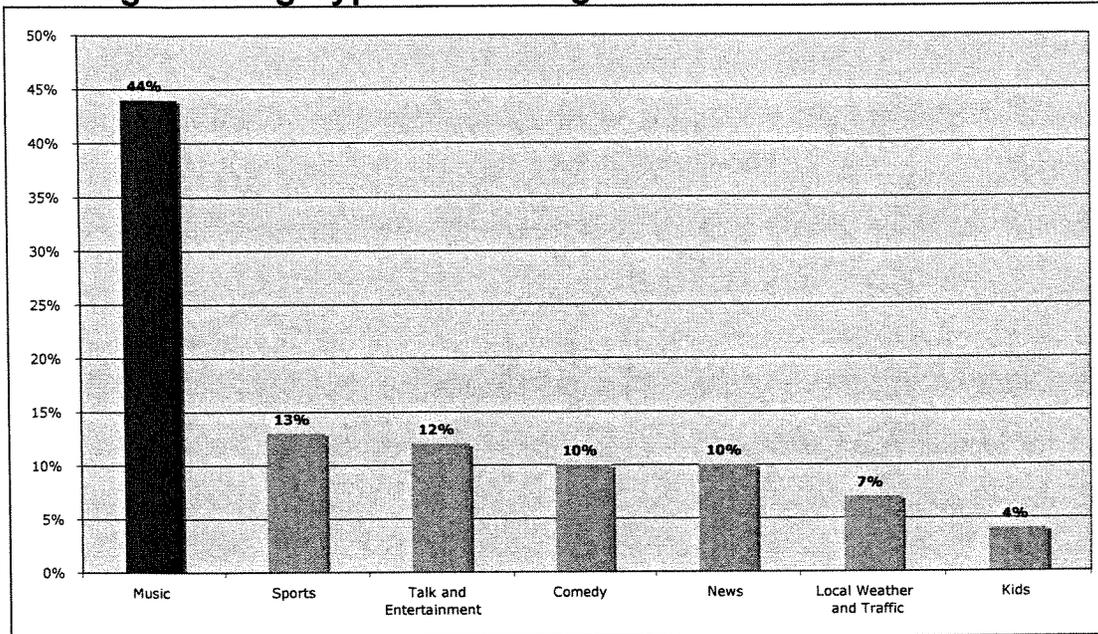
355. All of these open-ended questions unambiguously establish music programming as the feature most responsible for causing consumers to subscribe and to retain their subscriptions to satellite radio. Put another way, it would be impossible to argue on the basis of these findings that talk and entertainment programming or sports programming is a more important driver of subscriptions. To be sure, these programming types are important to some consumers, but music programming is more important to many more consumers.

356. It is also important to recognize that these results reflect the range of answers respondents gave. If a respondent gave “reggae” or “Howard Stern” as an answer, then those responses would be coded as music programming and talk/entertainment programming, respectively. 6/14/07 Tr. 124:1-21 (Wind).

357. The validity of the open-ended answers concerning draw and retention is confirmed by the constant sum questions. Respondents were asked to allocate 100 points among seven programming types in proportion to the “relative importance of that type of programming to you and your family’s decision to subscribe and retain your subscription to satellite radio.” Wind WDT at 37-38, SX Trial Ex. 51.

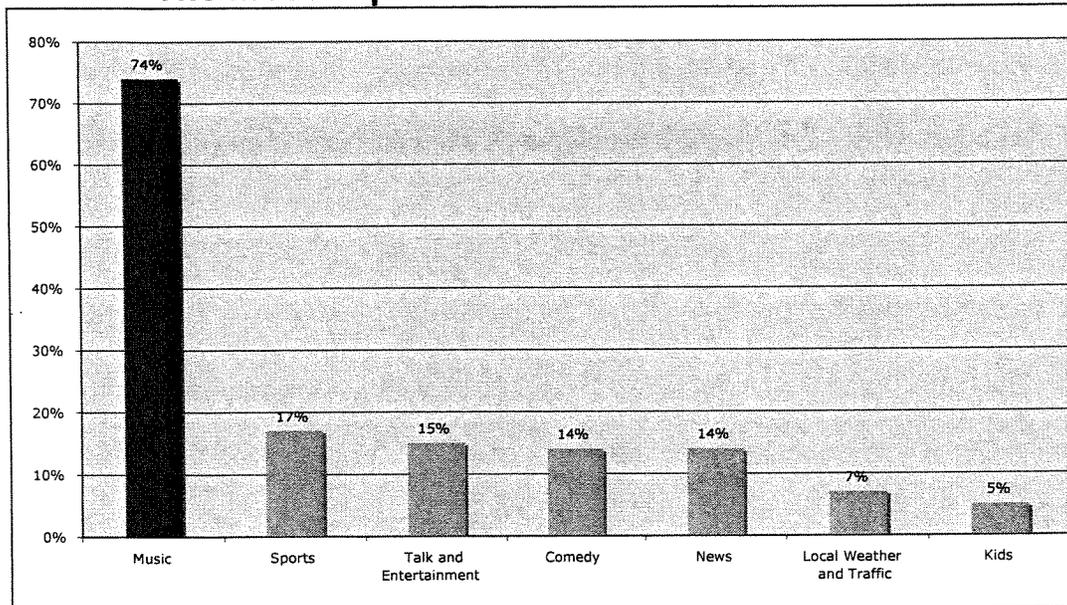
358. Respondents gave on average 44 points to music programming, and *74 percent of respondents gave more points to music programming than to any other programming type. Id* at 38. In other words, as shown in the figures below, 74 percent of respondents said that music programming was the most important programming type to them. *Id.* In contrast, respondents gave only 13 points to sports programming on average, and only 17 percent of respondents gave more points to sports than anything else. *Id.*

Figure 8. Respondents Rated Music The Most Important Programming Type On Average For Draw And Retention



Wind WDT at 37-38, SX Trial Ex. 51.

Figure 9. Many More Respondents Said Music Was The Most Important For Draw And Retention



Wind WDT at 37-38, SX Trial Ex. 51.

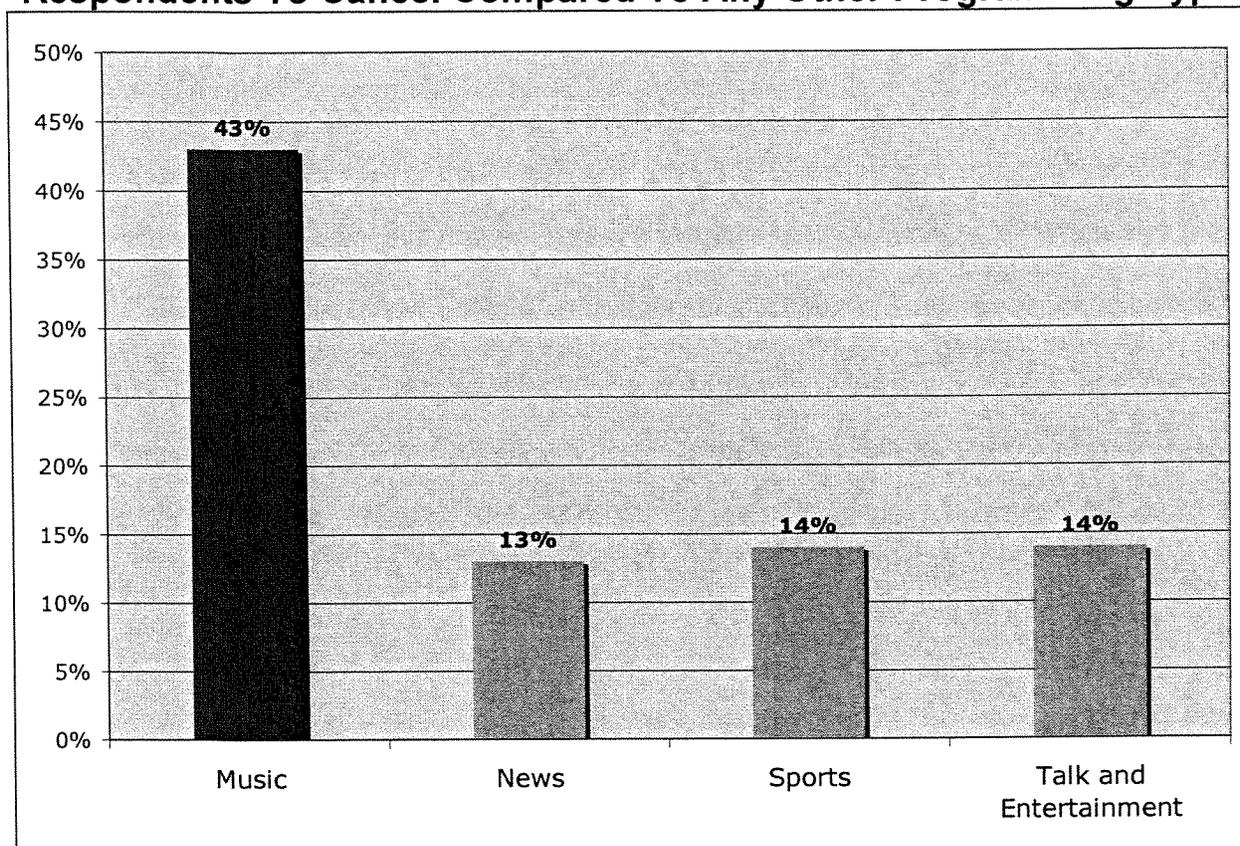
359. Thus, on the critical question of what causes people to subscribe and retain their satellite radio subscriptions, the answer is clear: music programming, more than any other programming type.

b. Willingness to Pay

360. Dr. Wind's study also looked at the amount that consumers would be willing to pay for a satellite radio service that lacked various types of programming. The loss of music programming had a far more dramatic effect on consumer willingness to pay as compared to any other type of programming. *Id.* 23.

361. Dr. Wind's study found that consumers, on average, would be willing to pay only \$6.15/month for a service identical to the current satellite radio service, save for the fact that it lacked music programming. *Id.* at 24. In comparison, consumers would pay \$9.99 for a service that lacked talk and entertainment programming. *Id.* A full 43% of consumers would cancel their service if it lacked music; only 14% would cancel if it lacked talk and entertainment programming. *Id.* In other words, losing music would cause three times as many subscribers to cancel, as compared to losing any other form of programming. *Id.* Indeed, Dr. Wind's study shows that more people (43%) would cancel if music were cut, than if news (13%), sports (14%), and talk (14%) programming were all cut. *Id.* at 23.

Figure 10. Losing Music Would Cause Three Times As Many Respondents To Cancel Compared To Any Other Programming Type



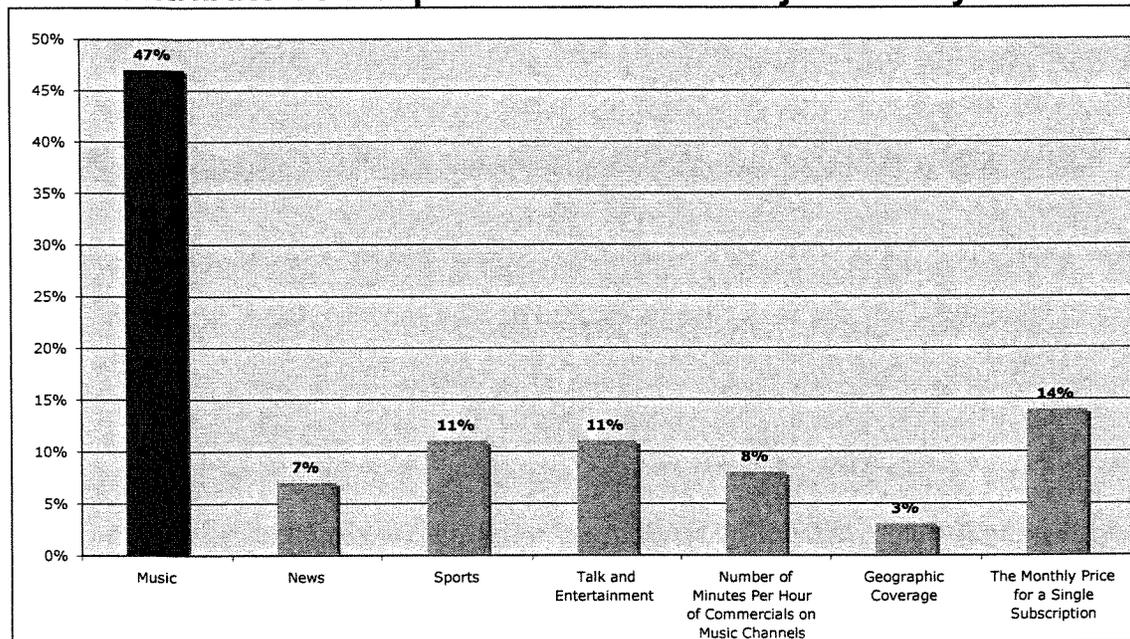
Wind WDT at 24, SX Trial Ex. 51.

362. And as Dr. Pelcovits noted, when one looks at the average price that respondents would pay in the absence of music (\$6.15), it is clear that the SDARS would lose an even greater number of customers, because they could not afford to offer their service at such a low rate. In addition to the 43% who would cancel absent music, the Wind survey found an additional 16% would insist on paying an average reduced rate of \$7.18. Wind WDT at 23, SX Trial Ex. 51. That price is likely not sustainable by the SDARS, so by charging more, they would lose the additional 16% who would only pay less absent music. Pelcovits WDT at 13. n.14, SX Trial Ex. 68 (performing same analysis for Sirius customers).

c. Conjoint analysis

363. Dr. Wind also included a conjoint analysis component in his study, which asked consumers to rank various satellite radio packages that differed in terms of their programming and features. *Id.* at 41. Dr. Wind explained his conjoint methodology in depth in his written direct testimony. *Id.* at App. H. This analysis revealed not only the value that consumers place on programming types, but also the value they place on features like “commercial free,” “nationwide coverage,” and price. *Id.* In total, respondents were asked to rank seven different satellite radio programming type and features. *Id.* Once again, music programming was revealed to be the most valuable aspect of the service. As shown below, 47% of respondents said that music programming was the most important aspect of the service to them – a figure more than triple the next most important feature (price), which was cited by only 14% of respondents as the most important to them. *Id.* at 28-29.

Figure 11. Music Was Overwhelmingly The Most Important Attribute To Respondents In The Conjoint Analysis

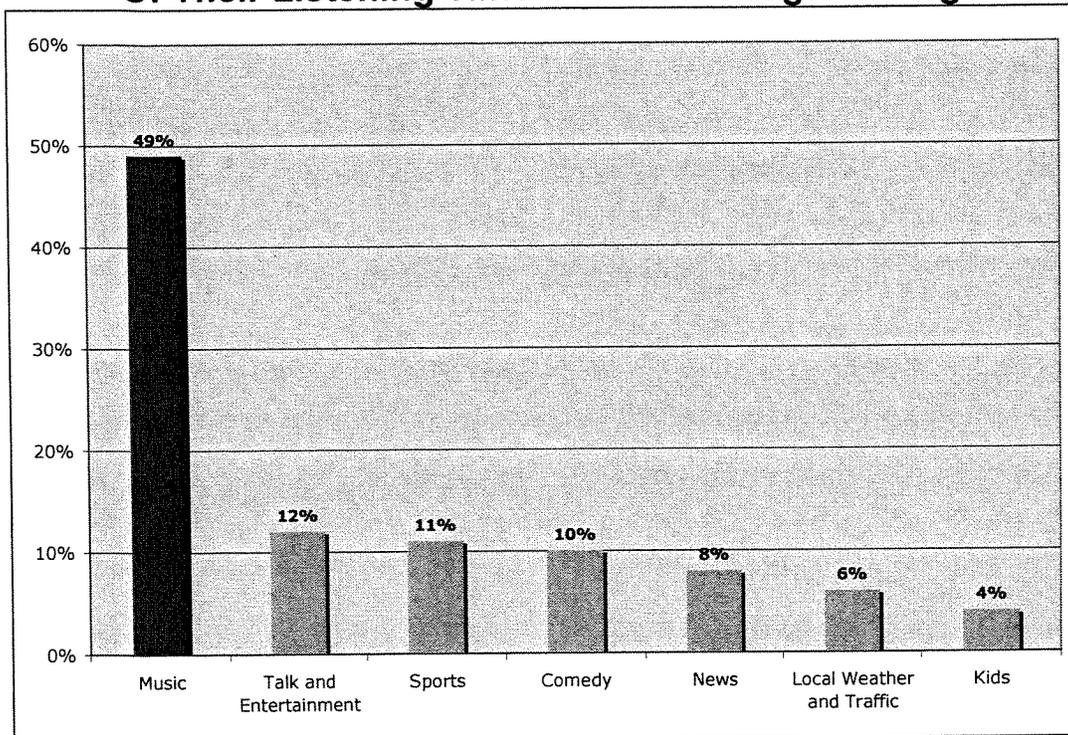


Wind WDT at 28-29, SX Trial Ex. 51.

d. Time spent listening.

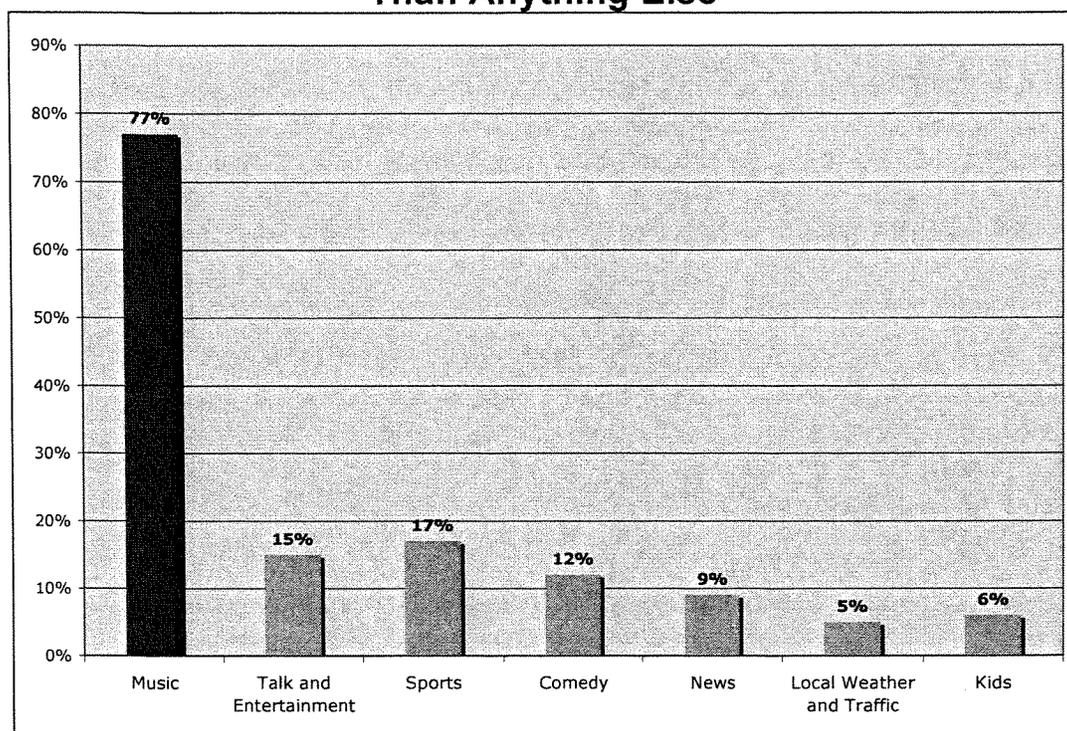
364. The Wind study looked at time spent listening to satellite radio by asking respondents to state the percentage of time they spent listening to each of satellite radio's seven programming types. *Id.* at 39. As shown below, respondents reported that they spent *nearly half* (49%) of their satellite radio time listening to music. *Id.* at 40. Moreover, over three quarters (77%) of respondents said that they spent more time listening to music than to any other type of programming. *Id.* No other programming type came close: the next highest was talk and entertainment programming, which garnered a mere 12% of listening time, and was cited by 15% of respondents as the programming type they listened to the most. *Id.*

Figure 12. Respondents Spend Nearly Half Of Their Listening Time On Music Programming



Wind WDT at 39-40, SX Trial Ex. 51.

Figure 13. The Vast Majority Of Respondents Listen To More Music Than Anything Else



Wind WDT at 39-40, SX Trial Ex. 51.

e. Comedy and Kids Programming.

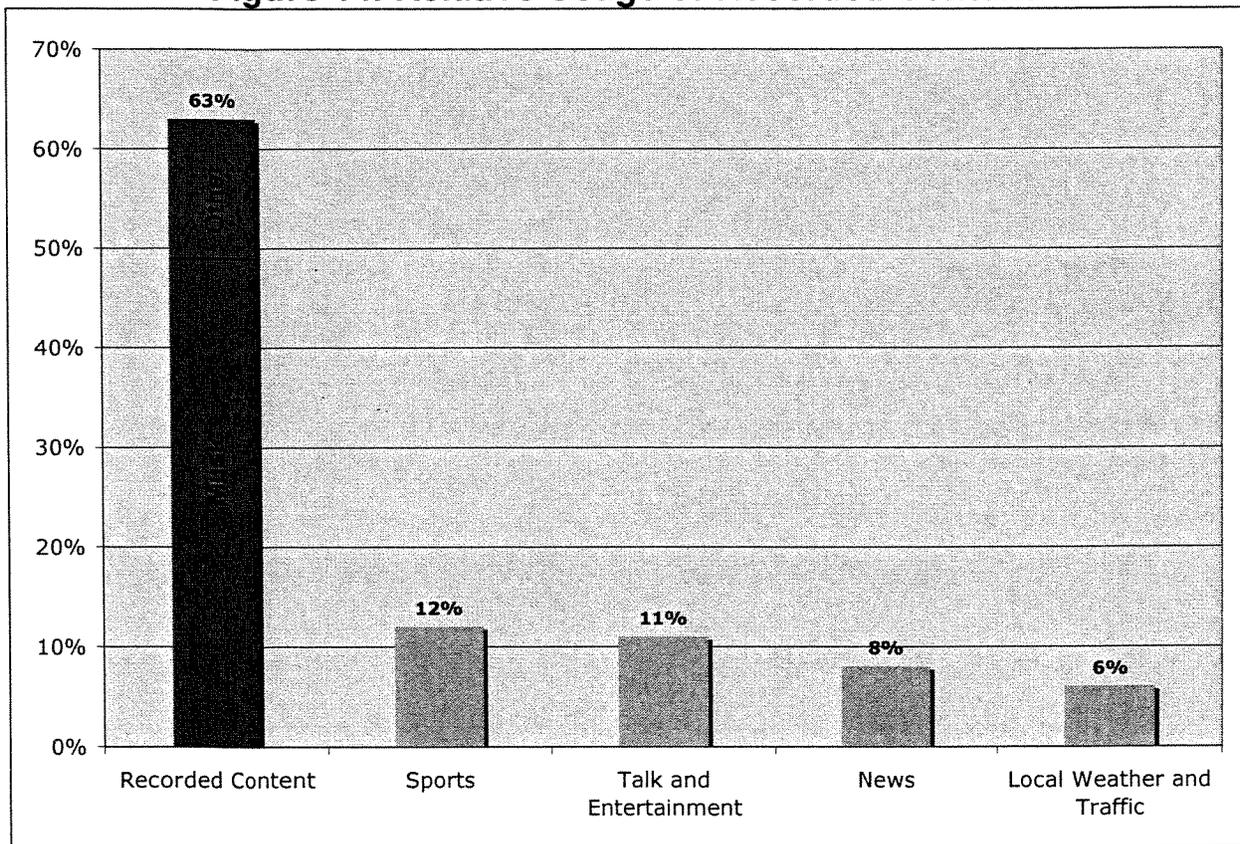
365. All of these results from Dr. Wind's study concerning music programming understate consumer value because they do not include the value that consumers find in comedy and kids programming, both of which involve predominantly transmission of sound recordings (either comedy sound recordings or children's music) and thus are subject to the statutory license to the sound recording royalty right at issue here. SDARS Trial Ex. 80 at Exs. 29 & 30 (Woodbury) (sound recording play counts). As shown below, respondents reported spending 63% of their time listening to music, comedy, or kids programming (and 95% said that they listened to one of these programming types the most). Wind WDT at 48-49, SX Trial Ex. 51.

And respondents ascribed 58% of total importance to these three programming types (and 93% said that one of these types was most important to their decision to subscribe). *Id.*

366. Moreover, as shown in Dr. Herscovici's survey of music programming on non-music, non-comedy, and non-kids channels, it is clear that XM and Sirius use large volumes of sound recordings on non-music channels. Herscovici WRT at 14-17 & App. K, SX Trial Ex.

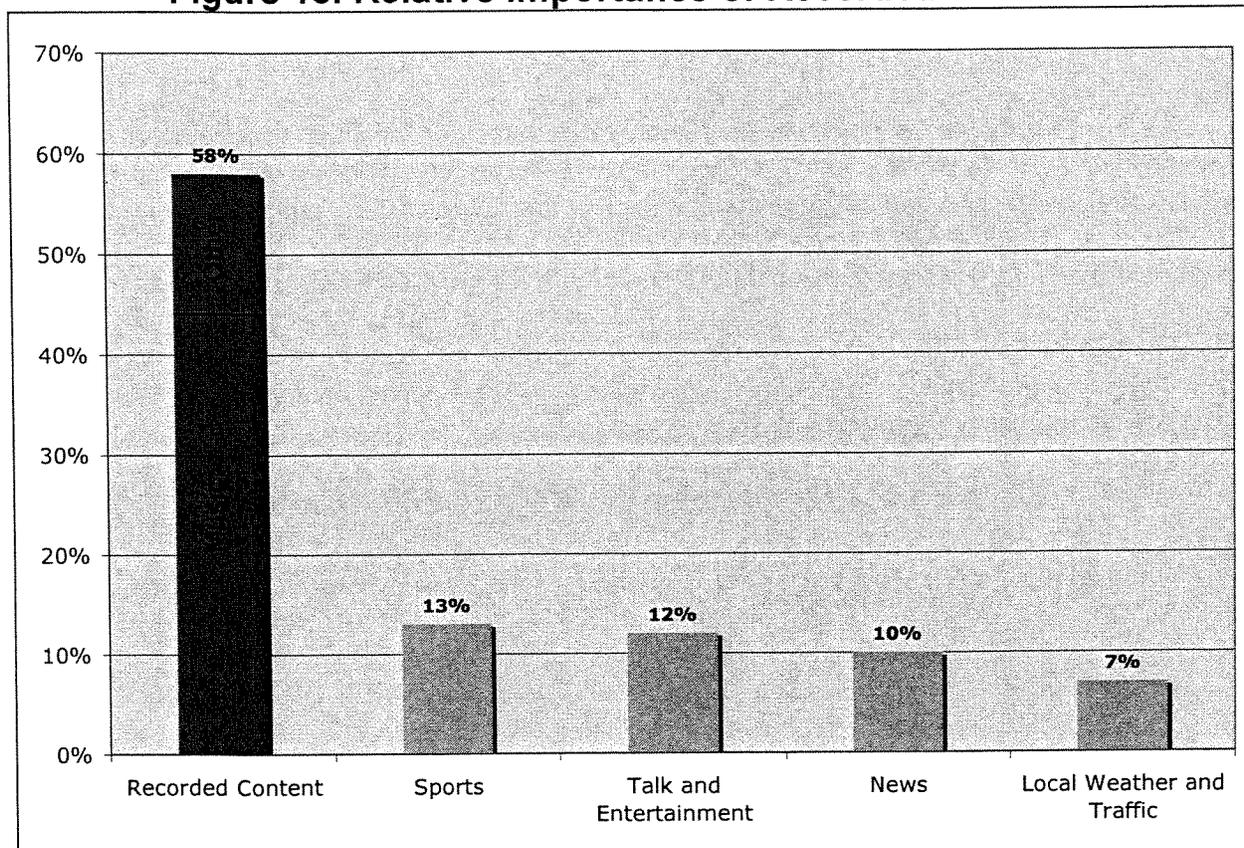
130. Thus, the actual value of music is actually even greater, as music is an essential ingredient of the SDARS' other programming as well.

Figure 14. Relative Usage of Recorded Content



Wind WDT at 48-49, SX Trial Ex. 51.

Figure 15. Relative Importance of Recorded Content



Wind WDT at 48-49, SX Trial Ex. 51.

4. Wind Study Conclusion

367. The results of Dr. Wind's study overwhelmingly demonstrate that consumers value music programming more than any other programming type. Not only is music valued more than other types of programming, but it dominates over them by a wide margin. Dr. Wind's study shows that more than any programming type, music draws people to satellite radio, causes them to remain subscribers, and occupies their listening time.

368. Dr. Ordover found that the survey data and results obtained by Dr. Wind are highly informative regarding the role of music in attracting the SDARS' subscribers, and strongly support the proposition that a representative subscriber to satellite radio values music

programming more than the other programming delivered by the SDARS. Ordover WDT at 23-24, SX Trial Ex. 61. Dr. Pelcovits reached the same conclusion. Pelcovits WDT at 13-14, 27, SX Trial Ex. 68.

369. For much of the analysis provided by both Dr. Ordover and Dr. Pelcovits, it was necessary to estimate the degree to which consumers valued the SDARS service for the music content as compared to the non-music content. To derive an estimate of the percentage of subscriber revenues the SDARS would likely spend on music content following market-based negotiations, Drs. Ordover and Pelcovits relied on Dr. Wind's survey. As discussed above, that survey provided a variety of measures of the importance and value of music to a representative sample of current subscribers to satellite radio networks. On all measures of the importance and value of music, consumers identified sound recordings as the most valuable content delivered by satellite radio service by a wide margin; indeed more important than all of the other types of programming combined. Based upon these findings, Dr. Ordover and Dr. Pelcovits agreed that music accounts for approximately 55% of the value of all programming content distributed by the SDARS. *See* Pelcovits Testimony 13 n.14, 26, SX Trial Ex. 68; Ordover WDT at 23-24, SX Trial Ex. 61.

C. The SDARS Internal Consumer Surveys

370. Dr. Wind's findings are entirely corroborated by the studies the SDARS conducted themselves to determine what consumers value about their service. As Dr. Wind explained in his amended direct testimony, he had the opportunity to review the major periodic studies that the SDARS provided in discovery and found that they confirmed his conclusions. Wind AWDT at 4, SX Trial Ex. 52. The SDARS' studies discuss measures of value like draw, willingness to cancel, and usage, just as Dr. Wind's study did. And just like Dr. Wind's study,

the SDARS' surveys make plain that music programming is their most valuable offering. Indeed, the SDARS' own surveys show music being of even *greater* importance than Dr. Wind's study found. Ultimately, these are companies that name their satellites "Rock" and "Roll," and "Rhythm" and "Blues," Masiello WDT at ¶¶ 25-26, XM Trial Ex. 7— not "Howard" and "Oprah."

371. At the outset, it is important to recognize that once this proceeding began, the SDARS all but ceased conducting surveys. For example, although Sirius conducted 11 Consumer Satisfaction Monitors ("CSM") between September 2002 and August 2006, and had another scheduled for November 2006, they have not conducted a CSM since August of 2006. SX Trial Ex. 35 at 3. Similarly, Sirius had conducted "semi-annual" Listener Studies through the summer of 2006, and it stopped doing so once testimony was filed in this case. Heye WDT at ¶ 14, SIR Trial Ex. 37. For its part, XM has produced only one major study that post-dates the filing of its direct case. As discussed below, the surveys overwhelmingly demonstrate that music programming is their most popular offering to consumers. The SDARS' decision to cease conducting the surveys that they have "routinely used in making programming decisions in the ordinary course of business," Heye WDT at ¶ 17, SIR Trial Ex. 37, strongly suggests that they recognize that additional data would only further undermine their claims regarding the value of music.

1. Draw.

372. Sirius provided detailed data on the reasons why their subscribers became interested in satellite radio in its August 2006 CSM, which is the most recent document it provided. SX Trial Ex. 35. The CSM tracks the reasons why people became interested in

satellite radio. *Id.* at 17. Respondents were allowed to mention as many reasons as they liked, and the CSM reports all reasons that 3% or more of subscribers cited. *Id.*

373. Mr. Coleman conceded at trial that Sirius's music channels are "69 radio stations designed to appeal to practically everyone. As a group, it is a very powerful group." 6/7/07 Tr. 249:8-11 (Coleman). Mr. Coleman's analysis correctly describes music's predominance in driving consumers to Sirius.

374. Specifically, [REDACTED], the last month for which Sirius has provided data, cited music programming or commercial-free music – more than twice the number of people who cited talk and entertainment programming – as a reason for being interested in satellite radio. SX Trial Ex. 35 at 17. A de minimis number of subscribers

[REDACTED]

[REDACTED] *Id.* Indeed, to put it in perspective, [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] *Id.*

375. Sirius's draw data also show that music programming is a more powerful draw than non-programming features. *Id.* For example, while [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] *Id.* In each case, music programming is a far more popular reason for coming to the service. *Id.*

376. In addition, Sirius's most recent data demonstrates that music is the most appealing aspect of Sirius, with [REDACTED] of subscribers ranking music programming as what they

liked most about Sirius, and [REDACTED] stating that commercial-free music was what they liked best. (By comparison, in the second quarter of 2006, only [REDACTED] of subscribers stated that Howard Stern was what they liked most about Sirius, and only [REDACTED] stated that “sports” was what they liked most, and only [REDACTED] said that the NFL was what they liked most.)

377. These data conclusively demonstrate that Sirius is incorrect when it claims that sports programming is a larger draw to its service than music. Sirius claims that the NFL led to a huge increase in subscribers, and that in 2004, Sirius research showed that the NFL was “the number one reason to subscribe to Sirius.” 6/7/07 Tr. 347:1-7 (Cohen); Karmazin WRT ¶¶ 24-25; Sirius Trial Ex. 62. However, the survey research does not support this contention. For subscribers who activated Sirius between June 2004 and July 2005 – the first year of NFL programming – only [REDACTED] cited the NFL as the reason for subscribing to satellite radio, as compared to [REDACTED] that cited music programming and [REDACTED] that cited commercial free music. SX Trial Ex. 35 at 17. And only [REDACTED] cited the NFL as their reason for choosing Sirius over XM in that same time period. SX Trial Ex. 35 at 18. (This is the same percentage of subscribers that chose Sirius over XM because of either the music programming or the commercial free music.) *Id.* And in the second quarter of 2006 – the most recent time period for which Sirius has provided data – only [REDACTED] of subscribers cited “sports programming” as the reason for subscribing to satellite radio. SX Trial Ex. 35 at 17; 6/11/07 Tr. 28:7-13 (Cohen). In fact, an internal Sirius email to Mr. Karmazin discussing Sirius’s focus group research explained that

[REDACTED]

[REDACTED]

[REDACTED] SX Trial Ex. 29 at 1. The same email noted that [REDACTED]

[REDACTED]

[REDACTED]
[REDACTED] SX Trial Ex. 29 at 1.

378. XM's internal documents tell the same story about music's preeminence as a draw to their service. XM's internal studies show that [REDACTED]

[REDACTED] SX Trial Ex. 1 at 2; 6/5/07 Tr. 61:20-64:6 (Parsons). Moreover, for subscribers themselves, "[REDACTED]

[REDACTED]" SX Trial Ex. 1 at 24; 6/5/07 Tr. 64:15-65:2

(Parsons), and it also ranks highest in [REDACTED]. SX Trial Ex. 2 at 11.

Music is also "the most important type of programming for all demographic groups." SX Trial Ex. 1 at 27; 6/5/07 Tr. 65:3-11 (Parsons). And even for sports fans, music is the most important type of programming. SX Trial Ex. 1 at 25; 6/5/07 Tr. 65:22-66:6 (Parsons). Indeed, an XM internal report loudly declares [REDACTED]

[REDACTED] SX Trial Ex. 2 at XMCRB 0016479.

379. Music's importance to XM manifests itself in how XM allocates its bandwidth – its "principal commodity," 6/5/07 Tr. 242:20 (Logan); Logan WDT at ¶ 9, XM Trial Ex. 2, which reflects "how [they] monetize [their] business," 6/5/07 Tr. 242:20-243:2 (Logan). XM has allocated [REDACTED] of its bandwidth to music. SX Trial Ex. 2 at 29. In other words, XM is "willing to devote 70 percent approximately, or 68 in this case, of [their] bandwidth" – their principal commodity – "to music." 6/5/07 Tr. 242:20-243:2 (Logan). XM allocates its resources in this manner so as to most effectively "build an offering that will promote the acquisition and retention of subscribers." Logan WDT at ¶ 12, XM Trial Ex. 2.

380. In a research study conducted [REDACTED] XM discovered that messages concerning music programming dominated. SX Trial Ex. 17 at 3, 6. In fact, the study revealed that [REDACTED] SX Trial Ex. 17 at 6. And it is this theme upon which XM relies throughout its messaging to attract subscribers to its service. SX Trial Ex. 17 at 6, 10-12. Music-related messages dominate among those that resonate most with potential subscribers to the service. SX Trial Ex. 17 at 6, 10-12.

381. XM “has achieved broad listener appeal across subscribers of different ages. Cook WDT at 12, XM Trial Ex. 6. And as XM’s own internal studies reveal, music programming is the most appealing aspect of the XM service across *all* age groups, and across *all* demographics. *See, e.g.*, SX Trial Ex. 1 at 27 [REDACTED] Music ranks at least [REDACTED]. SX Trial Ex. 1 at 27.

2. Willingness To Cancel

382. Sirius also keeps track of the extent to which subscribers would cancel in the absence of certain programming. In August 2005, Sirius reported that [REDACTED] of its subscribers would cancel their service if there were no music programming. SX Trial Ex. 33 at 5. In comparison, only [REDACTED] would cancel if Sirius dropped its NFL programming. *Id.* That is, approximately [REDACTED] times as many people would cancel their subscriptions if music were eliminated than if the NFL were eliminated.

383. The same survey also asked Sirius subscribers how likely they would be willing to pay an additional \$2 for certain content based on a 5 point scale (with 5 being “highly likely”).

A full [REDACTED] reported a likelihood of 4 or 5 that they would pay an additional \$2 for music, [REDACTED] reported a 4 or 5 likelihood for the NFL, and only [REDACTED] reported such a likelihood for Fox News. SX Trial Ex. 33 at 5.

384. As the SDARS' economics expert, Professor Noll, recognizes, an informative measure "for evaluating a channel is how much people would pay to keep that channel available." Noll WRT at 72, SDARS Trial Ex. 72. And as the Sirius survey shows, subscribers would pay more to keep music channels available than they would to keep other channels – such as Fox News and the NFL – available.

385. Sirius also keeps track of cancellation on a channel by channel basis that Dr. Woodbury used in calculating the value of music. The Woodbury "cancellation index," discussed below, also reveals that losing music programming would cause more subscribers to cancel than losing any other type of programming.

3. Usage

386. Sirius and XM both maintain a large amount of data on measures of usage. As noted above, usage is highly correlated with importance for consumers. *See supra*. And, like the Wind study, the SDARS' surveys also show that subscribers listen to more music programming than anything else. Dr. Wind's study showed that respondents listened to music programming 49% of the time. As shown in the figure below, [REDACTED]
[REDACTED] Wind AWDT at 6, SX Trial Ex. 52.

Figure 16. The SDARS Report An Even Higher Level Of Music Listening Than Dr. Wind's Study



Wind AWDT at 6, SX Trial Ex. 52.

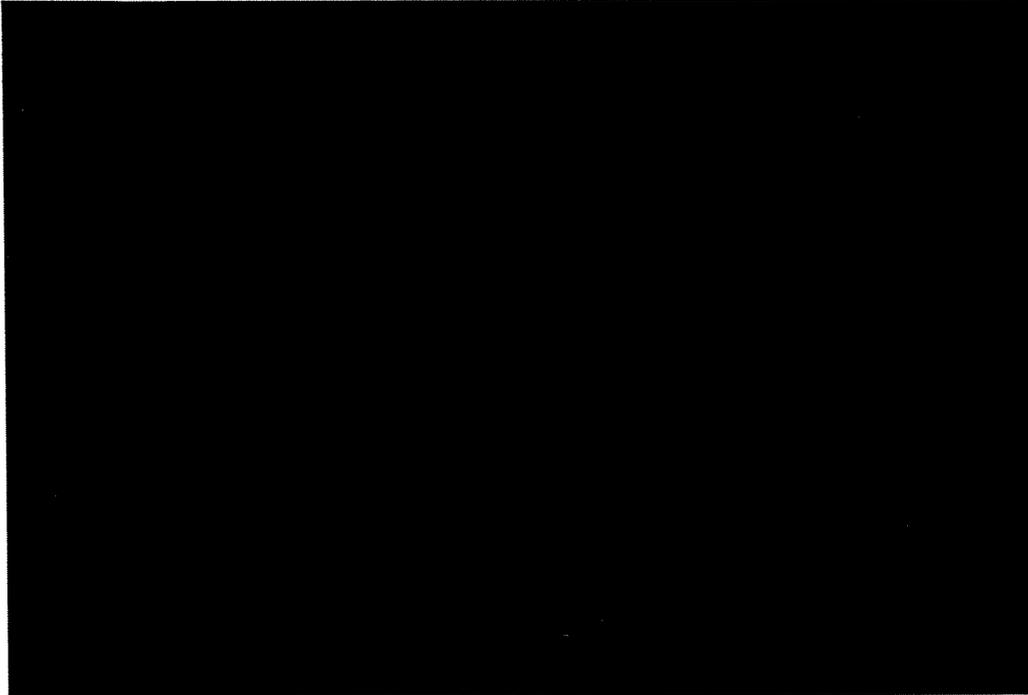
387. The predominance of music listening may be why several Sirius and XM strategy documents [REDACTED] [REDACTED] When Sirius was considering whether to carry NBA games, it found [REDACTED]. SX Trial Ex. 52 at SX Ex. 117 DR at SIR0038898. And when XM was considering whether to continue to carry NASCAR programming, it observed that [REDACTED] [REDACTED] SX Trial Ex. 52 at SX Ex. 121 DR at XMCRB 0023786 (emphasis added). These observations are clearly correct, for as shown in the figure below, [REDACTED] [REDACTED]. XM reports that [REDACTED]

[REDACTED]

[REDACTED]¹³ SX Trial Ex. 52 at SX Ex. 111 DR at SIR

00004458.

Figure 17. Music Listening Far Outpaces Sports Listening



Wind Amended WRT at 8, SX Trial Ex. 52.

Sirius and XM both track the individual channels that have the highest number of listeners.

Again, results from Sirius and XM reveal that music dominates this measure. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] SX Trial Ex. 52 at SX Ex. 112 DR at

SIR00025697. [REDACTED]

¹³ [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]. 6/7/07 Tr. 258:1-8 (Coleman) (closed session).

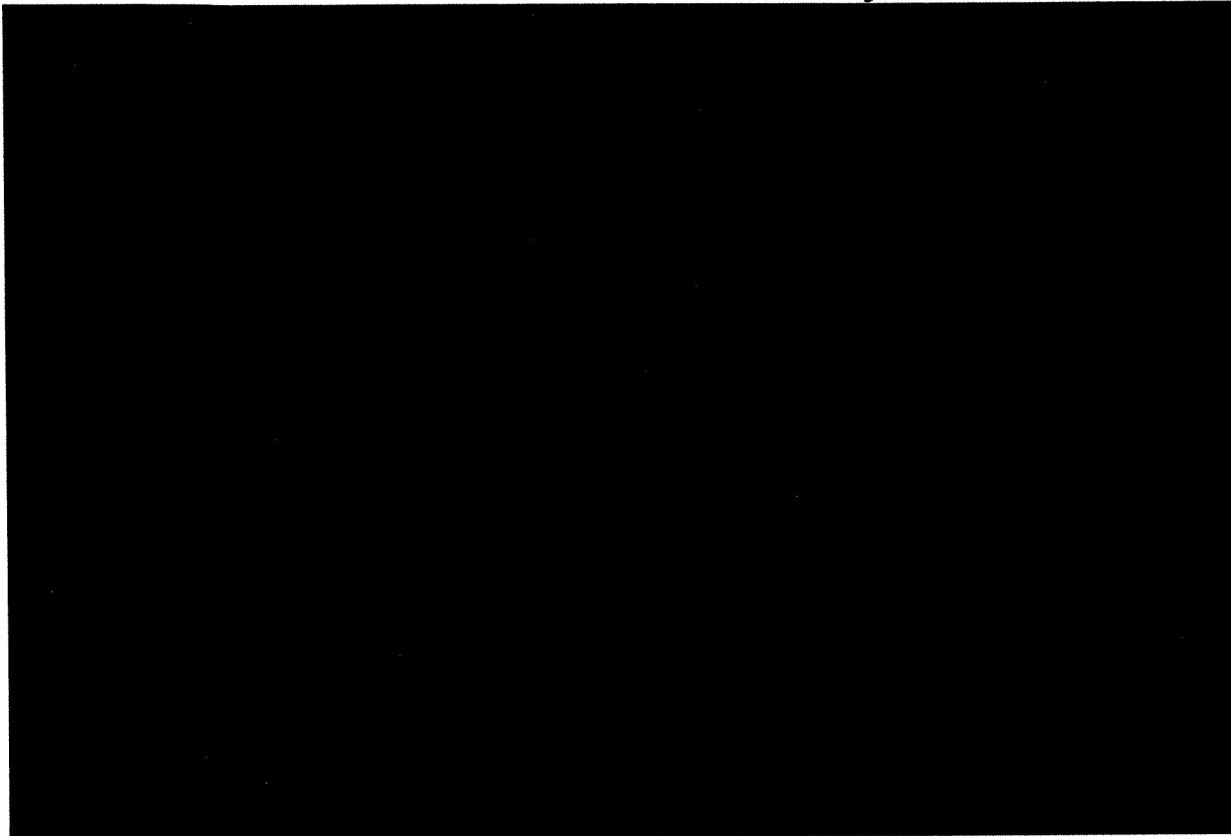
388. [REDACTED]

[REDACTED]

[REDACTED]¹⁴ SX Trial Ex. 52 at SX Ex. 113 DR at

XMCRB 13794; SX Trial Ex. 52 at SX Ex. 114 DR at 00119117.

Figure 18. Percentage Of The Ten Most-Listened To Channels That Are Music Or Comedy Channels

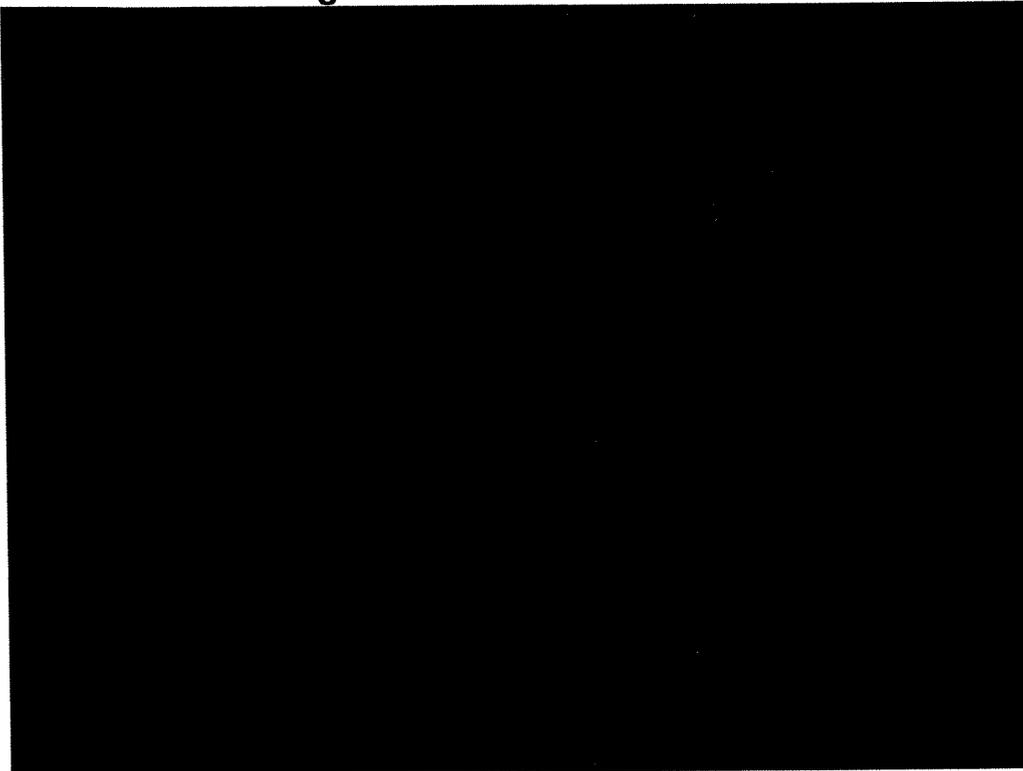


Wind AWDT at 10, SX Trial Ex. 52.

¹⁴ [REDACTED]

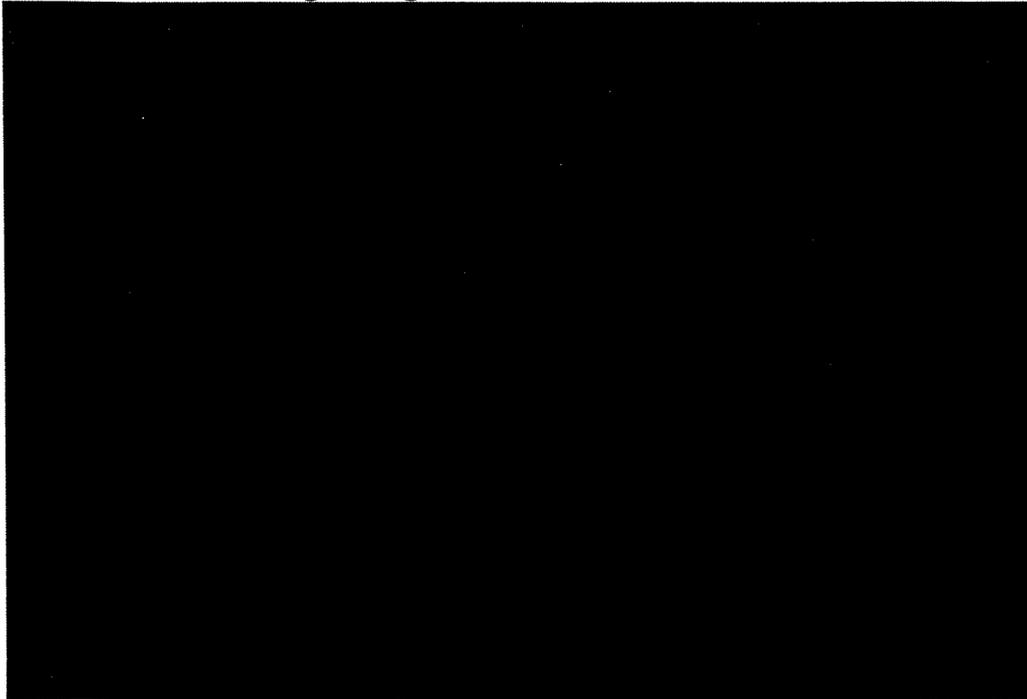
XM also reports that [REDACTED]
[REDACTED] are its most popular types of channels. SX Trial Ex. 52 at SX Ex. 122 DR at XMCRB
0051613. And as the figures below show, Sirius reports that its [REDACTED]
[REDACTED]
[REDACTED]. SX Trial Ex. 52 at SX Ex. 112 DR at SIR 00025739.

**Figure 19. Music Channels Have The Most Listeners
Among Recent Sirius Subscribers**



Wind AWDT at 11, SX Trial Ex. 52.

**Figure 20. Music Channels Have The Most Listeners
Among Longtime Sirius Subscribers**



Wind AWDT at 11, SX Trial Ex. 52.

389. In sum, the evidence is uncontroverted that satellite radio subscribers listen to more music programming than anything else.

4. The Effect of Howard Stern

390. Sirius has argued repeatedly throughout this proceeding that Howard Stern's value to the service is far greater than music's value. Sirius's *own* survey evidence entirely refutes that claim (and of course, XM does not even have a Stern-like figure it can point to as being more important than its music programming).

391. It is important to recognize at the outset that Howard Stern has a limited appeal to a discrete group of subscribers. Prior to signing Stern, Sirius commissioned a study by Odyssey to understand the effects of Howard Stern on consumers' likelihood to subscribe to satellite radio

– a study presented to Sirius’s board of directors and upon which Sirius relied when deciding to acquire Howard Stern at the current rate, *see* SX Trial Ex. 70 at SX Exhibit 144 DR, p. 5.

According to the Odyssey study [REDACTED] with [REDACTED] of radio listeners saying their overall image of him is [REDACTED] SX Trial Ex. 83 at 11. The study further found that Howard Stern had [REDACTED], and that he [REDACTED] SX Trial Ex. 83 at 12, 13. In fact, [REDACTED] SX Trial Ex. 83 at 16. This high degree of unpopularity contrasts markedly with music’s broad appeal.

392. The Odyssey study further advised that [REDACTED] [REDACTED] SX Trial Ex. 83 at 31 (emphasis added). In fact, only [REDACTED] of radio listeners would be more likely to buy/subscribe if Howard Stern were only available through satellite radio, as compared to the [REDACTED] who would be less likely to buy/subscribe.

393. Sirius’s own internal studies confirm that Howard Stern’s influence is [REDACTED] [REDACTED] Howard Stern began broadcasting on Sirius in January 2006 and he was heavily promoted by Sirius in 2005 in anticipation of his show. As the figure below shows, [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED] *Id.*

**Figure 21. Percentage of New Sirius Subscribers
Who Said They Were Interested In Talk Programming**



Wind AWDT at 17, SX Trial Ex. 52.

394. [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

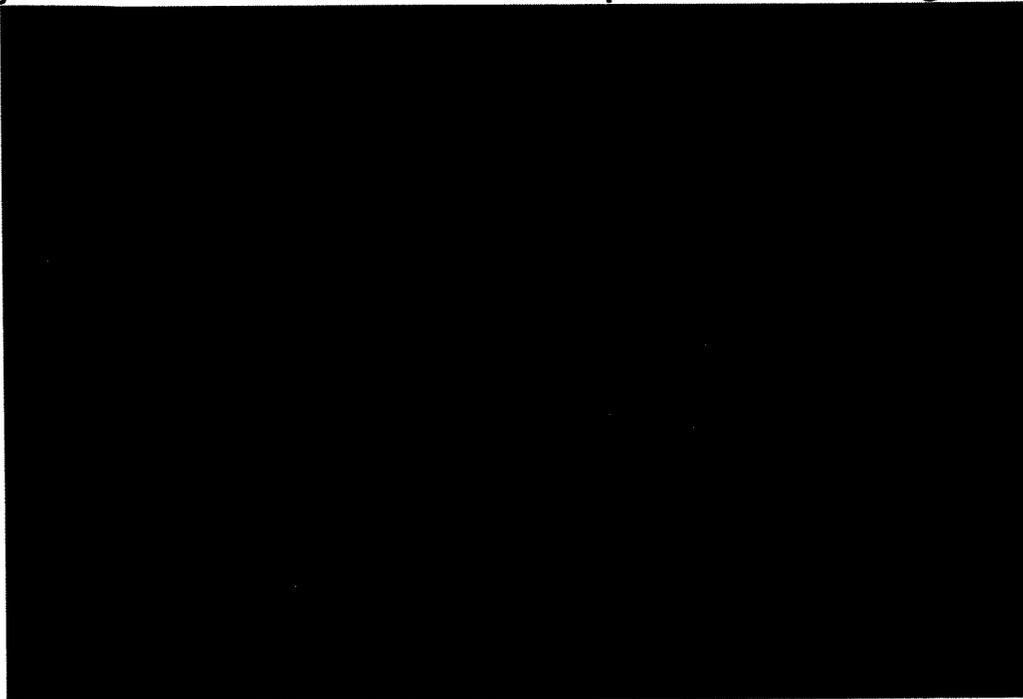
[REDACTED]

[REDACTED]

[REDACTED]

] The fact that Howard Stern's ability to draw new customers is rapidly diminishing may explain why Sirius has chosen not to conduct any additional studies beyond June 2006 on the subject.

Figure 22. Percentage of New Sirius Subscribers Who Said They Were Interested in Music as Compared To Talk Programming



Wind AWDT at 19, SX Trial Ex. 52.

15 [

[REDACTED]

395. It is also important to note that although a subset of listeners may have joined because of Howard Stern, those subscribers still listen to a lot of music. Indeed, since Howard Stern went on the air nearly every [REDACTED] [REDACTED] SX Trial Ex. 52 at SX Ex. 112 DR at SIR 00025697. Music usage has thus continued to rise.

396. The SDARS' internal surveys entirely corroborate Dr. Wind's own testimony. All of these surveys show that, measured any which way, music programming leads all other programming types in the eyes of the consumer.

D. The Hauser survey

1. Overview

397. Dr. Hauser attempted to replicate the Wind study and expose and correct supposed flaws in it. At the outset, this must be deemed a peculiar approach because Dr. Wind's results confirm those the SDARS themselves found in their own surveys. *Both* Dr. Wind's study and the SDARS' research confirm that music leads in terms of draw, willingness to cancel, and time spent listening measures. For this reason, it should not be surprising that Dr. Hauser's "corrected" study in no way impeaches Dr. Wind's (or the SDARS' own) results.

398. The ultimate irony of Dr. Hauser's study is that he finds – *after eliminating every possible contribution of value from other content providers and the SDARS themselves* – that the value of SoundExchange's contribution is \$1.78 per subscriber per month. Hauser WRT at ¶ 11, SDARS Trial Ex. 77. That result is entirely consistent with SoundExchange's rate proposal. Indeed, it is further proof of the reasonableness of SoundExchange's proposal, and the unfairness of the SDARS' proposal (which amounts to a bare fraction of Dr. Hauser's valuation).

399. Moreover, as explained in detail below, Dr. Hauser's primary point – that the SDARS provide functionality that contributes to the value of music – is entirely irrelevant to the calculations performed by the economists using Dr. Wind's figures. Dr. Hauser conceded that he is not an economist and does not offer an economic critique of Dr. Pelcovits's and Dr. Ordover's benchmarking or modeling analysis. 8/7/07 Tr. 215:8-16 (Hauser). And it is plain that Dr. Hauser does not understand how the economists use Dr. Wind's figures. Through his survey, Hauser attempts to place a value on the functionality – *other than content* – that the SDARS provide (*e.g.*, nationwide coverage). Hauser WRT at Ex. J-1, SDARS Trial Ex. 77. With the wealth of benchmarks available showing real world valuations, the economists had no need look to survey data to determine the value of functionality like nationwide coverage or portability. Instead, the benchmarks economists use capture the value of that functionality by showing what portion of a service's revenues are retained by the copyright user and what portion is collected by the copyright holder – a division that reflects value furnished by each party. *See infra* Section V. Dr. Hauser's attempt to determine these values through survey work is simply another approach to the issue of valuation – and one that led him to the same conclusions as SoundExchange's economists.

400. Thus when Dr. Ordover compares the percentage of revenues that music rights holders get in the market for, say, portable interactive services, that percentage inherently takes into account the value the market places on the right holder's contribution to the service (the music), and the service provider's contribution to the service (portability, sound fidelity). *See infra*. That is the nature of a benchmark. Likewise, when Dr. Pelcovits analyzed the Howard Stern agreement to determine an appropriate sound recording royalty, the compensation that Sirius agreed to pay Stern already reflected the fact that the SDARS provided a nationwide, high

fidelity platform for Stern. *See infra*. Since the Stern benchmark already reflected the bargain between Stern and Sirius that presumably gave Sirius the benefit of its contribution (and Stern the benefit of his), Dr. Pelcovits needed only to compare the value of Stern to the value of music, and did not need to also evaluate the value of nationwide coverage or sound quality. 7/09/07 Tr. 191:14-192:8 (Pelcovits).

401. All of these findings are discussed in detail within, *see* Section V *infra*, but leaving aside for the moment the fact that Dr. Hauser's ultimate results *support* SoundExchange's analysis and rate proposal, it is also important to recognize that Dr. Hauser's other criticisms of Dr. Wind's study miss the mark.

2. Inherent Limits To Dr. Hauser's Analysis.

402. Dr. Hauser offers *no* criticism of some of Dr. Wind's central findings:

- More respondents (67%) cited music programming than any other programming type as being critical in causing them *to subscribe*. Wind WDT at 32, SX Trial Ex. 51.
- More respondents (59%) cited music programming than any other programming type as being critical in causing them *to continue to subscribe*. Wind WDT at 34, SX Trial Ex. 51.
- More respondents (77%) of respondents said that they *listened to music* programming more than any other type of programming. Wind WDT at 40, SX Trial Ex. 51.
- The SDARS' *own surveys* show that music programming is satellite radio's greatest draw, greatest source of usage, and most necessary to prevent customers from cancelling. *See generally* Wind AWDT, SX Trial Ex. 52.

Most of the criticisms that Dr. Hauser does make are particularly superficial.

403. *First*, Dr. Wind's survey finds that 50% of respondents said that music programming would be the aspect of satellite radio that they would miss the most if it were gone. Wind WDT at 36, SX Trial Ex. 51. Dr. Hauser contends that this question is biased because the

“bulk of the [Wind] survey focuses on programming [and] it is likely that respondents were primed to answer about programming.” Hauser WRT at ¶ 51, n.58, SDARS Trial Ex. 77. That criticism, however, does nothing to explain why music programming scored three times as high as talk and entertainment programming (16%), the next highest would-be-missed aspect. Wind WDT at 36, SX Trial Ex. 51.

404. Moreover, the claim that the survey focused on programming is simply not true. Not only did many of the questions not have a programming focus (e.g., questions 1, 4, 6, 10), but the respondent would have just finished the conjoint exercise prior to answering the “most-missed aspect” question. Wind WDT at App C, SX Trial Ex. 51. The conjoint exercise required respondents to focus closely on several non-programming aspects, including coverage and sound quality. Wind WDT at 41, SX Trial Ex. 51. Thus, there was no prejudice in the ordering of the questions.

405. *Second*, Dr. Wind’s survey shows music programming (36%) was the single most cited feature when consumers were asked to state reasons that they subscribed to satellite radio. Wind WDT at 29, SX Trial Ex. 51. Dr. Hauser claims that in fact “commercial-free” programming was most cited. Hauser WRT at ¶ 50, SDARS Trial Ex. 77. Again, Dr. Hauser is incorrect: only 27% of respondents cited commercial free programming. Wind WDT at 29, SX Trial Ex. 51.

406. Dr. Hauser focuses on the fact that 17% of respondents mentioned music programming *first*, while 20% mentioned answers dealing with commercial free or fewer commercials first. Hauser WRT at ¶ 50, SDARS Trial Ex. 77. This hardly disproves Dr. Wind’s point. Not only do the responses dealing with commercial-free programming signal a preference for music programming (music programming is the dominant commercial free programming on

the SDARS), but the 20% included many respondents who stated commercial-free music explicitly. Wind WDT at 29, SX Trial Ex. 51. Dr. Hauser fails to mention, as well, that only 5% of respondents mentioned talk and entertainment programming first. Wind WDT at 29, SX Trial Ex. 51.

3. Dr. Hauser's flawed willingness to pay question.

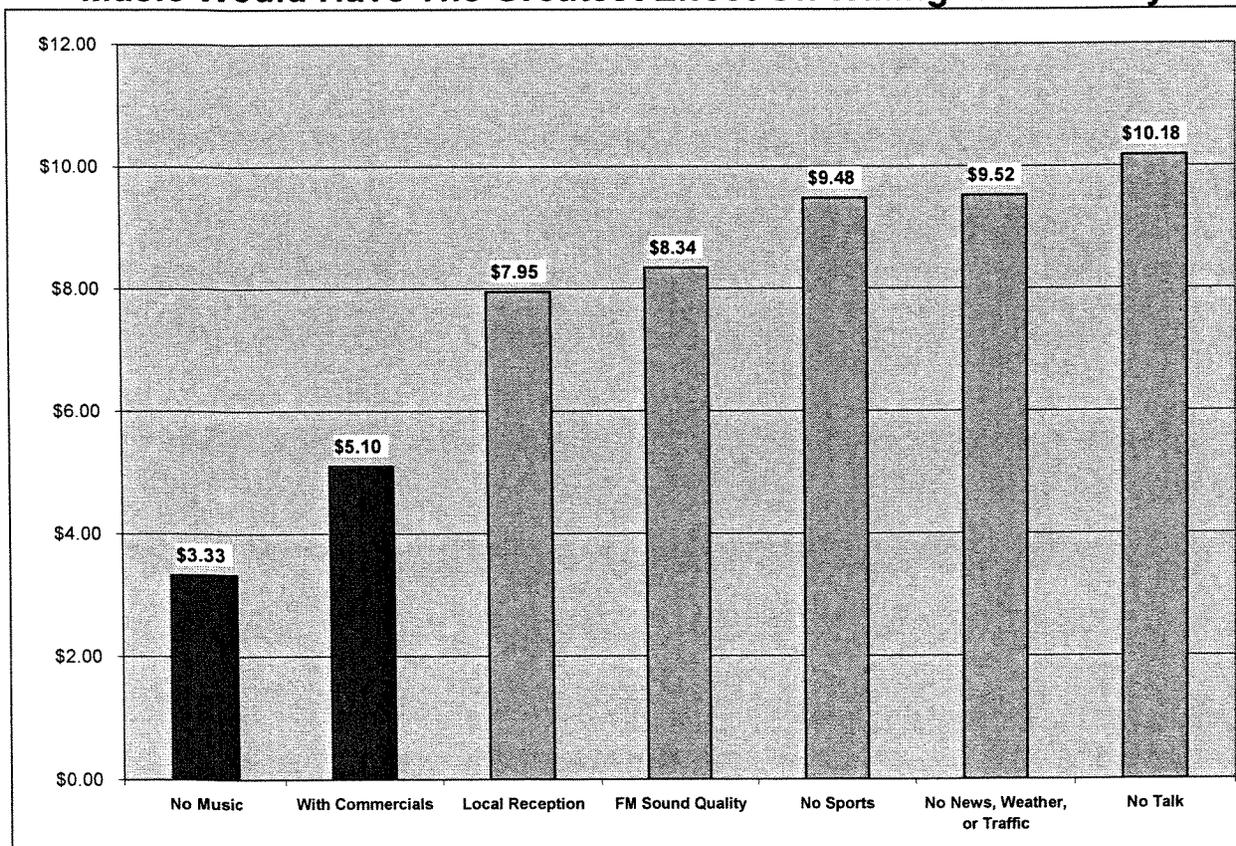
407. Dr. Hauser's study focused primarily on correcting alleged flaws in Dr. Wind's willingness to pay question. Dr. Hauser's willingness to pay question differed from Dr. Wind's. His question included both non-programming features (nationwide coverage, sound quality, and number of commercials) and programming types (music, talk, sports, news). Another difference came from the manner in which the question was asked. Dr. Wind's survey simply asked how much a consumer would pay for a service that lacked music programming but was otherwise identical to the current service. Wind WDT at App. C, SX Trial Ex. 51.

408. Dr. Hauser's survey, by contrast, asked a complicated series of questions. For example, his questionnaire asked "Now, how much would you pay ... for satellite radio if You couldn't get reception nationally, just locally, AND, Sound quality was only equal to that of FM radio you can listen to AND, There were as many commercials as on AM or FM Radio AND There was no music available, not even your favorite channels AND There were no talk shows available, not even your favorite hosts, AND, There was no sports coverage available, not even your favorite teams." Hauser WRT at Ex. E at 4, SDARS Trial Ex. 77.

409. Dr. Hauser concludes on the basis of his methodology that music is substantially less valuable than what he says Dr. Wind finds. Even assuming that a respondent could follow such byzantine questions, Dr. Hauser's conclusion is built on a series of errors.

410. *First*, Dr. Hauser’s study further confirms that music programming is more valuable than any of the other programming types – or the non-programming features that he tests. Dr. Hauser reports that consumers are willing to pay \$3.33 for a satellite radio service that lacked music (but was otherwise the same as the current service). Hauser WRT at Ex. J-1 at 1, SDARS Trial Ex. 77. Conversely, he finds that consumers are willing to pay \$10.18 for a satellite radio service that lacked talk programming (but was otherwise the same as the current service). Hauser WRT at Ex. J-1 at 1, SDARS Trial Ex. 77. The following figure shows what consumers would be willing to pay for a satellite radio service missing each feature.

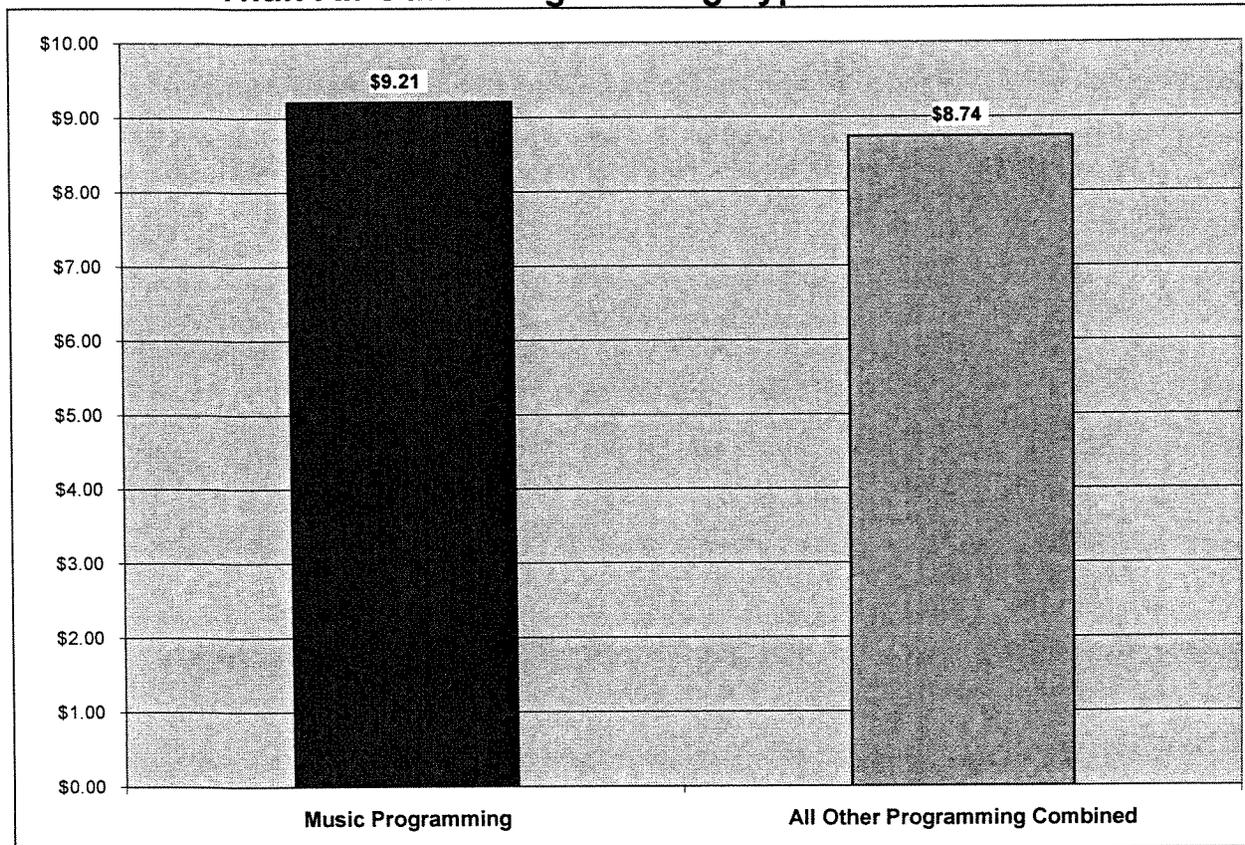
Figure 23. Dr. Hauser’s Study Confirms That Losing Music Would Have The Greatest Effect On Willingness To Pay



Hauser WRT at Ex. J-1 at 1, SDARS Trial Ex. 77.

411. The loss of music programming has by far the greatest effect on willingness to pay. In fact, the value of music programming is worth more than the value of all other types of programming put together. As shown below, music programming is worth \$9.21 on Dr. Hauser's account. *All other programming combined is worth just \$8.74.*

Figure 24. Dr. Hauser's Study Shows That Music Is More Valuable Than All Other Programming Types Combined



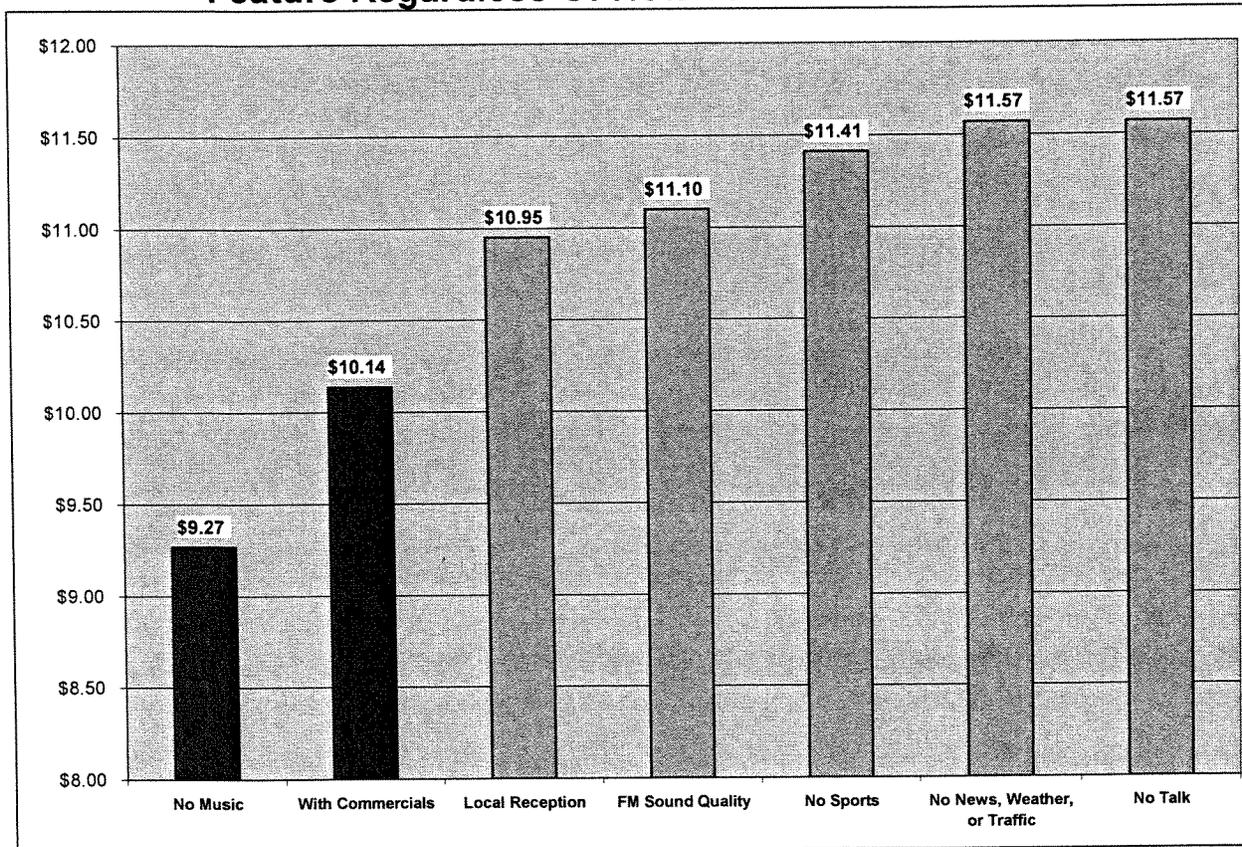
Hauser WRT at Ex. K-1 at 1, SDARS Trial Ex. 77.

412. The only other feature that comes close is the loss of commercial-free programming. But that only confirms the value of music, as it is overwhelmingly the music channels that are commercial-free. Thus consumers are indicating that losing music

programming entirely would reduce value the most, and that having commercials (i.e., having less music per hour) would cause the second greatest reduction in value.

413. Even when the reductions in value are calculated according to Dr. Hauser's preferred method of removing features cumulatively, music programming is still the most valuable feature, as the figure below demonstrates.

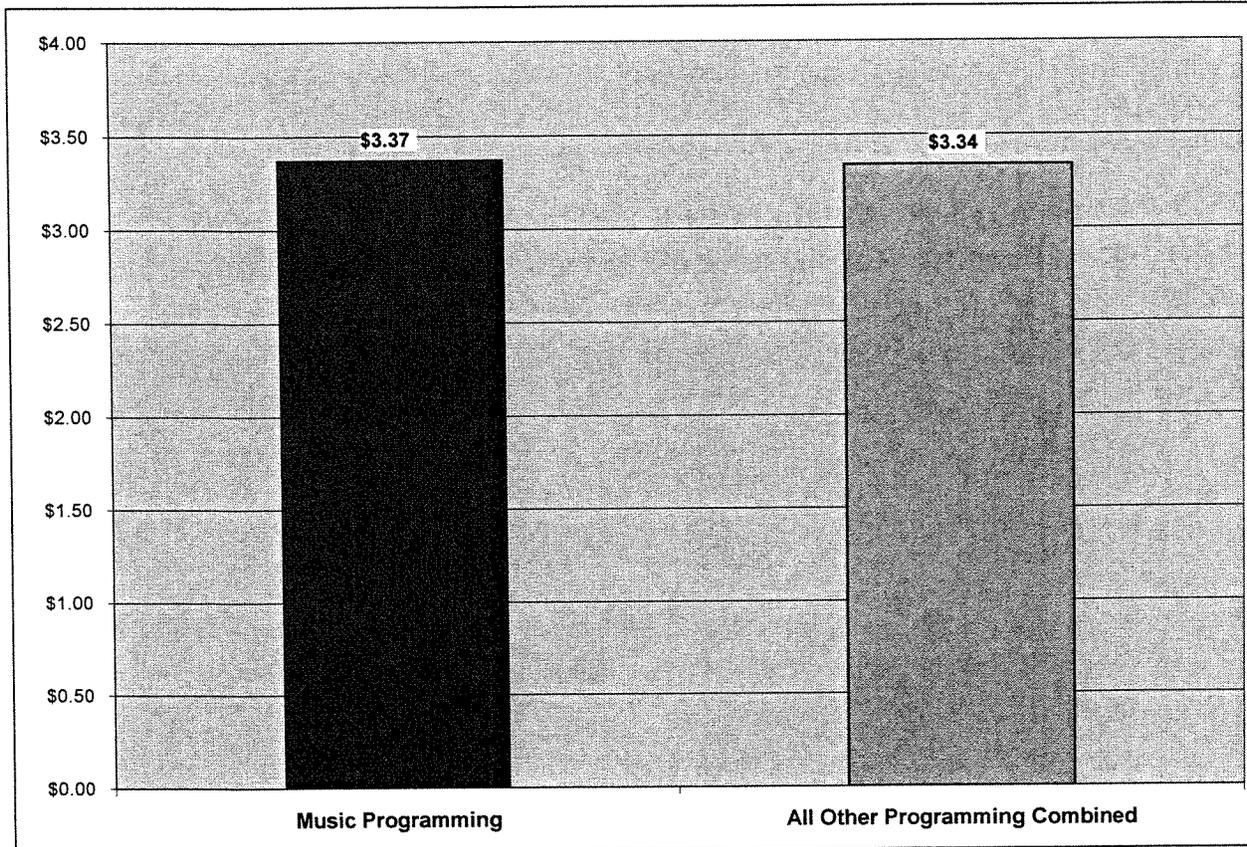
Figure 25. Music Is Still By Far The Most Valuable Feature Regardless Of How Value Is Calculated



Hauser WRT at Ex. J-1 at 1, SDARS Trial Ex. 77.

414. And again, music programming is more valuable than all other programming types put together, even using Dr. Hauser's preferred methodology, as shown in the figure below.

Figure 26. Even Using Dr. Hauser's Preferred Method, Dr. Hauser's Study Shows That Music Is More Valuable Than All Other Programming Types Combined



Hauser WRT at Ex. K-1 at 1, SDARS Trial Ex. 77.

415. *Second*, in addition to using his preferred method of asking the willingness to pay question cumulatively, Dr. Hauser argues at length that Dr. Wind's questions were not asked in a fair manner. Hauser WRT at ¶¶ 40-44, SDARS Trial Ex. 77. Yet when he corrected the supposed flaws, his results were the same or more favorable than Dr. Wind's. Dr. Wind found that consumers would pay \$6.15 for a service that lacked music. Wind WDT at 24, SX Trial Ex. 51. Dr. Hauser found that consumers would pay only \$3.33/month for an identical service that lacked music. Hauser WRT at Ex. J-1 at 1, SDARS Trial Ex. 77. He then "reweighted" this

figure, *but still found that consumers would pay only \$6.19/month for a service without music* – a figure essentially identical to Dr. Wind’s. Hauser WRT at Ex. J-2 at 1, SDARS Trial Ex. 77. Similarly, Dr. Hauser found that consumers would pay \$10.18 for a service that lacked talk and entertainment programming, Hauser WRT at Ex. J-1 at 1, SDARS Trial Ex. 77, again entirely in keeping with Dr. Wind’s results, which found that consumers would pay \$9.99 for such a service. Wind WDT at 24, SX Trial Ex. 51.

416. *Third*, Dr. Hauser’s willingness to pay question suffers from substantial interdependency problems. For example, someone who was asked how much he would pay for a service that had only FM sound quality might say \$0 because he listened to a lot of music. But while music ultimately would be driving the valuation of sound quality, the respondent would be treated as valuing sound quality at \$12.95/month and music programming at \$0/month. It is obviously absurd that a subscriber would value sound quality at \$12.95 per month and place no value on the very music content that he wants to hear with high fidelity.

417. The same holds true for Dr. Hauser’s measures of local reception: the person who values nationwide reception because she listens to music while driving cross-country would be treated as placing no value on the music programming and full value on the reception feature. The problem is particularly acute for valuing the number of commercials. As noted above, a lack of commercials is equivalent to playing additional music, yet when consumers state a preference for no commercials, Dr. Hauser’s approach ascribes no value to the music programming. Hauser WRT at ¶ 97, SDARS Trial Ex. 77. These problems of cross-valuation are why Dr. Wind did not use non-programming features in his willingness to pay question, and why the economists relied on market benchmarks which automatically account the division of value, rather than on survey evidence.

418. *Fourth*, when Dr. Hauser’s survey removes “commercial-free,” “nationwide coverage,” and “CD quality sound,” as well as the non-music programming types, he is essentially asking the consumer to value music on a FM-radio like service (i.e., one with commercials, FM sound, and local reception). 8/7/07 Tr. 323:10-15. Dr. Hauser finds that consumers would be willing to pay relatively little for music on such a service, but that is entirely in keeping with the derived demand or value pricing economic analysis described *infra* by Drs. Pelcovits and Ordover in which the value of the music for which rights holders receive compensation depends on the value of the service to the end user.

4. Dr. Hauser’s Flawed “Anchored Importance” Question

419. Rather than replicate the constant sum question that Dr. Wind’s survey used to determine what programming types were important to listeners, Dr. Hauser used an “anchored sum” question. Dr. Wind’s question required respondents to allocate 100 points among seven choices, and thus forced them to rank them. Wind WDT at 11, SX Trial Ex. 51. In contrast, Dr. Hauser’s question allowed respondents to allocate as many as 100 points to *each of the 29* options, and thus did not force the respondent to rank choices. Hauser WRT at ¶ 89 SDARS Trial Ex. 77. For that reason alone, the Wind approach (which showed that respondents gave 44 points on average to music programming) is more informative.

420. Indeed, to the extent that the Hauser approach yields any meaningful information, it is that music programming is the SDARS’ most important feature. Of the 29 features that Dr. Hauser provided, “I can listen to music” scored the highest with 89 points. Hauser WRT at Ex. L, SDARS Trial Ex. 77. Each of the *next 15 features* was related to music, either directly or indirectly:

Feature	Points
I can listen to music	89.0
I can listen to music without any commercials	87.2
I can always find what I want to listen to, when I want it	84.1
Provides excellent sound quality	82.3
I can listen to music from the 70's, 80's, 90's and today	81.8
I can listen to my stations wherever I go, even when traveling long distances	81.0
Provides consistently clear reception no matter where I go, even in the city	80.9
The artist and song name are displayed on my screen	80.6
I can listen to a lot of programs and content not available on either AM or FM radio	79.1
It's easy to find what I want to listen to without hunting around	77.1
I don't hear the same things over and over	77.0
The organization of channels makes it easy for me to explore a specific genre	74.4
The depth of the music programming helps me to find new songs to add to my collection	72.2
The DJ's don't talk too much	71.1
I can listen to the same stations in the car, at home, or on the internet	71.0
I can listen to uncensored programs	69.7
There are shows dedicated to specific topics that interest me	68.8
There are stations available for everyone in my family	68.2
I can hear programs and music that make me feel nostalgic for what I used to listen to when I was younger	66.8

Hauser WRT at Ex. L, SDARS Trial Ex. 77.

421. Some of these features are explicitly related to music (e.g., “The DJs don’t talk too much). Others have an implicit connection to music (e.g., “Provides excellent sound quality” or “I can always find what I want when I want to listen to it.”). To the extent that these answers refer to the sound quality of music, or the fact that listeners can always find the music that they want, these answers also show music’s popularity.

422. Dr. Hauser freely concedes that these features are “not necessarily independent,” Hauser WRT at Ex L, SDARS Trial Ex. 77, but the data still strongly suggest music’s dominance. 83% of respondents gave more points to those 19 music-related features than any of

the other features. Hauser WRT at Ex L, SDARS Trial Ex. 77. And even looking at the features that explicitly mention music, Dr. Hauser's data reveal that over 46% of respondents gave more points to one of those features than to any other feature. Hauser WRT at Ex L., SDARS Trial Ex. 77. By comparison, only 5% of respondents gave the most points to features related to sports programming. Hauser WRT at Ex L, SDARS Trial Ex. 77. It is also worth noting that the lowest-rated features in Dr. Hauser's study deal entirely with non-music programming or pre-1972 music from the 40's, 50's, and 60's. Hauser WRT at Ex L., SDARS Trial Ex. 77.

5. Dr. Hauser's Flawed Internet Study

423. Dr. Hauser also conducted an Internet study regarding several aspects concerning the value of music. Hauser WRT at ¶¶ 104-105, SDARS Trial Ex. 77. Like his "anchored importance" questions, this study too suffers from an interdependency flaw.

424. Dr. Hauser asked respondents to allocate 100 points among 8 music related attributes. He claims that because only 15.8% of points were allocated to the attribute "I can hear music from the 70s, 80s, 90s, and today," that demonstrates the low value of the sound recording rights at issue here. Hauser WRT at ¶¶ 104-105, SDARS Trial Ex. 77. That is incorrect for several reasons.

425. *First*, that attribute is misleading, as it strongly suggests only popular music from those decades. Many consumers would not associate country music, jazz, hard rock, rap, classical or other non "pop-music" formats with this attribute, yet sound recordings from those genres are at issue this proceeding. 8/7/07 Tr. at 170:18-171:3 (Hauser) (question from Roberts, J.).

426. *Second*, many of the features that Dr. Hauser had respondents rank derive their value from sound recordings. When people say they like the fact that most channels are

commercial-free, they are referring to the fact that they get to listen to more music. A “music” channel that had no commercials but also lacked music would, suffice it to say, not be a popular channel. The same can be said about nearly every other feature in the survey. “Artists and song titles” are only meaningful if their music is being played at the same time. The fact that “music is uncensored” only matters if music is being played. The “selection and sequencing of songs” derives value from the songs. “DJ’s and celebrity hosts” would be of little value unless there were disks to spin and music programs to host. Hauser WRT at Ex M, SDARS Trial Ex. 77.

427. *Third*, the entire constant sum question was artificial in that the ostensibly low ranking that music got was simply a function of the number of other features that it was competing with. Had there been fewer, or more, attributes, the score for any given attribute would rise or fall accordingly.

E. The Woodbury channel attachment index analysis

428. Yet more evidence of music’s value comes from Dr. Woodbury’s analysis of the Sirius Satellite Radio Listener Study – Wave 2, June 2006. Dr. Woodbury – the SDARS’ economist – compiled what he called a “channel attachment index.” In its survey, Sirius asked over [] listeners which channels they listened to during the past week, and for each channel they listened to, the respondents were asked whether they would cancel their subscription if that channel were canceled. Woodbury WDT at 19, XM Trial Ex. 8.

429. Dr. Woodbury multiplied the fraction of the surveyed subscribers who listened to each channel by the fraction of those subscribers who said they would cancel if the channel was deleted. This calculation produced a weighted cancellation rate for each channel. Dr. Woodbury then added the weighted cancellation rates for all channels and calculated what percentage of the

whole was represented by music channels. Woodbury WDT at 19, XM Trial Ex. 8. The precise purpose of Dr. Woodbury's analysis was to calculate the value of music programming relative to non-music programming on the SDARS and he used this calculation in estimating the royalty rate to be applied. *Id.*

430. For Sirius, Dr. Woodbury calculated that music channels represented [REDACTED] of the total weighted cancellation rates. Woodbury WDT at 20, XM Trial Ex. 8; 6/13/07 Tr. 90-21-91:2 (Woodbury).

431. Because Dr. Woodbury had only channel cancellation data for Sirius, he used the Sirius data to calculate a channel attachment index for XM, but omitted the Howard Stern channels on the assumption that all the other music and non-music channels would be roughly comparable as between XM and Sirius. On this basis, Dr. Woodbury calculated that music channels represent [REDACTED] of total weighted cancellation rates for XM. Woodbury WDT at 20, 34, XM Trial Ex. 8; 6/12//07 Tr. 288:8-289:22 (Woodbury); 6/13/07 Tr. 91:7-11 (Woodbury).

432. In short, even the SDARS' primary economic expert concedes that music programming amounts to [REDACTED] of the value of the SDARS' programming offerings.

F. Pre-1972 Sound Recordings

433. The SDARS suggest that the value of music, in comparison to non-music content, should be reduced because, they claim, pre-1972 sound recordings do not fall within the statutory license. Even if true, that does not, however, provide a basis for reducing the royalty rate here, if expressed as a percentage of revenue or derived therefrom.

434. First, the SDARS themselves did themselves propose a "discount" based on their use of pre-1972 sound recordings, other than by the indirect means of their per broadcast rate proposal.

435. Second, the evidence that the SDARS' attempted to produce concerning pre-1972 sound recordings related only usage of those sound recordings provides no basis for making any adjustment. Thus, Dr. Woodbury, in his rebuttal testimony, purports to provide statistics concerning the ratio of pre-1972 sound recordings to all sound recordings played on the SDARS. Woodbury WRT at 21-23, SX Trial Ex. 80. That measure, however, provides no evidence of the value of pre-1972 sound recordings to consumers or even of their listening to them. If, for example, as the record demonstrates, there is vastly more listening to channels that play post-1972 sound recordings and relatively little listening to post-1972 sound recordings, a "reduction" as implied by the SDARS, based on the number of broadcasts of pre-1972 sound recordings would not reflect a fair deduction.

436. Third, even the evidence that the SDARS produced in Dr. Woodbury's report is unreliable. Dr. Woodbury relied on information provided to him by the SDARS, but as Ms. Kessler from SoundExchange testified, SoundExchange has reviewed the SDARS' reports of use of sound recordings and has found that they contain "widespread inaccuracy," including incorrect information about the release dates of sound recordings played by the SDARS. Kessler WRT at 4, SX Trial Ex. 127; 8/29/07 Tr. 21:20-22:11. The SDARS frequently do not report any release date for sound recordings, or report release dates that are demonstrably false (e.g., a pre-1972 release date for an album released by an artist born after 1972 or by a band formed after 1972). Kessler WRT at 4, SX Trial Ex. 127. In addition, the evidence shows that the SDARS report an inordinate number of recordings with a release date of 1971 or 1900, and many others with no release date at all. 8/29/07 Tr. 21:20-22:11. This evidence tends to show that the SDARS are over-reporting performances pre-1972 recordings, presumably in a belief that performance royalties to SoundExchange may not be due for such recordings.

437. Fourth, Dr. Woodbury's own testimony appears to be inaccurate on its face. For example, in calculating his ratios, he appears to have double-counted the pre-1972 sound recordings on Sirius' 60s vibrations channels, thereby increasing the purported percentage of pre-1972 sound recordings played. See Woodbury WRT at SDARS-Woodbury Ex. 30, p. 1-2, SDARS Trial Ex. 80 (counting Sirius 60s Vibrations channel twice).

438. Fifth, the evidence in the record demonstrates that listening to pre-1972 sound recordings is of relatively low value when compared to post-1972 sound recordings. Dr. Hauser's survey found that listening to music from the 40s, 50s, and 60s was the second lowest-rated feature of the SDARS of the 29 features he examined. Hauser WRT at Ex. L, SDARS Ex. 77.

439. Finally, even if some percentage of the sound recordings broadcast on the Services' music channels are not compensable (the only thing that the SDARS purported to measure), that percentage is more than made up for by the large amounts of music that the Services uses on their non-music channels – and not simply comedy and kids channels. Herscovici WRT at 14-17 & App. K, SX Trial Ex. 130.

440. Music pervades many of the non-music channels on the Services. The so-called non-music channels often have blocs of programming totally dedicated to the playing of sound recordings (essentially hours of music on a channel labeled “non-music), Coleman WDT at ¶ 37. SIR Trial Ex. 34, or use music many times an hour to set the tone or theme of the non-music programming. Herscovici WRT at 14-17 & App. K, SX Trial Ex. 130, 6/7/07 Tr. 237:5-239:6 (Coleman).

441. As an example, Sirius OutQ which is [REDACTED]
[REDACTED] is classified as

“entertainment programming,” but plays at least 61 hours of music programming per week – more than 1/3 of its regularly scheduled programming. Herscovici WRT at 15, SX Trial Ex. 130. This includes programming blocs of sound recordings by GLBT artists or bands with at least one GLBT member and countdowns of the top twenty sound recordings by GLBT artists. Herscovici WRT at 15, SX Trial Ex. 130.

442. As another example, Maxim Radio on Sirius, which is ranked among the top five “entertainment” channels on Sirius in terms of listening, devotes at least 38 hours of programming exclusively to sound recordings each week. Herscovici WRT at 15, SX Trial Ex. 130. Internal email at Sirius shows that increasing music is the key ingredient to improve weak shows and make them stronger. Herscovici WRT at 15-16, SX Trial Ex. 130.

443. Two new channels, Cosmo Radio and Road Dog Trucking each rely heavily on music programming. Cosmo Radio broadcasts at least 29 hours per week of music programming, showcasing the “hottest hits” for four hours each weekday and broadcasting 9 hours of love songs Saturday night and Sunday morning. Road Dog Trucking broadcasts at least 53 hours per week of programming that is devoted to music or comedy – both sound recordings subject to the statutory license. Herscovici WRT at 16, SX Trial Ex. 130.

444. Even the programming on the Howard Stern channels uses an enormous amount of music. The “Ferrall” show on Howard 101 broadcasts live and in replay 43 hours per week and it features popular music in the background constantly throughout the program. Herscovici WRT at 16, SX Trial Ex. 130.

445. Dr. Herscovici provided an analysis of the use of music on non-music programming on both XM and Sirius and their most popular non-music channels. He found that virtually every channel of non-music programming used popular music as part of their

programming, and that many of the channels used music once a minute or every other minute – even on news and sports programming. Herscovici WRT at App. K, SX Trial Ex. 130. Even the Howard Stern channel played sound recordings in some form every 4 minutes. Herscovici WRT at App. K, SX Trial Ex. 130.

446. Dr. Herscovici’s study of music on non-music programming reveals that the value of sound recordings to XM and Sirius goes well beyond the commercial-free music programming that the Services tout. Rather, sound recordings are an essential ingredient of all of the Services’ programming, “music” and “non-music” alike. Herscovici WRT at 14-17 & App. K, SX Trial Ex. 130. Thus, any claim that there should be a “deduction” for pre-1972 works is more than offset by the use of sound recordings of all kinds on the so-called “non-music” channels.

G. The Value of Music Comes From Music

447. Perhaps recognizing that music programming is by far their most valuable programming offering, the SDARS also have argued that they are the ones that make the music desirable to consumers. E.g., Blatter WDT at 26, SIR Trial Ex. 36. Again, the evidence rebuts their claims and demonstrates that the value of music comes not from the packaging, but from the music.

448. First, although the SDARS claim that it is their DJs who help make their music programming attractive, Blatter WDT at 27, SIR Trial Ex. 36, their own survey evidence contradicts this. When XM asked its subscribers what they like about the service, it was the lack of DJ chatter that was attractive to [REDACTED] of respondents. SX Trial Ex. 52 at SX Ex. 123 DR at XMCRB 45078. The most appealing aspect to consumers in that survey was XM’s lack of

commercials, cited by [REDACTED] of respondents. In other words, what consumers like about satellite radio is the music, uninterrupted by commercials or DJs.

449. Second, the SDARS tout their original music programming, but that programming makes up a tiny fraction of their music offerings. Logan WDT at ¶ 41, XM Trial Ex. 2. Mr. Logan admitted at trial that XM has produced a total of 70 one-hour Artist Confidential shows, and even fewer shows of its other original programming. 6/5/07 Tr. 261:1-264:20 (Logan). This amounts to a bare fraction of the SDARS' total music programming, which fills 69 channels (for each service) 24 hours a day, 365 days a year, without commercial interruption.

450. Third, as this Court has already recognized, the SDARS are not entitled to credit for the "broadcast day," i.e., the manner in which they sequence music. 6/13/07 Tr. 93:8-94:4 (Woodbury). As the prior CARP and other tribunals have found in considering the analogous question of licensing copyrighted material for broadcast on television, broadcasters have been deemed to have made a negligible contribution to the value of the programming. PES I, 63 Fed. Reg. at 25407 (citing CRT's determination that broadcasters did not deserve a share of cable royalties for their role in formatting radio stations, and defining services' role to "make no significant contribution" in making recordings available to the public because their contribution "merely enhanced presentation of the final work"); *cf. National Ass'n of Broadcasters v. Copyright Royalty Tribunal*, 772 F.2d 922, 931 (D.C. Cir. 1985) (finding reasonable the conclusion "that people listen to retransmitted stations for the music, and thus any award for retransmitted radio broadcasters should go to the Music Claimants", and rejecting the idea that formatting a radio station had any value); *1980 Cable Royalty Distribution Determination*, 48 Fed. Reg. 9552, 9565-66 (Mar. 7, 1983) (reaffirming prior holding that there is "no basis for

establishing the value of the broadcast day” nor “any basis for a distribution of royalties to broadcast claimants on this theory”).

451. Fourth, almost all of the SDARS’ claims regarding the value of their alleged contribution are based on mere assertion without any quantitative evidence to support them. Even Dr. Woodbury, who argued for the “enhanced value of music programming,” conceded that he had no data that he could use to value these enhancements, 6/12//07 Tr. 253:4-254:8 (Woodbury), and in fact he was unaware of any survey evidence showing that the revenues of the SDARS are increased by their enhancements to music programming. 6/13/07 Tr. 91:21-92:13 (Woodbury).

452. Fifth, the only quantitative evidence that the SDARS present on this point comes from Dr. Hauser, and it supports SoundExchange’s position. In Dr. Hauser’s willingness to pay question, respondents evinced a willingness to pay for music several times greater than the SDARS’ high fidelity service or its nationwide coverage. For example, respondents said that they would pay only \$3.33 for a service without music, but \$8.34 for a service with only FM quality, holding all other features constant. *See supra*. Likewise, in Dr. Hauser’s anchored importance question, music programming scored higher than every other aspect of the service that Dr. Hauser tested. *See supra*. These results are entirely consistent Dr. Wind’s conjoint analysis, which also found that music programming was more important than any other feature of the service. *See supra*. And of course, when Dr. Hauser attempted to remove all the functionality he claims the SDARS provide, he still concluded that the value of SoundExchange’s contribution was \$1.78 per subscriber per month, a result entirely in line with SoundExchange’s rate proposal. *See supra*.

H. The Alleged Value Of Non-Music Content With Respect To Exclusivity And Branding

453. The SDARS spent an enormous portion of their rebuttal case, including three new proffered experts, on their claim the “brand” value of non-music content providers is greater than the value of music programming. As was shown in great detail at trial, those claims are untenable and without support in the record.

1. Exclusivity

454. The SDARS have tried to rebut the evidence about showing music’s value by claiming that non-music programming is more valuable because it is “exclusive.” *E.g.*, Karmazin WDT at 3, SIR Trial Ex. 1. This is on its face a flawed argument because exclusivity is at best a means to an end – the attraction and retention of subscribers. *See, e.g.*, 6/7/07 Tr. 224:17-18 (Coleman) (“[T]he overall goal with everything we do is to drive subscribers.”); 6/6/07 Tr. 34:8-35:6 (Vendetti). It is thus irrelevant for valuation purposes whether a particular piece of content is exclusive. If content A is exclusive and will directly or indirectly draw and retain one million subscribers, it is less valuable to the SDARS than content B, which would draw and retain two million subscribers even though it was not exclusive. And for the reasons described above, music programming attracts and retains subscribers better than any other form of programming.

455. But even if one were to consider exclusivity as a valuable concept in itself, the evidence demonstrates that the SDARS’ music programming is no less exclusive than the SDARS’ non-music programming.

456. The music programming offered on the SDARS is itself “exclusive” in the sense that the SDARS offer “a much greater variety of music channels,” and the music channels “are commercial free,” two qualities that differentiate SDARS from terrestrial radio and thus provide

the SDARS with an important and valuable type of “exclusive” content – exclusive vis-à-vis terrestrial radio, which the SDARS consider to be their prime competitor. 6/11/07 Tr. 65:7-12, 131:18-19 (Blatter).¹⁶

457. As Mr. Blatter explains – in an analysis that applies equally well to XM – because of the number of channels that Sirius has, they are “able to take a genre of music and carve it up, you know, a number of different ways. . . . And as a result of that, I think that we’re able to better serve the particular audiences . . . and further engage them in the kind of music we’re playing.” 6/11/07 Tr. 84:4-85:1 (Blatter). Sirius is able to offer channels that terrestrial radio would find “very difficult” to offer; Sirius “can offer a lot of styles of music in different formats that would just never be successful at terrestrial radio.” 6/11/07 Tr. 90:9-22 (Blatter). “Sirius gets much deeper into the catalog than terrestrial radio. With 64 channels of music, each channel can be more specialized and dig down to music terrestrial radio would never use.” Blatter WDT at ¶ 117, SIR Trial Ex. 36.

458. The result is that the SDARS’ music channels “provide a breadth and quality of music choice that is not and inherently cannot be provided by traditional radio.” Blatter WDT ¶ 19, SIR Trial Ex. 36. Terrestrial radio is limited in scope – providing only local listening experiences – and limited in size and audience. In fact, “in the great majority of traditional U.S. radio markets . . . there may be only four to ten quality music channels versus the 69 available on Sirius.” Blatter WDT at ¶ 22, SIR Trial Ex. 36. “In all markets, and particularly in smaller markets, satellite radio provides access to music that listeners would otherwise never encounter.” Blatter WDT at ¶ 24, SIR Trial Ex. 36. Bluegrass, Broadway showtunes, 80s’ Hair Bands, Jazz,

¹⁶ It is worth noting that terrestrial radio’s right to digitally transmit sound recordings without payment is conditioned on *not* charging a subscription price. 17 U.S.C. § 114(d). Thus, terrestrial radio ultimately has to sell advertising.

Blues, Classic Country and more are all available from the SDARS and not typically from terrestrial radio. In sum, the SDARS offer “numerous channels dedicated to styles of music that are typically not available on terrestrial radio.” Blatter WDT at ¶ 24, SIR Trial Ex. 36. *See also* Parsons WDT at ¶ 31, XM Trial Ex. 1 (each of their music channels “plays a much deeper and more diverse catalog of music than can be heard on terrestrial radio stations of the same format,” and each service “plays many music genres and formats that cannot be heard on broadcast radio, even in major metropolitan areas.”) “[L]isteners frustrated with the limited formats of broadcast radio will enjoy the diversity of genres of music programming on XM channels. Those tired of narrow playlists on hit-driven radio stations will find breadth and depth in XM’s programming.” Logan WDT ¶ 40, XM Trial Ex. 2. *See also* Logan WDT ¶ 13, XM Trial Ex. 2 (the SDARS “feature a spectrum of musical genres as well as mass appeal formats that have been abandoned by terrestrial radio”).

459. In fact, XM management considers its music programming – not its news, talk, or sports programming – to be its “Key Content Differentiator.” SX Trial Ex. 2 at 24. And this differentiation – premised on music – is what XM utilizes to “convert[] consumers to subscribers.” Logan WDT ¶ 23. If anything, the SDARS’ music programming competes with the other sources of music for which consumers pay a fee to obtain, such as CDs, iTunes, etc., which explains why it serves as a substitute for those music sources. *See infra* Section V.E. But the bottom line is that far from being the ubiquitous commodity that the SDARS describe, music programming on satellite radio brings attractive content to listeners who cannot get it elsewhere over the airwaves.

460. Reluctantly, even the SDARS’ own expert, Dr. Benston, agreed that some music content is effectively exclusive to satellite radio. For example, Judge Roberts noted that some of

the music channels available on satellite radio are not available on terrestrial radio, and while a consumer can download music to an iPod and play it in the car, that requires some effort by the consumer. Therefore, some of the SDARS' music channels are in effect exclusive because there is no other way to easily obtain the same music from another source in the car. 8/20/07 Tr. 96:4-97:11 (Benston). Dr. Benston agreed: "I think that is very important." 8/20/07 Tr. 100:15-16 (Benston). He explained (8/20/07 Tr. 101:6-11 (Benston)):

For myself, I'm a National Public Radio listener because I like classical music and if I travel a distance, I would probably subscribe to XM or Sirius to get that music because in my area I can get it but in many areas, you can't.

Following up, Judge Roberts asked for Dr. Benston's "reaction to the fact that there seems to be a number of channels offered by satellite radio that don't have viable substitutes," and Dr. Benston replied: "I think your Honor is making a very good point and I would amend what I wrote as being too sweeping by taking music in general." 8/20/07 Tr. 105:5-13 (Benston).

461. Mr. Karmazin attempted to rebut the notion that Sirius's music is exclusive by arguing that even if FM stations did not play a wide variety of music, no legal barrier prevented them from doing so. 8/22/07 Tr. at 171:9-19 (Karmazin). Mr. Karmazin conceded, however, on cross-examination that the same situation held with respect to NFL programming – which he had described as exclusive programming: no legal barrier prevented terrestrial radio stations from broadcasting every NFL game either. 8/22/07 Tr. at 195:1-197:19 (Karmazin).

462. The other half of the exclusivity fallacy is that even the non-music programming that the SDARS claim justifies high prices is not actually exclusive. For example, Sirius claims that "[m]ajor sports programming is critical to Sirius in attracting and retaining subscribers. The exclusive availability of major sports programming on Sirius is a fundamental point of differentiation between both Sirius and terrestrial radio and Sirius and XM," and "sports

programming is critical in attracting subscribers to Sirius.” Cohen WDT ¶ 4, Sirius Trial Ex. 35. The supposed importance of sports has led the SDARS to spend huge amounts of money to obtain this programming.

463. For example, pursuant to its agreement with the NFL, Sirius pays a total of [REDACTED] [REDACTED]. SX Trial Ex. 36 at SIR00040089; Sirius Trial Ex. 62 at Sirius Ex. 43, p. 15-16. Major League Baseball (“MLB”) will receive [REDACTED] million dollars over 11 years. Woodbury WDT at 18, XM Trial Ex. 8. NASCAR will receive [REDACTED] million over 5 years. SX Trial Ex. 23. And the SDARS have not stopped just with sports programming: under its agreement with Martha Stewart (which began in 2005 and covers a term of four years), Sirius pays [REDACTED] over four years for the right to the content broadcast on Martha Stewart Living Radio. SX Trial Ex. 32. And Sirius renewed its deal with Fox, 6/7/07 Tr. 244:5-6 (Coleman), agreeing to pay [REDACTED]. SX Trial Ex. 22.

464. Yet none of this content is truly exclusive— football fans can “get radio broadcasts” of NFL games “on NFL.com,” and can get “network broadcasts of the NFL games” through DirecTV. 6/7/07 Tr. 348:11-16 (Cohen). Likewise, NASCAR fans can listen to NASCAR races on terrestrial radio, as well as through NASCAR.com’s TrackPass. 6/11/07 Tr. 20:2-21:12 (Cohen). MLB games are available from numerous outlets, 6/6/07 Tr. at 107:14-108:22 (Cook), as are Martha Stewart and Fox News programming. Indeed, the Fox News channels for which XM and Sirius each pay significant sums are both non-exclusive to each other and simply re-broadcasts of Fox News’ TV programming. Herscovici WRT at 25-26, SX Trial Ex. 130. But even more importantly, music programming is far and away more popular than this expensive non-programming content. *See supra*. In short, the SDARS have it

backwards— what they call exclusive programming and pay premium prices for brings in fewer subscribers than the music programming that they inaccurately describe as a commodity.

2. Branding

465. In rebuttal, the SDARS launched a three-pronged attack on Dr. Pelcovits’s non-music benchmark analysis. The point they *tried* to make – through three different experts – was that Dr. Pelcovits had under-valued the SDARS’ non-music content deals (and thus over-valued music) because he had not accounted for the value that such deals brought to the SDARS in terms of “branding” and advertising – a value they claim music does not share. At the hearing, however, this entire aspect of the SDARS’ rebuttal case completely collapsed under its own weight. All three of the experts admitted that they had not even attempted to analyze or quantify the corresponding branding or advertising value of music – or even whether music had any such value at all. One presented no data whatsoever. And the two that did employed methodologies and made conclusions that ultimately showed themselves to be recklessly untrustworthy.

a. Dr. Erich Joachimsthaler

466. The SDARS introduced the testimony of Dr. Erich Joachimsthaler, who purported to assess the “brand equity” of various non-music content providers with which the SDARS have programming agreements; that is, to demonstrate the value that the SDARS derive from their deals with non-music content providers that might be viewed as being derived from the “brand” value of the content. 8/16/07 Tr. 258:17-260:11 (Joachimsthaler). It is important to note at the outset – as Dr. Joachimsthaler himself did at trial – that Dr. Joachimsthaler provided no data or quantitative analysis of any kind. 8/16/07 Tr. 258:22-259:9 (Joachimsthaler).

467. As part of his theoretical analysis, Joachimsthaler defined what he called “points of parity” and “points of difference.” Points of parity are “necessary to a legitimate and credible

product offering.” Joachimsthaler WRT at 11, SDARS Trial Ex. 73. Joachimsthaler unequivocally stated that the “right to play sound recordings is a point of parity for radio businesses.” Joachimsthaler WRT at 11, SDARS Trial Ex. 73. Joachimsthaler claimed that “‘points of difference’ [or ‘differentiation’] are features or associations that are unique to the brand” – in his view, non-music content. Joachimsthaler WRT at 11, SDARS Trial Ex. 73.

468. Joachimsthaler used the examples of a bank and a restaurant in explaining his methodology. For instance, in the restaurant example, he likened “points of parity” to those things a business must have “in order to be in the restaurant business,” such as serving water, 8/16/07 Tr. 267:5-9 (Joachimsthaler), or presumably, serving food. He claimed that sound recordings are points of parity for the SDARS, and that sound recordings – much “like the water in a restaurant” – “need to be there” in order for satellite radio *to be* satellite radio. 8/16/07 Tr. 299:2-5 (Joachimsthaler). Sound recordings are “a part of radio” and have “been always a part of radio,” in Joachimsthaler’s words. 8/16/07 Tr. 299:5-7 (Joachimsthaler).

469. In the bank example, he likened “points of parity” to those items without which “consumers would not consider a bank truly a bank,” such as “a range of checking and savings accounts,” “safety deposit boxes,” and “automatic teller machines.” Joachimsthaler WRT at 11, SDARS Trial Ex. 73. Points of differentiation, on the other hand, are not necessary to be viewed as a bank by consumers. 8/16/07 Tr. 304:4-7 (Joachimsthaler). Without the points of parity – in the bank example, checking and savings accounts, and in this proceeding, sound recordings – consumers do not view something as “a legitimate and credible product offering within a certain category.” 8/16/07 Tr. 306:2-15 (Joachimsthaler).

470. Joachimsthaler agreed that the points of parity are all absolutely necessary to a product offering; that is, something is “not even a bank if [it doesn’t] have checking and

savings.” 8/16/07 Tr. 310:17-18 (Joachimsthaler). Without the points of parity, the entity is “no longer a bank.” 8/16/07 Tr. 311:11-14 (Joachimsthaler). Without the points of parity, an entity is not even “within the context of consideration.” 8/16/07 Tr. 311:15-18 (Joachimsthaler). And Joachimsthaler made clear that the “right to play sound recordings is a point of parity for radio businesses.” Joachimsthaler WRT at 11, SDARS Trial Ex. 73. Thus, without sound recordings – a point of parity – a product offering simply could not be a satellite radio business. No consumer could even consider subscribing, because a company that does not broadcast sound recordings *would not be a radio business*.

471. On the other hand, Joachimsthaler agreed that no one point of differentiation is absolutely necessary to a legitimate and credible product offering in a certain category. Thus, in the bank example, if a bank attempts to make a deal to include financial services as a point of differentiation, and “they don’t like the price . . . charg[ed] for financial services, they can go to a different differentiator.” 8/16/07 Tr. 309:18-22 (Joachimsthaler). Similarly, if XM or Sirius were unwilling to pay the price of a given kind of non-music content, they could look elsewhere for non-music content, available at a lower price that would serve to differentiate their service – much the way XM did when it chose not to pay a high price for Howard Stern – from other radio offerings. Without sound recordings, however, there could be no satellite radio service at all.

472. Joachimsthaler theorized that points of difference are important because consumers “must be given a compelling reason to buy a product or service.” Joachimsthaler WRT at 12, SDARS Trial Ex. 73. But he virtually ignored in his analysis the fact that *without* sound recordings, XM and Sirius could not be radio businesses *in the first place*. Absent the right to play sound recordings, there would be no XM or Sirius service for consumers to purchase. Incredibly, Joachimsthaler claimed that “there is no basis for Sirius and XM to pay a

premium for the right to play sound recordings.” Joachimsthaler WRT at 11, SDARS Trial Ex. 73 (sound recordings are *necessary* “for Sirius and XM to stay competitive”). Given his own definitions of points of parity and points of differentiation, however, there only conclusion is that the SDARS absolutely could not exist without sound recordings and, therefore, would pay whatever they needed to in order to get it – even if it meant having less money to spend on points of differentiation. In other words, the rational economic behavior that this Court should be incenting is that the SDARS pay a fair price for their sound recordings (indeed, they would pay far above “fair” if Joachimsthaler is right) and use whatever is left for their non-music content.

473. Joachimsthaler went to acrobatic lengths to defend his testimony. He agreed, for example, with the proposition that “the whole point of having a brand” – “the bottom line” – “is that a well known brand, a well respected brand, draws people to buy your product or services.” 8/16/07 Tr. 312:12-19 (Joachimsthaler). He also agreed that “if a very well known brand resulted in no one purchasing the product that is affiliated with the brand, the brand wouldn’t have much value to the business trying to sell the product.” 8/16/07 Tr. 315:14-19 (Joachimsthaler). And he agreed that the purpose of the SDARS is to sell subscriptions to their services to make a profit. Inexplicably, though, Joachimsthaler insisted that agreements with non-music content providers would still have value for XM and Sirius, even if they drew *no* subscribers to the SDARS’ services. 8/16/07 Tr. 318:20-320:15 (Joachimsthaler).

474. Notably, Joachimsthaler did not deny that sound recordings have “brand equity.” Like nearly anything else – a “person, product, service, . . . a company, . . . an institution” or even “America,” 8/16/07 Tr. 263:11-264:4 (Joachimsthaler) – sound recordings can be expressions of brand equity. 8/16/07 Tr. 300:20-301:1 (Joachimsthaler). Nonetheless, neither he nor any of the SDARS’ “branding” witnesses examined or even considered the “brand” value to

the SDARS of being able to say that they play all the music in the world – every band, every performer – on scores of commercial-free stations.

475. Joachimsthaler asserted that one “key asset” of a brand is “favorable . . . brand associations.” Joachimsthaler WRT at 14, SDARS Trial Ex. 73. Joachimsthaler may have called Stern “an eminently bankable entertainer,” Joachimsthaler WRT at 16, SDARS Trial Ex. 73, but despite such claims and assertions, the quantitative evidence in this case proves exactly the opposite.

476. For instance, research Sirius commissioned from Odyssey in August 2004 indicated that “Howard Stern Is Too Much For Most People.” SX Trial Ex. 83 at SIR00023213. The Odyssey study found that the most common associations with Howard Stern were “Disgusting,” “Not For Me,” and “Goes Too Far.” SX Trial Ex. 83 at SIR00023213. The Odyssey study further found that [REDACTED] of U.S. adults who listen to radio are *not* fans of Howard Stern, SX Trial Ex. 83 at SIR00023215, and that [REDACTED] SX Trial Ex. 83 at SIR00023216. Odyssey even warned Sirius that Stern [REDACTED] [REDACTED] SX Trial Ex. 83 at SIR00023231. Ultimately, the Odyssey study concluded that making an exclusive deal with Stern would not [REDACTED] [REDACTED] SX Trial Ex. 83 at SIR00023206.

477. Joachimsthaler provided no support for his claim that the SDARS’ association with non-music content brands “has helped them increase their subscriber base.” Joachimsthaler WRT at 31, SDARS Trial Ex. 73. For instance, he noted that “[a]fter Sirius announced its deal with Stern in October 2004, . . . Sirius added nearly a half-million new subscribers, which

brought its total to 1,143,258 subscribers” by end of fourth quarter 2004. Joachimsthaler WRT at 17-18, SDARS Trial Ex. 73. But simply noting that subscriber numbers rose after the Stern deal was announced does nothing to prove causation.

478. In fact, internal Sirius documents, documents that were created before the Howard Stern deal was even a thought in Sirius executives’ minds, demonstrate that the Stern deal had a negligible effect on subscriber numbers. In a Sirius press released dated February 12, 2004, the company announced its expectation that it would “end the year with approximately 1 million subscribers.” SX Trial Ex. 81. Indeed, the press release attributed that expected subscriber growth to “agreements with EchoStar Communications Corporation . . . and RadioShack Corporation.” SX Trial Ex. 81.

479. The press release demonstrates that the most Joachimsthaler could say is that Stern was responsible for bringing in the additional 100,000 subscribers that had not been predicted by Sirius as early as February 2004. SX Trial Ex. 81. Joachimsthaler himself even agreed that one cannot identify “a cause/effect relationship” between the Stern deal and an increase in Sirius’s subscriber numbers. 8/20/07 Tr. 9:2-11 (Joachimsthaler). He admitted that he could not attribute “specific numbers” of “subscriber growth” to the Stern deal. 8/20/07 Tr. 9:18-21 (Joachimsthaler).

480. Likewise, Joachimsthaler attempted to connect Sirius’s deal with the NFL in December 2003 to Sirius’s increase of 400,000 subscribers over the next nine months, simply by noting that the two happened around the same time. Joachimsthaler WRT at 35, SDARS Trial Ex. 73. He ignored, however, the fact that Sirius had only recently launched its service, and subscriber numbers for the new service were bound to be low. Joachimsthaler provided no evidence of causation that would suggest the subscriber numbers rose for any reason other than

the simple fact that they had nowhere to go but up. He also ignored that Sirius itself attributed subscriber gains during this period to its retail distribution agreements, not the NFL. SX Trial Ex. 81.

481. Joachimsthaler made a number of other claims that are not supported by any evidence whatsoever – claims that are far afield from any subject in which he was qualified as an expert. For instance, Joachimsthaler asserted that the SDARS’ brand associations “have made it more likely that automobile manufacturers will pre-install satellite receivers in their vehicles.” Joachimsthaler WRT at 32, SDARS Trial Ex. 73. He alleged this to be true simply because he “consulted” with “several automotive manufacturers” – he does not say it was in connection with this proceeding or was about satellite radio – and concluded that auto manufacturers are “careful in their selection of features and options to offer in their cars.” Joachimsthaler WRT at 32, SDARS Trial Ex. 73. If anything, the acceptance of SDARS by automotive manufacturers reflects a conclusion that consumers are willing to pay for satellite radio, a product defined by the presence of sound recordings – not a judgment on the strength of the non-music content brands with which the SDARS have made deals. Moreover, a Sirius press release demonstrates that Sirius had OEM contracts with 17 automotive manufacturers as of February 12, 2004 – months before the Stern deal was announced. SX Trial Ex. 81.

482. Joachimsthaler also claimed, with no support whatsoever, that the SDARS’ association with non-music content brands “undoubtedly enhanced the SDARS’ financing options,” Joachimsthaler WRT at 68, SDARS Trial Ex. 73. He did not, however, cite a shred of evidence that any of the supposed “brand value” of the SDARS’ non-music content deals had any effect whatsoever on the SDARS’ ability to access financing in the capital markets.

483. Finally, he cited what he called the “difficult to measure . . . ‘halo effect’ . . . that results from the . . . association with the Non-Music Content Providers.” True to his word, Dr. Joachimsthaler made no attempt to measure this so-called “halo effect,” or even to define it in any more concrete terms than those quoted here. Joachimsthaler WRT at 32, SDARS Trial Ex. 73. Ultimately, Joachimsthaler provided no way at all to quantify or otherwise measure the effects he claimed resulted from the SDARS’ association with non-music content providers.

484. In the end, for all of Dr. Joachimsthaler’s theoretical hype about the branding power of non-music content, Sirius’s own “Brand/Ad Tracker” survey shows that in the third quarter of 2005 – long after the major sports deals were signed and a year after the Stern deal was announced, Stern was mentioned [REDACTED] SX Trial Ex. 84 at SIR00018174.

b. Mr. Daryl Martin and Consor

485. The SDARS, through the testimony of Mr. Daryl Martin, have asserted that the “brand,” “endorsement,” and “exclusivity” associated with their non-music content deals, apart from the content itself, account for the vast majority of their value. Martin WRT at 8, SDARS Trial Ex. 75. Mr. Martin testified about the value of these “intangible” elements of the SDARS’ contracts. 8/20/07 Tr. 235:6-14 (Martin). Notwithstanding that his testimony attempts to quantify the economic value of these intangibles, Mr. Martin is not an economist. 8/20/07 Tr. 210:10-11 (Martin). Mr. Martin has no special training in econometric modeling, 8/20/07 Tr. 210:12-16 (Martin). And Mr. Martin’s trial testimony revealed multiple fatal flaws in both the methodology and conclusions of Mr. Martin and the team at CONSOR Intellectual Asset Management upon which he relied.

i. Martin Did Not Evaluate Any Comparable Agreements and Instead Relied on Tabloids and Other Unreliable Sources of Information

486. Mr. Martin claimed that he was able to value the “intangible brand asset components,” Martin WRT at 4, SDARS Trial Ex. 75, of the SDARS’ non-music content deals by comparing them with “comparable market-based brand royalty rate transactions.” Martin WRT at 10, SDARS Trial Ex. 75. The first and most glaring problem with Mr. Martin’s methodology is that Mr. Martin never actually looked at even one comparable transaction. Instead, he based his analysis on unreliable summaries or news media and tabloid accounts of the transactions. 8/20/07 Tr. 250:5-252:18 (Martin). A colloquy with the Court made this point very clear:

CHIEF JUDGE SLEDGE: Mr. Martin, on that point, I want to clarify something I think may have been confusing earlier. Several minutes ago you were asked if you reviewed the agreements in exhibits 6 and 8. And your answer was that we produced all of the agreements we reviewed. But I think that was non-responsive to the question.

In exhibit 6 and 8, you only reviewed secondary sources and did not review any agreements, did you?

THE WITNESS: Yes, sir. That’s correct, Your Honor. They were source document summaries of licensing endorsement transactions. You are absolutely correct.

8/20/07 Tr. 295:5-20 (Martin).

487. Mr. Martin obtained his information about the majority of these purportedly comparable agreements from the RoyaltySource Intellectual Property Database, a source which itself obtains its information from secondhand sources in the media and every page of which contains an express disclaimer that RoyaltySource “does not guarantee the accuracy or completeness of the information provided.” SX Trial Ex. 87. Mr. Martin testified that he had no information at all about the terms of any of the comparable agreements, and that he simply

eliminated from his consideration the possibility of additional terms that might have altered the compensation levels. 8/20/07 Tr. 258:5-260:2 (Martin).

488. Mr. Martin also obtained his information from About.com, a general website available to the public, the user agreement for which states that, “Neither about.com nor its affiliates endorse or are responsible for the accuracy or reliability of any opinion, advice, or statement on the service or their sites.” 8/20/07 Tr. 322:17-323:1 (Martin).

489. Furthermore, although Mr. Martin first represented to the Court that he did not rely on tabloids and instead looked to “industry periodicals and trade journals that are specific to licensing and endorsement and sponsorship activity,” 8/20/07 Tr. 250:19-251:4 (Martin), that statement proved to be false. In fact, Mr. Martin relied not only on *USA Today*, SX Trial Ex. 92, 96; 8/21/07 Tr. 37:10-38:5 (Martin), and the *New York Post*, SX Trial Ex. 102, but also on the British tabloid *Hello Magazine*, SX Trial Ex. 90, 91; 8/20/07 Tr. 325:18-333:8 (Martin). These were the sole sources for Mr. Martin’s information about the contracts discussed in the tabloids; he never reviewed the actual contracts that these tabloids mentioned, and he never verified the information from the tabloids against any other authority.

490. Mr. Martin’s methodology has been criticized by his own colleague, Mr. Russell L. Parr, who actually co-authored Mr. Martin’s written rebuttal testimony and who Mr. Martin called “one of the godfathers of intellectual property valuation.” 8/20/07 Tr. 198:1-198:3 (Martin). In *The Journal of Proprietary Rights*, a scholarly publication edited by the Technology and Proprietary Rights Group of Weil, Gotshal & Manges, Mr. Parr published an article called, “An Economic Approach to Royalty Rate Determination.” SX Trial Ex. 95. In his article, Mr. Parr and a co-author discuss precisely the market approach used by Mr. Martin to value the “intangible” aspects of the SDARS’ non-music content deals. *Id.* Mr. Parr states in that article

that a market-based approach to valuing a royalty must use reliable data, and “reliable data should be defined to include the complete license agreement.” *Id.* at p. 21. Mr. Martin testified that it was impossible to obtain the complete agreements to compare with the SDARS’ agreements. 8/20/07 Tr. 334:3-12 (Martin). But the co-author of Mr. Martin’s own testimony wrote in his article that “[n]otwithstanding the difficulty in collecting pertinent information for use in a market approach, the accuracy of this information must be questioned. . . . [T]he information upon which a market based royalty is founded is usually incomplete at best and may not be representative of the true universe of similar licensed property.” *Id.* Relying on tabloids, Mr. Martin failed to comply with these guidelines.

ii. Mr. Martin’s “Comparable” Agreements Were Not, In Fact, Comparable

491. In addition to using unreliable second and third-hand accounts of supposed comparable agreements, Mr. Martin also violated a basic tenet of the market approach to valuing assets because the agreements he used as comparables were not, in fact, comparable. Mr. Parr, in his scholarly article on the subject, states that “[t]he factor of similarity includes a consideration of the comparability of the property itself, similarity of license terms and similarity of markets to be exploited.” None of these factors of similarity was present in the agreements Mr. Martin relied upon in his testimony.

492. *First*, the properties were certainly not similar. The SDARS’ properties that Mr. Martin analyzed consist of four radio personalities – Howard Stern, Martha Stewart, Oprah, Opie & Anthony – and three sports leagues – Major League Baseball, NFL, and NASCAR. Yet the properties he chose to compare them with were not remotely comparable.

493. For the radio personalities, he compared Stern, Stewart, Oprah, and Opie & Anthony with a range of persons from singer Britney Spears to Princess Diana to Marilyn

Monroe. SX Trial Ex. 87 at 2, 3, 7, 10-12. He did not evaluate any deals involving shock jocks or radio personalities or daytime TV talk show hosts at all. 8/21/07 Tr. 26:5-26:22 (Martin). Furthermore, Mr. Martin did not analyze any non-radio brand or endorsement deals involving Stern, Stewart, Oprah, or Opie & Anthony to compare them with the SDARS' deals. 8/20/07 Tr. 312:1-313:19 (Martin).

494. With respect to the three sports leagues, again Mr. Martin did not evaluate comparable properties. Instead of comparing the SDARS' deals with sports leagues with other endorsement deals involving those leagues, Mr. Martin compared the SDARS' deals with endorsement deals with specific sports personalities like golfers Tiger Woods and Jim Furyk, and Olympic swimmer Michael Phelps. 8/21/07 Tr. 45:12-47:2 (Martin); 8/21/07 Tr. 49:3-49:11 (Martin); 8/21/07 Tr. 51:18-51:22 ("Q: But you did not examine any endorsement deals for a whole league? Isn't that correct? A: All I examined, sir, is what's on this list, the individual athletes."). Yet Mr. Martin admitted that the demographic appeal of a specific golfer might be very different than the demographic appeal for baseball or football as a league. 8/21/07 Tr. 47:20-48:3 (Martin).

495. Such apples to oranges comparisons have been rejected by experts in the field – specifically, by Mr. Martin's colleague and the co-author of his testimony, Mr. Parr. As Mr. Parr explains:

For example, consider the licensing of cartoon characters to firms that exploit markets ranging from dolls and stuffed animals to lunch boxes. In general, the expectations would be that there is a high degree of similarity in the licensing of these characters. However, take the case of the cartoon characters, the Teenage Mutant Ninja Turtles, one of this year's biggest rages with boys aged three through ten. There may be a significant amount of difficulty in attempting to prove that the licensing attributes of these characters are similar to the Pink Panther. Although both are cartoon characters, *the dissimilarity of their utilization should prevent their use as substantive surrogates in royalty determinations.*

SX Trial Ex. 95 at 2-3 (emphasis added). Mr. Martin did not follow this industry standard in analyzing dissimilar properties to value the intangible elements of the SDARS' agreements.

496. *Second*, Mr. Martin included in his analysis royalty rates that were not based on comparable agreements, but on damages awards issued by a court. For instance, he included a \$2.5 million dollar damages award for the unlawful use of drag racer Bob Glidden's name.

8/20/07 Tr. 298:9-300:16 (Martin). Mr. Martin did not know anything about the lawsuit; he did not have any details about it or know what the claims were. *Id.* Yet he included the damages award in his analysis as one of his "comparable market-based brand royalty rate transactions."

Martin WRT at 10; SDARS Ex. 75 at Martin Ex. 6.

497. *Third*, in addition to analyzing dissimilar subjects, Mr. Martin also analyzed agreements with dissimilar markets. None of Mr. Martin's purported comparables are even agreements involving radio station or endorsement of media or anything with a remotely similar market to that of the SDARS. In fact, not a single agreement analyzed by Mr. Martin was a content agreement like those of the SDARS. 8/20/07 Tr. 304:12-20 (Martin). For instance, one "comparable" deal was for the distribution of bubble gum displaying Britney Spears' likeness. SX Trial Ex. 87 at 2. One "comparable" deal was for the distribution of mints bearing the likeness of NASCAR driver Tony Stewart. *Id.* at 8. Eleven of the sixteen endorsement deals in Exhibit 8 of Mr. Martin's testimony involve cosmetics or fashion, and one involved a beer company. 8/21/07 Tr. 27:6-27:18. The SDARS' presented no evidence that the markets for cosmetics and fashion and beer are similar to the SDARS' market. Yet, Mr. Parr writes in his scholarly article that "the markets to which the 'similar' property is licensed *has to be considered.*" SX Trial Ex. 95 at 3 (emphasis added). He continues:

The broader the definition of the markets in which the intellectual property is exploited, the less influence this factor will have on the royalty rate. The more

narrowly the market is defined, the greater the influence of this factor on the royalty rate. Utilizing the example of cartoon characters, one may conclude that this type of property, in general, is normally licensed for approximately 6 percent. However, narrowing the market to children's clothes, the royalty may not be 6 percent, but may be only 3 percent.

Id. at 3. Mr. Martin did no analysis at all of the similarity of the markets, and the deals are patently dissimilar. SX Trial Ex. 87.

498. *Fourth*, the terms of the “comparables” analyzed by Mr. Martin are not only uncertain, but those terms that are known are materially dissimilar from the terms of the SDARS’ non-music content deals. For example, many of Mr. Martin’s purportedly comparable agreements were global marketing agreements, not U.S. agreements. SX Trial Ex. 97 (mentioning a Brad Pitt overseas deal); Martin WRT, SDARS Trial Ex. 75 at Martin Ex. 8 (listing each comparable deal as a global deal except one, which was global and excluded the United States and Canada). One of Mr. Martin’s comparables is a deal for basketball player Yao Ming to endorse a product in China. *Id.* His conclusions are thus unreliable and inaccurate, as Mr. Parr explains in his article that “geographic limitations” are terms that “have a significant impact on the royalty rate.” SX Trial Ex. 95 at 3.

499. *Fifth*, most of the agreements Mr. Martin utilized as benchmarks predate the SDARS’ non-music content deals by years, and some by decades. One Tiger Woods agreement was dated 1996. 8/20/07 Tr. 253:9-253:14 (Martin); Martin WRT, SDARS Trial Ex. 75 at Martin Ex. 8 (listing deals from 1997, 1996, 1993, 1992, 1988, 1987, 1986, and multiple deals with dates unknown). Mr. Martin also testified that many of the dates for the comparables were unknown to him and his team. 8/20/07 Tr. 256:8-258:4 (Martin). By analyzing deals from disparate and unknown periods, Mr. Martin was again comparing apples and oranges. As Mr. Parr explains: “Is it valid to use a license agreement negotiated three years ago to form the basis

of royalty entered into today? Probably not, because a lot can happen in three years. . . . License agreements should reflect the most current circumstances, not those of the past. . . . Market conditions that may have been the basis of royalty rates yesterday may not exist today, thereby invalidating the comparability of the subject license agreement to the market compare.” SX Trial Ex. 95 at 4.

500. In sum, Mr. Martin’s analysis was flawed and incomplete. According to Mr. Parr:

The market approach requires the utilization of similar property with similar circumstances. To base a royalty rate on dissimilar property with dissimilar license terms would be contrary to rational decisionmaking. Given the number of factors that can make the comparisons of licensed intellectual property an exercise in futility, the weakness of this approach is evident.

SX Trial Ex. 95 at 4. As a result, Mr. Martin’s testimony should be disregarded by the Court, as the “failure to satisfy only one of the major criteria of the market approach may be sufficient to discard this approach entirely.” SX Trial Ex. 95 at 5.

iii. Mr. Martin Exaggerated the Value of the Intangible Elements

501. A critical admission by Mr. Martin is that he did not calculate the value of the content in the SDARS’ non-music content deals. The content was simply his “remainder” after valuing the brand, endorsement, and “exclusivity” elements of the deals. 8/20/07 Tr. 272:13-274:16 (Martin). Therefore, the more Mr. Martin artificially inflated these “intangible” elements, the more he artificially reduced the remaining content value. Mr. Martin exaggerated his results in numerous ways.

502. *First*, he failed to evaluate a single agreement involving content like the content provided by Stern, Stewart, and the other parties to the non-music content deals with the SDARS. 8/20/07 Tr. 304:12-20 (Martin). “Branding” is utterly irrelevant to the SDARS’ bottom line unless the branding generates subscribers. Yet Mr. Martin presented no evidence

that subscribers subscribe to XM or Sirius to listen to a “brand.” A consumer may buy a pack of gum with Britney Spears on it because she wants to be associated with her and her “coolness” factor. But Mr. Martin presented no evidence that a radio subscriber subscribes to Sirius to be “associated” with Howard Stern. To the contrary, all of the evidence suggests that consumers subscribe in order to actually listen to Stern’s content. By evaluating only deals that involved no content at all, Mr. Martin falsely overstated the value of the brand and endorsement to the SDARS, while undervaluing the content.

503. *Second*, Mr. Martin exaggerated his results by boosting the value of each intangible component of the agreement by 25% based on his strained treatment of the SDARS’ non-music content deals as “exclusive.” Mr. Martin did not use the typical definition of “exclusive” content, but rather determined that XM’s content is exclusive vis-à-vis Sirius and vice versa. 8/20/07 Tr. 263:14-268:19 (Martin). Mr. Martin acknowledged at trial that the SDARS’ non-music content deals are most certainly not exclusive vis-à-vis local television, local radio, or any other media. The following exchange between the Court and Mr. Martin at trial is instructive:

CHIEF JUDGE SLEDGE: So exclusivity is a term of art the way you are using it, not the general definition of exclusive. Where do we find that definition in your report?

...

THE WITNESS: I don’t know if we have a formal definition in the report.

...

CHIEF JUDGE SLEDGE: It looks like on 13 and 14 you’re treating exclusivity only as between the two satellite services.

THE WITNESS: Yes. And that is all we’re attempting to quantify here. To attempt to quantify the value of precluding other sound delivery mechanisms, such as terrestrial radio, there wasn’t enough time nor information available. I’m simply quantifying the exclusivity value within the satellite radio platform.

CHIEF JUDGE SLEDGE: I see. Well that's –

THE WITNESS: Precluding –

CHIEF JUDGE SLEDGE: I'm glad I asked the question. That's very different than what I thought exclusivity meant.

THE WITNESS: Thank you, sir. I'm sorry I didn't explain that properly.

CHIEF JUDGE SLEDGE: I see. So when you are talking about exclusivity, you are talking about only between two services?

THE WITNESS: Absolutely. I reference that we have exclusivity in other means from terrestrial for certain properties, but we are strictly limiting our analysis to the exclusivity between XM and Sirius in our analysis.

8/20/07 Tr. 263:14-268:19 (Martin); The SDARS presented absolutely no evidence at trial that, under this very limited definition of “exclusive,” a 25% upward adjustment in value was accurate, appropriate, or valid.

504. *Third*, Mr. Martin exaggerated the intangible elements of the SDARS' non-music content deals by selecting as benchmarks only the most valuable brand and endorsement deals that he and his team could locate, and by excluding from his analysis any deals that would lower the value of the intangibles. For example, Mr. Martin included in his analysis three endorsement deals with swimmer Michael Phelps. SX Trial Ex. 92, 93; 8/20/07 Tr. 339:17-340:11 (Martin). Mr. Martin obtained the information of these three deals from a *USA Today* article obtained via the Internet. *Id.* Mr. Martin manipulated his results, however, because that very same *USA Today* article also highlighted several other endorsement deals for Michael Phelps that were lower in value than the ones Mr. Martin chose to include. Mr. Martin admitted at trial that one of three things was true: either his testimony was wrong because there were lower-valued deals he found but failed to use in his analysis, or his colleagues misled him about the existence of other deals, or his colleagues did sloppy work. 8/20/07 Tr. 341:5-343:12 (Martin). Under any of these

explanations, Mr. Martin's results were flawed and undeniably exaggerated to make the content value of the SDARS' deals seem less than reality.

505. Mr. Martin engaged in similar exaggeration elsewhere in his analysis. He excluded from his analysis a \$400,000 endorsement deal with Paris Hilton, but included a \$4.5 million dollar deal with Brad Pitt even though both deals are discussed in the same publicly available article from *Forbes* magazine. SX Trial Ex. 97; 8/21/07 Tr. 32:20-34:4. Mr. Martin also included a \$20 million dollar deal for Catherine Zeta Jones but excluded a \$1 million dollar deal for Eva Longoria even though both of those deals are discussed in the same publicly available article. SX Trial Ex. 97; 8/21/07 Tr. 34:10-35:1 (Martin). Furthermore, Mr. Martin analyzed the endorsement value of almost exclusively golfers and tennis players as comparables for sports leagues like the NFL and Major League Baseball, even though one of his source materials clearly explained that endorsement deals for golfers are outliers on the high end of the spectrum because "the golf audience is the most desirable demographic appeal of any sport." SX Trial Ex. 98 at 1. By way of example, though valuing deals with the NFL and MLB, Mr. Martin failed to include any endorsement deals for football or baseball players. Specifically, he failed to include one of Barry Bonds' two-year endorsement deals with Armor Hot Dogs for \$200,000, even though the information about that deal is publicly available in a news article in the *San Francisco Business Times*. SX Trial Ex. 100. The inclusion of this and other similar deals in Mr. Martin's analysis would have substantially lowered the results of his analysis and increased the value of the content relative to the intangible elements of the SDARS' non-music content agreements.

506. *Fourth*, Mr. Martin exaggerated the intangible elements of the SDARS' non-music content deals by relying on news media accounts of only the most valuable contracts.

Eleven of the sixteen agreements Mr. Martin analyzed in Exhibit 8 to his testimony were derived from an article in *Ad Week* magazine which highlighted the world's most expensive endorsement deals at the time the article was written. SX Trial Ex. 94; 8/21/07 Tr. 24:5-25:8, 29:14-29:17 (Martin) (stating that "Ad Week believes these to be the top ten highest paying deals among celebrities"). Mr. Martin thus did not evaluate a "cross section" of deals – he only analyzed the most expensive ones. As a result, there is an inherent bias in his results that overstates the value of the "intangible" elements about which he testifies. The value of these deals is exaggerated further by the fact that Mr. Martin did not actually review the deals, but rather relied on news media estimates of the value of these comparable agreements which are, themselves, exaggerated. As Judge Roberts pointed out at trial, they are based on quotes from the celebrities' own agents about their worth. 8/20/07 Tr. 333:9-334:12 (Martin). Obviously, agents representing celebrities have an incentive to exaggerate their value because such value is tied to the future compensation of their clients and thus themselves.

507. *Fifth*, Mr. Martin exaggerated the value of the intangible elements by calculating the wholesale value of the agreements using a fictional industry profit margin of 26.61%. Martin WRT, SDARS Trial Ex. 75 at Martin Exhibit 7; 8/20/07 Tr. 287:12-291:5. Mr. Martin admitted at trial that this profit margin is a complete fiction, that his "analysis assumed that a wholesale price at which the wholesaler would provide that content to the retailer for distribution to the consumer would entail a 26.61 percent operating margin, average operating margin. It had no reference to whether or not Sirius and/or XM had been operating at a 26 percent level or higher or lower." 8/20/07 Tr. 289:17-290:3 (Martin); *see also* 8/20/07 Tr. 282:21-284:5 (stating that Mr. Martin "didn't have access to the retail revenues" when conducting his analysis); 8/20/07 Tr. 288:16-290:3 (admitting that "I have not reviewed their financial operating performance, nor was

I asked to review it as part of this exercise”). Notwithstanding that 26.61% was a wholly artificial number that had nothing to do with the reality of the SDARS’ operating profit margins, Mr. Martin “grossed up” the net present value of the SDARS’ agreements by that percentage in the process of valuing the brand, endorsement value, and exclusive value of the SDARS’ agreements. Mr. Martin’s results are therefore as fictional as the numbers upon which they are based.

c. Mr. Bruce Silverman

508. Finally, the SDARS offered the testimony of Bruce G. Silverman, an advertising and media consultant. Silverman claimed to have calculated the “advertising cost” of “editorial content” in publications and on television. 8/22/07 Tr. 85:4-14 (Silverman).

509. One can only presume that the SDARS put forth Silverman’s testimony as evidence that non-music content has some greater value to them than do sound recordings. However, the “advertising cost” Silverman claimed to have identified in his testimony is a number without any significance. Silverman’s advertising cost is not equivalent to the “value” of news coverage. Indeed, the Court ruled that Mr. Silverman lacked the expertise to testify to the value of publicity. 8/22/07 Tr. 78:21-79:5 (Silverman). The Court did not even permit Silverman’s written rebuttal testimony to be entered into evidence. 8/22/07 Tr. 128:10-11 (Silverman).

510. In turn, Mr. Silverman himself admitted that no comparison could be drawn between the theorized advertising cost and the value of editorial content. At one point, Silverman testified, agreeing with the Court, that it would “be cheaper to get a series of op-eds planted in newspapers as opposed to actually running an ad in those same newspapers.” 8/22/07 Tr. 49:13-20 (Silverman).

511. Thus, Silverman's testimony about what a given piece of editorial content would cost if it were an ad is meaningless. His testimony tells this Court *nothing* about the value to the SDARS of such media coverage. In fact, his oral testimony was wholly untethered to the question of value.

512. Moreover, nothing in Silverman's testimony suggests that editorial coverage of non-music content is more valuable than editorial coverage of music. In fact, Silverman never considered editorial content about *music*. 8/22/07 Tr. 260:14-261:18 (Silverman). He admitted that he simply did not know anything about editorial coverage of music. 8/22/07 Tr. 261:16-18 (Silverman).

513. Beyond the fact that his testimony discussed only the perfectly meaningless ad-cost numbers, Mr. Silverman's testimony was riddled with flaws and inconsistencies.

514. As the Court will recall, Mr. Silverman did not recognize *a single one* of the editorials used in his "study" when he was shown a random sampling of them on cross examination. 8/22/07 Tr. 254-300 (Silverman). Mr. Silverman testified that he would not have counted a story about one of the SDARS suffering a service outage. 8/22/07 Tr. 75:17-76:3, 262:4-14 (Silverman). But in fact, his team counted a story with the headline "Glitch KOs service to XM radio listeners." SX Trial Ex. 109 at SDARS CRB 00046553. The story's lead and first eight paragraphs concerned a disruption in XM's service that lasted 24 hours, and called the outage "widespread," and theorized that the outage might present "an issue for investors." SX Trial Ex. 109 at SDARS CRB 00046553. Silverman recognized that his team had counted SX Trial Ex. 109, despite his earlier testimony that such an article should not have been counted. 8/22/07 Tr. 265:6-8 (Silverman).

515. To have counted this story about the outage, with its negative implications for the XM's service quality and investor relations, is not only inconsistent with Silverman's own claims about his methodology, but is also inconsistent with the way the SDARS' other branding witnesses treated favorability. The SDARS' witness Dr. Erich Joachimsthaler claimed that favorability is one of the most important characteristics of a brand that makes associating with the brand so important for the SDARS. Silverman, on the other hand, counted both favorable *and unfavorable* mentions in his calculation of advertising cost. He admitted that he looked at "even negative stories . . . as a positive mention in terms of getting publicity value for the service." 8/22/07 Tr. 74:12-17 (Silverman).

516. Silverman's methodology led to other bizarre results. Because he did not consider music, Silverman ended up giving "credit" to various non-music content providers for stories that had much more to say about music than about any kind of non-music content. For instance, he counted for Opie & Anthony a news story from the Tennessean that began with the line, "Sonata Stanton loves music," but which did not even mention shock jocks Opie & Anthony until the fourth page of the five-page article. SX Trial Ex. 112 at XMCRB 00154094-97. Well before any mention of Opie & Anthony, the article included such statements as "I'm hearing better music," "XM and Sirius each offer about 65 channels of music with no commercials," and "[s]atellite radio plays about 17 songs an hour, compared with commercial radio's 12." SX Trial Ex. 112 at XMCRB 00154094-96. Opie & Anthony were mentioned only once in the article. SX Trial Ex. 112 at XMCRB 00154097.

517. These methodological flaws merely scratch the surface as Mr. Silverman's own descriptions of his methodology reveal a deeply flawed system that produced wholly irrelevant results. This Court explicitly ruled that much of Mr. Silverman's testimony was "not the product

of reliable principles and methods,” and that Silverman did not “appl[y] the principles and methods reliably to the facts of the case.” 8/22/07 Tr. 108:22-109:5 (Silverman).

518. In the first place, Silverman did not review every piece of editorial content himself. Silverman told this Court that the process used in arriving at the numbers in his testimony was extremely subjective and that he delegated much of the subjective decision-making to others who were *not* experts in any field. 8/22/07 Tr. 77:1-3 (Silverman). He employed “a group of individuals all working on a part-time basis” to review the media “hits.” 8/22/07 Tr. 52:13-53:1 (Silverman). Much of the review work was done on weekends and at night. 8/22/07 Tr. 53:12:18 (Silverman).

519. He claims he gave *the employees* a “standard to use to determine whether or not to . . . say yes or no to any one of the hits.” 8/22/07 Tr. 71:3-6 (Silverman). In fact, it appeared there were several standards that the employees could have applied. At one point, Silverman testified that the “number one standard” his employees used was “would this story have taken place were it not for the relationship between one of the personalities . . . making a deal with either of the satellite companies.” 8/22/07 Tr. 71:3-13 (Silverman).

520. But at another point, Silverman testified that he told his employees to review “the lead of the story” as “a good indicator” of the subject of the article. 8/22/07 Tr. 271:1-6 (Silverman). And at other times, Silverman testified that he asked his team “to determine whether . . . there was . . . information in the story that would point to one of these deals that had perhaps made the story more relevant at a given time.” 8/22/07 Tr. 271:8-12 (Silverman). If Mr. Silverman could not articulate one clear standard in court, one can only imagine the directions he gave his underlings.

521. This amorphous set of standards resulted in confusion that taints Silverman's results. Silverman himself admitted that, although it was "pretty easy" for his workers to apply these standards to some instances of editorial content, it was more difficult to apply those standards to other, "more convoluted" examples. 8/22/07 Tr. 72:1-8 (Silverman).

522. Silverman also admitted that some articles that he would have excluded "slipped through" because he "couldn't check every single thing" his employees approved. 8/22/07 Tr. 76:16-20 (Silverman). Although he claimed that he "would make the final decision as to whether or not something" would be counted, 8/22/07 Tr. 53:19-22 (Silverman), in fact, he did not review all the subjective decisions his employees made. Rather, he only "spot checked" his employees' work. 8/22/07 Tr. 54:2-6 (Silverman). Furthermore, after he found errors and instances in which his "expert" judgment differed from the judgment exercised by the underlings, he *still* did not go back and check every subjective decision made by those individuals. 8/22/07 Tr. 256:4-7 (Silverman). At bottom, it was clear that as he sat on the witness stand, he had no idea whatsoever how many editorials might have been counted in his study that he would have excluded.

523. Several times in his testimony, Silverman claimed that he could not have reviewed the 4000 "hits" that were approved by his employees. 8/22/07 Tr. 54:13-22, 76:16-77:3, 255:9-11 (Silverman). That amounts to only 2-3 standard banker boxes of documents. In light of the hundreds of thousands of pages that have been produced and reviewed by the parties in this proceeding, Silverman's claim that he just could not have been expected to review 4000 instances of news coverage is not remotely credible.

524. Perhaps as a result of Silverman's delegation, he appeared to lack even the most basic familiarity with the editorial content that was ostensibly the subject of his testimony. In

response to the questions posed by counsel for SoundExchange on cross-examination, Silverman didn't recognize a single article that was supposedly reviewed in the process of coming up with the numbers in his testimony. *See generally* 8/22/07 Tr. (Silverman).

525. As well, Silverman had virtually no idea how to use *his own* spreadsheets. Every time counsel for SoundExchange asked Silverman about his own spreadsheets, counsel for SoundExchange had to point out to Silverman where the relevant information was located. *See, e.g.*, 8/22/07 Tr. 264:9-265:5 (Silverman). At one point, the Court had to direct Silverman to the location of information in documents produced to SoundExchange on the ground that they were supposedly relied upon *by Silverman himself*. 8/22/07 Tr. 268:2-7 (Silverman).

526. And the methodological failings do not stop there. Mr. Silverman did not calculate the portion of a full page that any given "hit" occupied – that was done by Precis, a contractor Silverman employed, and Silverman did not even spot check Precis's work. 8/22/07 Tr. 258:5-16. Neither Silverman nor any members of his team reviewed the rate cards for any but a "tiny number" of periodicals used in his analysis. 8/22/07 Tr. 258:17-259:5. *No one* on Silverman's team – certainly not Silverman himself, and not even his underlings – actually *viewed* the television hits. 8/22/07 Tr. 256:8-257:1 (Silverman).

527. In sum, Mr. Silverman's study and testimony was so inherently unreliable that it cannot be countenanced by this Court.

V. A WIDE RANGE OF MARKETPLACE BENCHMARKS AND ECONOMIC EVIDENCE SUPPORTS THE SOUNDEXCHANGE RATE PROPOSAL

A. Introduction and Summary

528. SoundExchange and its retained experts have provided over a half a dozen benchmark rates and economic analyses, each of which provides distinct and highly relevant

information that should aid the Court in setting a royalty rate that satisfies the policy objectives of § 801(b).

529. First, the amount that the SDARS pay in open market transactions for content other than sound recordings is highly instructive. All content serves the same basic purpose: it draws subscribers and adds revenue. The amounts paid by the SDARS to obtain non-music content, therefore, provide evidence relevant to assessing the value to the SDARS of music content. Dr. Pelcovits analyzed the data relating to Sirius's contract with Howard Stern, and also looked more generally at all of the non-music contract expenditures of the SDARS, finding that this evidence supports royalty rates for the SDARS ranging between 13% of revenue and 23% of revenue. While Dr. Pelcovits performed this analysis, Dr. Ordover agrees that this kind of evidence is highly instructive with respect to the rates one would expect the SDARS to pay to individual record companies. Ordover WDT at 36, SX Trial Ex. 61. This analysis is explained *infra* at point B. Dr. Herscovici noted that this type of evidence is particularly relevant to several of the § 801(b) factors. Herscovici WRT at 21, SX Trial Ex. 130.

530. Second, Dr. Ordover analyzed and provided benchmark analyses that relied on the contracts entered into between record companies and other services that digitally distribute their sound recordings. Dr. Ordover concluded that these deals, applied in the context of the SDARS, suggested percentage of revenue royalty rates between 19% and 28%, or per subscriber rates between \$2.48 and \$2.81 per subscriber, per month. This analysis is explained *infra* at point C.

531. Third, Dr. Ordover analyzed evidence derived from the deals between content providers and satellite *television* operators, useful principally because satellite television and satellite radio have roughly comparable capital structures, being relatively high-cost methods of delivering content. 6/21/07 Tr. 274:6-9 (Ordover). Therefore, using satellite television as a

benchmark addresses questions about whether businesses that deliver content over a relatively high-cost delivery mechanism have content costs in roughly the same proportion to total costs as do webcasting and other digital distribution businesses that use lower-cost distribution technologies. Ordover WDT at 37, SX Trial Ex. 61; 6/21/07 Tr. 191:15-192:10 (Ordover). Potential rates from \$2.17 to \$2.70 per subscriber, per month, or from 18% to 23% of revenue, resulted from this analysis. This analysis is explained *infra* at point D.

532. Fourth, survey experts Jerry Wind and George Mantis, as well as Drs. Pelcovits and Herscovici, each looked at various aspects of the evidence relating to the substitution and promotion effects of the SDARS broadcasts of sound recordings. What they concluded is that on balance the record companies lose approximately \$1.29 per SDARS subscriber per month due to customers substituting the SDARS' service for CD purchases. Dr. Pelcovits and Dr. Herscovici explain why these losses represent an opportunity cost that establish a lower bound of a royalty rate that satisfies the four statutory criteria. This analysis is explained *infra* at point E.

533. Fifth, Dr. Pelcovits, supported by financial information provided by SoundExchange finance expert Sean Butson, provides an analysis based on the surplus that will be created by the SDARS when they achieve a steady state of growth. Dr. Pelcovits explains how much of this surplus would be awarded to the record companies under an economic modeling approach that advances the statutory policy goals. This analysis, yielding potential rates of \$2.37 per subscriber per month or 18% of revenue, is explained *infra* at point F.

534. Finally, the SDARS own expert, Dr. Hauser, provides survey data that offers still another basis to establish a royalty rate, based on his analysis of how much subscribers are willing to pay for each discrete aspect of the SDARS service. Dr. Hauser concludes that the sound recordings have a value of \$1.78 per subscriber per month, independent of the

contributions of the SDARS and other content providers. This analysis is explained *infra* at point G.

535. The ability to look at a number of different benchmarks and methods of economic analysis is important. A rate that is supported by multiple measures is more likely to be an appropriate one. Pelcovits WDT at 8-9, SX Trial Ex. 68. Here, each of the benchmark rates and economic analyses produce similar results, and taken together they provide overwhelming evidence of the range of rates that would satisfy the statutory criteria at issue in this case.

7/09/07 Tr. 109:22-111:37/09/07 (Pelcovits); Ordover WDT at 36, SX Trial Ex. 61.

B. Non-Music Content Benchmarks Establish That the Copyright Owners Should Be Paid a Double-Digit Percentage of the SDARS' Revenues

1. The Advantages Of Non-Music Content As A Benchmark

536. Between 2004 and 2005, XM's non-music programming costs rose from [REDACTED] to [REDACTED]. Between 2004 and 2005, Sirius's non-music programming costs rose from [REDACTED] to [REDACTED]. Woodbury WDT at 17, XM Trial Ex. 8. The SDARS' evident willingness to pay large sums for non-music content speaks volumes about the value of music content, which survey evidence uniformly shows to be more valuable than non-music content. *See supra* Section IV

537. Dr. Pelcovits considered agreements by the SDARS to acquire non-music content to be highly probative evidence in this case, because from the SDARS' perspective, the purpose of non-music content and music content is the same – to attract and retain paying customers for the SDARS service. 7/09/07 Tr. 54:18-56:3 (Pelcovits). XM itself, in its SEC filings, notes that “[w]e view programming and content expenses as a cost of attracting and retaining subscribers,” without distinguishing between music and non-music content. Pelcovits WRT at 13-14, SX Trial Ex. 124. Thus, as Dr. Pelcovits explained, if one had an unidentified piece of programming, but

one knew how many subscribers and listeners it attracted relative to other content, one need not know whether the programming is music or not to determine its appropriate payment. If the program brings in twice as many subscribers and listeners as the average program, it should be paid twice as much as the average program.¹⁷ Pelcovits WRT at 14, SX Trial Ex. 124.

538. Because the value of content is directly related to its ability to attract subscribers, music content and non-music content are substitutable inputs. Pelcovits WDT at 9-10, SX Trial Ex. 68; 7/09/07 Tr. 299:19-300:3 (Pelcovits). Indeed, even the SDARS' retained expert, Dr. Benston – who attacked the use of non-music content as a benchmark in sweeping terms, *see* 8/20/07 Tr. 80:6-15 (Benston) – agreed that the output or product produced by the SDARS is a broadcast that can be received by special radios, especially in cars, and that both music and non-music content are inputs into that product. 8/20/07 Tr. 193:14-194-6 (Benston).

539. Analyzing the SDARS' acquisition of non-music content addresses the four § 801(b) statutory criteria particularly well. Pelcovits WDT at 11, SX Trial Ex. 68. SoundExchange is not fairly compensated under the compulsory license if sound recording payments, relative to the value sound recordings provides, are lower than the comparable market-based payments to other content providers. *Id.* Moreover, where sound recording rights holders alone are undercompensated relative to a competitive market standard, sound recordings will be undersupplied relative to other programming in the long run. That outcome directly undermines the first statutory goal of “maximizing the availability” of sound recordings, and it

¹⁷ The SDARS, on the contrary, seemingly would insist on knowing whether the program was music or not, and if the program was music, the SDARS would pay only about 5% of the payment made for non-music programming generating identical consumer patronage. In approximate numbers, Dr. Pelcovits proposed a royalty increasing to 20% based on payments to non-music content, while the SDARS propose a royalty of one percent. Hence, the SDARS approach reduces to dividing payments for non-music programming by 20 to generate a royalty payment for sound recordings. Dr. Pelcovits perceived no justification for this gross disparity in payment. Pelcovits WRT at 13-14, SX Trial Ex. 124.

disserves consumer welfare. *Id.* Moreover, considering the third and fourth statutory factors, the SDARS would not have agreed to rates in marketplace transactions for content unless such transactions made economic sense and did not have a disruptive impact, that is, were likely to lead to revenues from subscriber gains greater than the amount spent, left the SDARS sufficient revenue to make the necessary capital investment in their satellite networks and would not undermine their long-term viability. *Id.* Thus, these marketplace transactions demonstrate the SDARS' own judgments about the value of content within the context of their own business model, and the needs of their investors to recover, over time, the appropriate risk-adjusted rate of return. *Id.*

540. Using non-music content deals as a benchmark is particularly attractive because the SDARS are presently in a period of rapid growth. In such periods, companies are investing substantial resources to build up their customer base. These costs are incurred based on the reasonable assumption that they will be offset in the future with commensurate revenues. Unlike a more mature business in a stable state, a profit and loss statement for a rapidly growing business will reveal the costs, but not the revenues that are the expected result of those costs. *Herscovici WRT at ¶¶ 73-78, SX Trial Ex. 130.* A business might be spending all of its money to attract new customers, and have no profits or surplus at all. However, suppliers of inputs to the business do not accept lower prices simply because the buyer presently is unprofitable. An input supplier would not do so, because it understands that the surplus to which it is contributing will only develop in later years. It would instead demand its share of the future anticipated surplus. *Pelcovits WDT at 31-32, SX Trial Ex. 68.*

541. This analysis is corroborated by the analysis of non-music content deals that the SDARS have struck. Howard Stern received benefits that are not justified by looking only at

Sirius's revenue and its costs in 2006, a time when its costs were greater than its revenues. The surplus that Howard Stern was recovering was not 2006 surplus, but surplus that Sirius expected to be generating as a result of Stern's content in future years. Pelcovits WDT at 31-32, SX Trial Ex. 68.

542. Through one of their retained experts, Dr. Benston, the SDARS attacked the use of non-music content as a benchmark, raising a variety of objections that uniformly lack merit.¹⁸ For example, Dr. Benston criticized Dr. Pelcovits's use of non-music content as a benchmark in part because he believes that the supply of non-music content is somehow more limited than the supply of music content, and because there is a smaller supply and fewer substitutes for non-music content, the price for non-music content will be higher than the price for music content. 8/20/07 Tr. 74:6-76:21 (Benston). In fact, however, Dr. Benston does not actually know whether the supply of non-music content is any different than the supply of music content, as the following colloquy reveals (8/20/07 Tr. 187:19-188:10 (Benston)):

Question: Its fair to say, is it not, that there are talk show hosts who are stars and have a loyal following, correct?

Answer: Yes.

Question: And its also fair to say that there are recording artists who are stars and have a loyal following, correct?

¹⁸ Symptomatic of the lack of substance in Dr. Benston's critique was his response to a hypothetical from the Court. Dr. Benston was asked whether one could use the royalty paid for motion pictures on television as a benchmark to value a syndicated television series. 8/20/07 Tr. 80:17-81:21 (Benston). He responded that motion pictures and syndicated television shows "are at least similar" and "the same basic product" because "they're both visual images that are being projected and in that sense there is a similarity of the products." 8/20/07 Tr. 81:22-82:8 (Benston). He then had to acknowledge, however, that music content and non-music content both involve audio transmissions listened to predominantly over a car radio, 8/20/07 Tr. 82:8-14; 87:20-88:5 (Benston), and thus are similar in the same way that motion pictures and syndicated television shows are similar.

Answer: Yes.

Question: Do you have any reason to think that the supply of one is any different than the supply of the other?

Answer: To look at – I don't think I've ever tried to look at the supply in terms of numbers and the price they might command, so I don't know.

543. Similarly, Dr. Benston faulted Dr. Pelcovits's use of non-music as a benchmark based on Dr. Benston's contention that the opportunity costs for non-music content providers is higher than the opportunity costs for music content providers. Benston WRT at 4, SDARS Trial Ex. 74. Dr. Benston, however, has not undertaken any empirical study of the opportunity costs for any non-music content providers. 8/20/07 Tr. 182:13-20 (Benston).

544. Dr. Benston additionally assailed Dr. Pelcovits's use of non-music content as a benchmark because he believes that music content and non-music content "will be worth different things to people who might buy the final product." 8/20/07 Tr. 76:22-77:5 (Benston). That is, consumer demand will be different. In part, Dr. Benston contended that consumer demand would be higher for non-music content because some of it is exclusive to XM or Sirius. 8/20/07 Tr. 88:5-89:1 (Benston).

545. Dr. Benston admitted, however, that supposedly exclusive non-music content, such as Martha Stewart, is available from sources other than satellite radio. 8/20/07 Tr. 94:15-95-12 (Benston). And even if some non-music content agreements provide the SDARS with a degree of exclusivity, Dr. Pelcovits did not believe that exclusivity diminished the relevance of non-music content agreements as evidence of an appropriate royalty rate for music. The measure by which content is valued by the SDARS is the number of customers who sign up for an SDARS service as a result of that content. Exclusive content might attract more customers than non-exclusive content, but Dr. Pelcovits took this into account in his analysis. 7/09/07 Tr. 56:4-

57:10 (Pelcovits). On this point, the SDARS' own fact witnesses appeared to agree with Dr. Pelcovits, not Dr. Benston. *See supra* Section IV.H.1 (citing testimony from Mr. Coleman and Mr. Vendetti)

546. On the other side of the coin, the reality is that the SDARS effectively offer music on an exclusive basis, as this Court recognized. *See* 8/20/07 Tr. 96:4-97:11 (Benston). Even the largest AM/FM radio markets do not offer as many music channels, with as many kinds of music, as do the SDARS. According to Dr. Woodbury, "Sirius and XM both provide more music channels than are found in even the largest terrestrial radio markets, and those channels cover a more diverse set of genres. While Sirius has 71 music channels and XM has 80, the five largest radio markets, as measured by BIA, have an average of 43 music channels." Woodbury WDT at 42, XM Trial Ex. 8. Dr. Woodbury goes on to note that the majority of the terrestrial radio channels in the largest radio markets are rock or pop genres, while XM and Sirius have a far wider array of formats than are found even in the top five markets. Even the top five radio markets have no stations dedicated to kids music and only one of those markets features a dance music format. *Id.* *See also supra* Section IV.H.1.

547. Even with a genre of music found on both terrestrial radio and satellite radio, there is greater diversity in the satellite radio offerings. For example, four of the five top terrestrial radio markets have only one station in a jazz and blues format, while XM and Sirius both have five channels playing jazz and blues, featuring different sub-genres such as classical jazz, modern jazz, etc. Woodbury WDT at 42, XM Trial Ex. 8.

548. Dr. Benston admitted as much, agreeing with the Court that some music content is, as a practical matter, exclusive to satellite radio. For example, Judge Roberts noted that some of the music channels available on satellite radio are not available on terrestrial radio, and while

a consumer can download music to an iPod and play it in the car, that requires some effort by the consumer. Therefore, some of the SDARS' music channels are in effect exclusive because there is no other way to easily obtain the same music from another source in the car. 8/20/07 Tr. 96:4-97:11 (Benston). Dr. Benston agreed: "I think that is very important." 8/20/07 Tr. 100:15-16 (Benston). He explained (8/20/07 Tr. 101:6-11 (Benston)):

For myself, I'm a National Public Radio listener because I like classical music and if I travel a distance, I would probably subscribe to XM or Sirius to get that music because in my area I can get it but in many areas, you can't.

549. Following up, Judge Roberts asked for Dr. Benston's "reaction to the fact that there seems to be a number of channels offered by satellite radio that don't have viable substitutes," and Dr. Benston replied: "I think your Honor is making a very good point and I would amend what I wrote as being too sweeping by taking music in general." 8/20/07 Tr. 105:5-13 (Benston).

550. For all of these reasons, Dr. Pelcovits considered non-music content agreements to be highly relevant evidence. In order to analyze the value of non-music content agreements, however, Dr. Pelcovits needed to know how much the SDARS paid for any particular type of content, and how many customers could be attributed to that content. At the outset of his engagement in this case, Dr. Pelcovits had this information from public sources only for the Howard Stern agreement. 7/09/07 Tr. 57:22-59:11 (Pelcovits). Subsequently, in discovery Dr. Pelcovits obtained additional information regarding the Stern deal, including a copy of the contract between Sirius and Stern. 7/09/07 Tr. 59:12-60:9 (Pelcovits). He also received information about the SDARS' other non-music content deals. He therefore was able to provide two benchmark values using non-music content: the Stern benchmark developed from public data and presented in his opening testimony, as amended subsequently when more, non-public,

information became available; and a benchmark involving all non-music content expenditures, provided in amended testimony when that information became available to him. *See* Pelcovits WDT 9-14, SX Trial Ex. 68 and Pelcovits Amended WDT 4-11, SX Trial Ex. 70. These two benchmarks are described below.

2. The Sirius-Howard Stern Contract Provides an Excellent Benchmark

551. Initially using public information, and later using information obtained in discovery, Dr. Pelcovits examined the amounts paid by Sirius to Howard Stern, and the incremental revenues received by Sirius as a result of hiring Stern, in order to assess what percentage of the revenue attributable to a given content provider the SDARS would be willing to pay in order to license that provider's content. Knowing what percentage of incremental revenue the SDARS would pay to obtain content, and using the Wind survey data to establish how much incremental revenue was attributable to music content, allowed Dr. Pelcovits to calculate that the SDARS would pay for music content an amount equal to 23% of total revenue or \$2.76 per subscriber (*see infra*).

552. In broad strokes, what Dr. Pelcovits did was to divide the number of incremental subscribers expected to result from the Stern contract into the total payments to Stern, in order to obtain an amount that Stern was paid per expected subscriber. He then determined the amount paid to Mr. Stern per subscriber per month by dividing the total paid to Stern per subscriber by the average number of months subscribers remain with Sirius (42 months). This payment per subscriber per month was compared with the total revenue Sirius is expected to obtain from each subscriber per month (using Mr. Butson's calculation based on publicly available information from the SDARS), which yields a result that Sirius paid Stern slightly above 50% of the incremental revenue he brought to Sirius. Pelcovits WDT at 12-13, SX Trial Ex. 68; 7/09/07 Tr.

62:1-62:9, 68:6-68:13 (Pelcovits). Dr. Pelcovits then calculated a sound recording royalty based on the following formula: Share of incremental revenue paid to Stern (50%) times the revenue percentage attributed to music (56%, based on the Wind survey) minus publishers' royalty (3.5%) and music production costs [REDACTED]. Pelcovits Amended WDT at 5, 8, SX Trial Ex. 70.

553. As the first step in this process, Dr. Pelcovits determined what percentage of the incremental revenue was paid to Stern by comparing the amounts paid to Howard Stern by Sirius with the estimated incremental revenue earned by Sirius as a result of hiring Howard Stern.

7/09/07 Tr. 63:12-64:18 (Pelcovits). These amounts were calculated as follows:

554. *Total Stern Compensation:* Dr. Pelcovits determined the total compensation paid to Howard Stern based on the contract between Stern and Sirius produced in discovery. 7/09/07 Tr. 63:18-64:13 (Pelcovits). Specifically, Howard Stern and his agent¹⁹ receive the following payments (Pelcovits Amended WDT at 5-6, SX Trial Ex. 70):

- [REDACTED] signing bonus in October 2004;
- \$220 million stock/cash payment in January 2006;
- [REDACTED]/year in years 2006 through 2010, spread evenly throughout the year;

- [REDACTED];

- [REDACTED];

- Howard Stern and Sirius [REDACTED]

¹⁹ Pursuant to the terms of Sirius's agreement with Stern, [REDACTED] – an amount *in excess* of what Sirius is proposing to pay for music. SX Trial Ex. 27 at SIR00010470. Stern's manager, provides consulting only for the Howard Stern channels. 6/7/07 Tr. 12:3-15 (Karmazin).

[REDACTED];

- Sirius pays Howard Stern [REDACTED].

See SX Trial Ex. 27.

555. *Incremental Stern revenue:* The average revenue per subscriber for 2006 was based on the Sirius actual reported numbers, and for 2007 through 2010 was based on projections supplied by SoundExchange witness Sean Butson.²⁰ Dr. Pelcovits assumed that every subscriber who signed up for Sirius because of Howard Stern would remain a Sirius subscriber through the entire life of the Stern contract. 7/09/07 Tr. 67:5-68:5 (Pelcovits).

556. The number of subscribers Sirius anticipated would sign up for Sirius because of Howard Stern was triangulated from a number of sources, including analysts reports, statements by Sirius about the number of subscribers needed for Sirius to break even on the Howard Stern transaction, and various subscriber target levels in the Stern contract that would result in bonus payments to Stern. 7/09/07 Tr. 64:20-65:16, 291:7-291:22 (Pelcovits):

- Financial analysts, some of them briefed on the Stern transaction by Sirius, generally put the number of incremental customers Sirius expected to gain from Howard Stern's programming at less than 1.75 million net customers. Pelcovits WDT at 12, SX Trial Ex. 68.

- In the transcript of an earnings call, Sirius representatives stated that the company's research supported the proposition that Stern would bring one million subscribers to Sirius. Pelcovits Amended WDT at 6-7, SX Trial Ex. 70. Although the earnings call also indicates that four million subscribers was thought to be a possibility, Dr. Pelcovits considered that an outside estimate rather than an expression of how many Stern subscribers Sirius actually expected. An increment of four million subscribers would have been contrary to the revenue guidance Sirius was giving at the time. 7/09/07 Tr. 263:7-263:14, 265:3-265:12, 266:2-266:14 (Pelcovits).

²⁰ Dr. Pelcovits discounted all costs and revenues to present value as of January 1, 2006, at a 12% discount rate. Pelcovits Amended WDT at 7, SX Trial Ex. 70.

- The Stern contract itself provided for different levels of compensation, depending on the number of subscribers that Stern was believed to have brought to Sirius. In particular, the contract provided for a bonus payment to Mr. Stern if the number of Stern subscribers exceeded two million, and an additional bonus if the number of Stern subscribers exceeded four million. Pelcovits Amended WDT at 7, SX Trial Ex. 70.

557. Dr. Pelcovits calculated the percentage of incremental revenue paid to Howard Stern by Sirius at each of the incremental subscriber levels described in Stern's contract. At 1 million incremental subscribers, 2 million incremental subscribers, and 4 million incremental subscribers, the percentage of incremental revenue paid by Sirius to Stern equaled [REDACTED], respectively. Pelcovits Amended WDT at 6, 7, SX Trial Ex. 70.

558. Dr. Pelcovits believed that one could reasonably select the 1.0 million subscriber level as the basis for benchmark analysis in this case, because Sirius executives testified that Sirius would have been willing to enter into the deal with Stern at that level of incremental subscribers. *Id.* at 7 and n.14. Instead, however, he used the 2.0 million subscriber estimate in his benchmark analysis for several reasons. First, the 2.0 million figure reflects more accurately what actually happened: Sirius expected that the majority of Stern-generated subscribers would subscribe in 2006.²¹ Subscriber additions for 2006 totaled 2.7 million, and the 2.0 million figure would attribute a significant proportion – but not all – to Stern. Second, Sirius's own surveys reflect that [REDACTED]. And third, 2.0 million subscribers is closest to analysts' projections of 1.75 million. For those reasons, Dr. Pelcovits believed that the 2.0 million incremental subscriber figure was the most reasonable. *Id.* at 7-8.

²¹ As Sirius CFO David Frear explained in the earnings call announcing the Howard Stern deal, Sirius did "expect the vast majority of subscribers that come to us will come to us after he goes up on the air," that they "wouldn't expect 40 percent or 50 percent of them to wait to the end of year when they haven't been able to listen to him for ten months." SX Trial Ex. 70 at SX Exhibit 144 DR at 4-5.

559. In fact, the number of potential Stern subscribers used by Dr. Pelcovits in his analysis was considerably higher than the number that the Sirius Board of Directors was told to expect at the time the Board approved the deal with Stern. A study conducted for Sirius by the Odyssey group found that [REDACTED] [REDACTED] SX Trial Ex. 83 at 35. The Odyssey study was presented to and relied upon by Sirius's Board of Directors when it decided to hire Howard Stern. See SX Trial Ex. 70 at SX Exhibit 144 DR, p. 5. Similarly, after Sirius signed Howard Stern and announced the deal to the public, it commissioned another study to examine the "incremental impact of Howard Stern on Sirius Satellite Radio." See SX Trial Ex. 82 (Ipsos-Vantis Study prepared for Sirius on April 29, 2005). The purpose of this study was to "forecast the number of incremental subscribers (in 2005 and 2006) attributable to availability of Howard Stern on SIRIUS Satellite Radio starting 2006." *Id.* The study estimated that there were a total of approximately [REDACTED] daily Stern listeners. *Id.* at 8. Based on these numbers, and according to the study, Ipsos-Vantis determined that approximately [REDACTED] subscribers had already signed up because of Stern, and another [REDACTED] additional subscribers were projected to subscribe between the third quarter 2005 and the fourth quarter 2006. *Id.* at 9. Thus, Ipsos-Vantis predicted that less than [REDACTED] additional subscribers would be driven to subscribe because of Stern. If Dr. Pelcovits had used a lower subscriber number as he could have, it would have resulted in a higher benchmark rate.

560. Using the figure of 2 million incremental subscribers, even though it was more than [REDACTED] the number of new subscribers predicted for the Sirius Board of Directors by the Odyssey study, Dr. Pelcovits determined that Howard Stern received from Sirius 50% of the incremental revenue that Stern brought to Sirius. Pelcovits Amended WDT at 8, SX Trial Ex.

70; 7/09/07 Tr. 62:7-62:9 (Pelcovits). He then reasoned that the royalty payment for music should equal the same percentage (*i.e.*, 50%) of the incremental revenue attributable to music. 7/09/07 Tr. 62:7-62:20 (Pelcovits). In Dr. Pelcovits's view, content is valuable because it attracts subscribers, and if Howard Stern receives 50% of the revenue from the subscribers he attracts, then music likewise should receive 50% of the revenue from the subscribers that it attracts. 7/09/07 Tr. 61:3-62:9 (Pelcovits).

561. To determine the incremental revenue attributable to music, Dr. Pelcovits used survey evidence from the Wind survey indicating that 56% of Sirius subscribers would either cancel their subscription (41%) or pay a fraction of their current subscription fee (15%) if music were not available. Pelcovits WDT at 12-13, SX Trial Ex. 68. Of note, this estimate is close to and slightly below the value of music programming calculated by Dr. Woodbury's cancellation analysis. *See supra* Section IV.E. If music is responsible for 56% of total SDARS revenue, and if content providers such as Stern are paid 50% of the revenue they bring in, then an appropriate royalty for music is 28% of total SDARS revenue (*i.e.*, 50% x 56%). Pelcovits Amended WDT at 8, SX Trial Ex. 70; 7/09/07 Tr. 66:11-71:2 (Pelcovits).

562. Because the 28% royalty applies to music generally, rather than discretely to the performance right for sound recordings, Dr. Pelcovits deducted from that number the amount that he estimated is paid by the SDARS for musical works rights (3.5%),²² as well as the production and programming costs incurred by the SDARS in connection with the broadcast of music. Deducting these costs produced a proposed royalty rate for sound recordings of 23% of

²² Dr. Pelcovits estimated the musical works royalty paid by the SDARS using projections provided by Sean Butson derived from public analysts' reports. 7/09/07 Tr. 71:18-72:1 (Pelcovits). According to Dr. Woodbury, the actual musical works royalty rate is closer to [REDACTED]. Woodbury WDT at 38, XM Trial Ex. 8. If Dr. Pelcovits had adjusted his data accordingly, it would have resulted in a slightly higher benchmark rate.

SDARS revenues. Pelcovits Amended WDT at 8, SX Trial Ex. 70; 7/09/07 Tr. 71:3-72:7 (Pelcovits). Translated into a per subscriber fee, and based on an average revenue per subscriber of about \$12 per month in 2012 (Pelcovits WDT at 14, SX Trial Ex. 68), the per subscriber fee is \$2.76 per subscriber per month ($\$12 \times 23\%$).

563. Dr. Pelcovits was unable to perform a similar calculation to determine the percentage of incremental revenue paid to other individual content providers, because it was not clear from the discovery materials he received whether the SDARS executives relied on projections of incremental subscribers when they agreed to these content deals, and the relationship between the payment to a given content provider and the anticipated incremental revenue to be earned from the content provider was less clear than it was in the case of Howard Stern. 7/09/07 Tr. 74:17-76:11 (Pelcovits). Sirius did not provide any documents showing projected subscriber levels for different contemplated content deals. And while XM provided some [REDACTED] documents, Gary Parsons, Chairman of the Board for XM, stated at his deposition that [REDACTED]. Pelcovits Amended WDT at 8-9, SX Trial Ex. 70.

564. Nevertheless, to the extent that there was some information about the incremental number of subscribers who would be attracted by certain content providers, even though the SDARS themselves did not appear to rely on that data, Dr. Pelcovits reviewed the data as a reality check on his Stern analysis. The results gave Dr. Pelcovits further confidence in the Stern analysis. 7/09/07 Tr. 147:1-148:21 (Pelcovits). [REDACTED]
[REDACTED]
[REDACTED] 7/09/07 Tr. 74:17-76:11 (Pelcovits). Thus, looking only at the

[REDACTED] agreement, the corresponding royalty for music would be in [REDACTED] as a percentage of total SDARS revenue. 7/09/07 Tr. 78:10-78:20 (Pelcovits).

565. In part for these reasons, Dr. Pelcovits did not believe that the agreement between Howard Stern and Sirius was atypical in any way that rendered it unsuitable as a benchmark. Although Stern is important to Sirius and attracts a significant number of subscribers, he is not more important than the music catalogue of a major record company such as Universal or SONY BMG. 7/09/07 Tr. 72:8-73:7 (Pelcovits). Nor is Howard Stern the only large contract in dollar terms – sports deals also are substantial. For example, in October of 2004, XM agreed to pay Major League Baseball [REDACTED]. Woodbury WDT at 18, XM Trial Ex. 8. Because Stern was not “off some end of the charts” compared to other big-dollar content deals, Dr. Pelcovits did not regard the Stern agreement as an outlier or a “rogue agreement.” 7/09/07 Tr. 73:3-74:16 (Pelcovits).

566. Throughout these proceedings, however, Sirius has attempted to portray the Stern deal as entirely unique in terms of its value to the company, rendering it unsuitable as a benchmark. Studies commissioned or conducted by Sirius tell a very different story, however, portraying Stern as someone with a loyal but finite group of fans, and whose affect on the larger universe of potential subscribers might well be negative. For example, prior to contracting with Howard Stern, Sirius commissioned a study aimed at understanding the effects of Howard Stern on consumers’ likelihood to subscribe to satellite radio. *See* SX Trial Ex. 83 (Study conducted by Odyssey, presented to Sirius Satellite Radio on August 24, 2004). According to the Odyssey study [REDACTED] with [REDACTED] of radio listeners saying their overall image of him is [REDACTED] SX Trial Ex. 83 at 11. The study further found that Howard Stern had [REDACTED],

and that he [REDACTED] SX Trial Ex. 83 at 12, 13. In fact, [REDACTED]
[REDACTED] SX Trial Ex. 83 at 16.

567. The Odyssey study advises Sirius that [REDACTED]
[REDACTED] SX Trial Ex.
83 at 30 (emphasis added). In other words, [REDACTED]
[REDACTED]. The overall advice that Odyssey gave to Sirius was that [REDACTED]
[REDACTED]
[REDACTED] SX Trial Ex. 83 at 31 (emphasis added). In fact, only [REDACTED] of radio
listeners would be more likely to buy/subscribe if Howard Stern were only available through
satellite radio, as compared to the [REDACTED] who would be less likely to buy/subscribe. SX Trial
Ex. 83 at 31. Even among his fans, [REDACTED] would be more likely to subscribe if Sirius
acquired Howard Stern, while among [REDACTED] of his fans, it would have no effect. SX Trial
Ex. 83 at 33.

568. Additional studies corroborate this data. For example, in an October 2005 study
commissioned by Sirius, D/R Added Value found that [REDACTED]
mentioned Howard Stern in the third quarter of 2005 as part of their awareness of satellite radio.
See SX Trial Ex. 84 at 8. Moreover, the survey found that [REDACTED]
[REDACTED]
[REDACTED] SX Trial Ex. 84 at 9 (emphasis in original). In fact, in examining subscriber intent and
the attributes most important to them, the survey found that [REDACTED]
[REDACTED]
[REDACTED]. SX Trial Ex. 84 at 91.

569. Moreover, despite the announcement of the Howard Stern deal and Stern's alleged promotion of his move to Sirius, the D/R study found that [REDACTED]
[REDACTED]
[REDACTED] SX Trial Ex. 84 at 5. And in spite of Sirius's acquisition of Stern, the study concluded that [REDACTED]
[REDACTED]
[REDACTED] SX Trial Ex. 84 at 12 (emphasis added). Furthermore, for those who were aware of satellite radio, [REDACTED]
[REDACTED]
[REDACTED] SX Trial Ex. 84 at 15. *See also id.* at 66 (showing the different brand perception attributes between Sirius and XM). [REDACTED]
[REDACTED]

570. Secondly, the SDARS argue, through their retained expert, Dr. Noll, that the Howard Stern contract makes a poor benchmark because Stern had a high opportunity cost – the amount he would have been paid by the next-to-highest bidder for his services, while the owners of sound recording copyrights have little or no opportunity cost. In Dr. Noll's view, the Sirius-Stern contract largely represented Stern's opportunity cost, and so is not relevant to what a record company-Sirius contract would be. 8/16/07 Tr. 203:10-21 (Noll).

571. This argument, however, proved to be based on a misunderstanding by Dr. Noll of the Stern-Sirius contract. Stern's previous contract with broadcast radio was for \$67 million over five years. 8/16/07 Tr. 205:6-8 (Noll). Dr. Noll believed that Stern's contract with Sirius was for \$100-\$150 million over five years, representing a reasonable increase in his value since

the time he signed his contract for \$67 million. 8/16/07 Tr. 206:16-17 (Noll). Based on these facts, Dr. Noll concluded that Stern's current contract was approximately the same value as his opportunity costs: in other words, Sirius paid Stern that much because he was almost that valuable to the second-highest bidder for his services. In fact, however, Stern was paid almost five times more than Noll believed to be the case. *See supra*. His payment was in fact grossly in excess of his opportunity cost, at least as that cost had been calculated by Dr. Noll, and thus the factual basis for Dr. Noll's assertion that the difference in opportunity costs between Stern and SoundExchange made the Stern contract a poor benchmark was disproved.

572. To be sure, Stern's impact on Sirius may be significant, but the evidence contained in a host of surveys conducted by both SoundExchange and the SDARS demonstrates that the impact of sound recordings is far greater. *See* Section IV.C.4, *supra*. Stern's contract therefore supplies a relevant benchmark in this case. There should be debate that sound recording companies and performers should be paid for more, in the aggregate, than Mr. Stern.

3. The SDARS Aggregate Non-Music Content Expenditures Also Provide a Useful Benchmark

573. In addition to analyzing the payments made to Howard Stern, Dr. Pelcovits also examined the payments made by the SDARS in the aggregate for non-music content. In the opinion of Dr. Pelcovits, the total costs to the SDARS for their music channels (including the sound recording royalty, the publishers' royalty, and the SDARS internal programming expenses) ought to comprise at least the same percent of revenues as the comparable payments for non-music channels. This is so because music provides greater value to the companies than does the non-music programming, as revealed not only in the Wind survey data, but also [REDACTED]

[REDACTED]

[REDACTED].²³ Since the SDARS themselves believed the purchase of this other content was a reasonable investment, but the content is worth less than music to subscribers, Dr. Pelcovits concluded that sound recording licenses sold in a reasonably competitive market would command an equal or greater percentage of revenues. Pelcovits Amended WDT at 9, SX Trial Ex. 70.

a. The Pelcovits Analysis

574. For 2006, Dr. Pelcovits compared the total payments for non-music content against the SDARS' total revenue (as opposed to the Howard Stern analysis, which compared the total payments to Stern against the incremental revenues attributable to Stern). 7/09/07 Tr. 76:12-78:20, 279:14-17 (Pelcovits). For the purposes of his analysis, Dr. Pelcovits calculated the total non-music content cost as a function of total revenue. He did not believe it appropriate to reduce the cost of content by any offsetting benefit, such as advertising revenue, since the advertising revenue was already included in the total revenue number. Revenue, in his view, should show up in the denominator rather than adjusting the numerator. 7/09/07 Tr. 281:8-282:21 (Pelcovits).

575. XM's revenues in 2006 were approximately [REDACTED]. Its total programming and content expense (excluding music royalties and internal music programming costs) was [REDACTED]. In addition, non-music content providers were paid [REDACTED] as their share of advertising revenues. Thus, non-music content providers received total compensation for their inclusion on XM of [REDACTED]. Consequently, Dr. Pelcovits calculated that XM's non-music content providers were paid [REDACTED] of revenues in 2006. Pelcovits Amended WDT at 9-10, SX Trial Ex. 70.

²³ See Wind Amended WDT at 6, SX Trial Ex. 52.

576. Dr. Pelcovits performed a similar analysis for Sirius, but excluded payments to Howard Stern because Stern received substantial compensation 2006 that is part of a multi-year deal. Pelcovits Amended WDT at 10, SX Trial Ex. 70; 7/09/07 Tr. 80:2-80:16 (Pelcovits).

577. Dividing the sum of non-music content payments by the sum of SDARS revenues reveals that in 2006 non-music content providers were paid 18.3% of the SDARS revenues. 7/09/07 Tr. 278:1-279:13 (Pelcovits). After determining the amount paid by the SDARS for non-music content as a percentage of total revenue, Dr. Pelcovits adjusted the resulting number – as he did in the Howard Stern analysis – to deduct the amount paid by the SDARS for musical works rights and the costs of music production and programming costs incurred by the SDARS. 7/09/07 Tr. 81:3-81:10 (Pelcovits). The resulting music royalty is 13.3% of total revenue. 7/09/07 Tr. 278:1-279:13 (Pelcovits).

578. It is important to recall, however, that the 13.3% of revenue royalty was calculated without the Howard Stern costs, because Dr. Pelcovits did not attempt to allocate to later years the up-front costs of the contract incurred in 2006. Pelcovits Amended WDT at 10, SX Trial Ex. 70. The total cost of the Stern contract is in excess of [REDACTED] million over its five year term.²⁴ See *supra* Section V.B.2. Allocating that cost *pro rata* to each year of the contract

²⁴ The total value of the Stern deal ([REDACTED] million) is calculated as follows: [REDACTED] million signing bonus ([REDACTED] million for Stern plus [REDACTED] million for his agent), SX Trial Ex. 27 at 1, 5; plus [REDACTED] million in rights fees ([REDACTED] million for Stern plus [REDACTED] million for his agent each year for five years), SX Trial Ex. 27 at 1, 5; plus \$220 million stock/cash payment to Stern and his agent (made in January 2006), SX Trial Ex. 70 at 5; see also SX Trial Ex. 27 at 1, 5 (describing bonus stock compensation); plus \$82.5 million performance-based stock compensation paid to Stern and his agent, SX Trial Ex. 70 at 5; see also SX Trial Ex. 27 at 2, 5 (describing performance-based stock compensation); compare SX Trial Ex. 27 Exhibit A (Sirius internal subscriber projections) with SIR Trial Ex. 62 at Sirius Ex. 47, p. 3 (showing that Sirius had 6 million subscribers at the end of 2006); plus [REDACTED] million in production funding ([REDACTED] million each year for five years), SX Trial Ex. 27 at 6; plus [REDACTED] million in marketing funding ([REDACTED] million each year for five years), SX Trial Ex. 27 at 7; plus [REDACTED], see SX Trial Ex. 27 at 3 (showing the [REDACTED])

term would have resulted in at least [REDACTED] million being allocated to 2006, which all by itself would represent 22% of Sirius's revenues for that year ([REDACTED] million divided by Sirius's total revenues of [REDACTED]) (see Pelcovits Amended WDT at 10, SX Trial Ex. 70)), without taking into account the remaining Sirius non-music content costs. And adding that \$142 million of Stern costs into the total non-music costs for 2006 would result in an implied sound recording royalty of 22% of revenue.²⁵

579. Indeed, Dr. Pelcovits was conservative in this analysis in another respect. Dr. Wind's survey, Dr. Woodbury's analysis, and Dr. Hauser's survey show that music is worth *more* than all other programming combined – not just the same. Nonetheless, Dr. Pelcovits assumed that music programming and non-music programming are each of equal value.

b. The Benston 2007-2012 analysis

580. On behalf of the SDARS, Dr. Benston purported to re-calculate Dr. Pelcovits's non-music content benchmark using actual and projected non-music content costs for the years 2007 through 2012. In doing so, Dr. Benston made three critical errors. First, he omitted all of

[REDACTED]), SIR Trial Ex. 62 at SIR Exhibit 47, p. F-4 (showing Sirius's total advertising revenues for 2006 as \$31.1 million); plus [REDACTED], see SX Trial Ex. 27 at 3-4 (showing the [REDACTED]), SIR Trial Ex. 62 at SIR Exhibit 47, F-4 (showing Sirius's total subscription revenue for 2006 as \$575.4 million). This total does not include [REDACTED], nor does it include [REDACTED]. SX Trial Ex. 27 at 6.

²⁵ The math is straightforward. The total XM and Sirius revenues for 2006 are \$1,566 million. Pelcovits Amended WDT at 9-10, SX Trial Ex. 70. The XM non-music content costs are \$157.3 million, and the total Sirius non-music content costs, without Howard Stern, are 128.9 million, for a total of \$286.2 million. 7/09/07 Tr. 278:1-21 (Pelcovits). Adding \$142 million of Stern costs yields total SDARS non-music costs of \$428.2 for 2006, and dividing that number by the SDARS total revenues yields the result that total non-music content costs equal 27% of revenue (428.2 ÷ 1,566). To arrive at a figure specific to sound recordings, Dr. Pelcovits deducted musical works costs of 3.5% and music programming costs of 1.5% (Pelcovits Amended WRT at 10-11), resulting in an implied royalty for sound recordings of 22%.

the costs of the Howard Stern contract from his calculation, even though he included all of the revenue attributable to Howard Stern. *See infra*. Second, Dr. Benston double-counted the advertising revenue received from non-music content channels by both counting that revenue as part of the SDARS' total revenues but also deducting a portion of that same advertising revenue from non-music content costs. That double-counting radically skewed the results. *See infra*. Third, after faulting Dr. Pelcovits for omitting consideration of the later years of the non-music content deals (when those deals represent a relatively lower percentage of total revenue), Dr. Benston then did precisely the same thing in reverse by omitting from his calculation the earlier years of the non-music content deals (when they represent a relatively higher percentage of total revenue). *See infra*.

581. With respect to the costs of the Howard Stern agreement, Dr. Benston agreed that the Howard Stern contract is the single largest non-music content deal that either satellite radio service has, with costs that total hundreds of millions of dollars over the term of the Stern agreement. 8/20/07 Tr. 143:20-145:1 (Benston). Yet he omitted it from his calculations, purportedly because Dr. Pelcovits did not include the costs of the contract between Howard Stern and Sirius in his calculation of the 2006 non-music content costs. 8/20/07 Tr. 122:4-21 (Benston).

582. Dr. Pelcovits, however, had a reason for omitting Howard Stern costs from the 2006 calculation, because Stern "received substantial compensation [in] 2006 that is part of a multi-year deal." Pelcovits Amended WDT at 10, SX Trial Ex 70. Dr. Benston agreed that if the reason Dr. Pelcovits omitted the Stern costs was that there were substantial up-front payments to Stern in 2006 that should have been allocated to later years, that rationale would not apply to Dr.

Benston's calculations, because Dr. Benston was analyzing a multi-year period from 2007 through 2012. 8/20/07 Tr. 143:2-15 (Benston). Yet Dr. Benston omitted the Stern costs anyway.

583. Moreover, Dr. Benston acknowledges that Howard Stern is responsible for a significant number of subscribers joining Sirius, resulting in significant revenue for Sirius. 8/20/07 Tr. 145:2-8 (Benston). Dr. Benston included in his calculations all of the *revenue* attributable to Howard Stern, but excluded all of the *costs* attributable to Howard Stern. 8/20/07 Tr. 145:9-18 (Benston).

584. With respect to the double-counting of non-music content related advertising revenue, Dr. Benston admits that the total advertising revenue figures in his calculations are included as a component of the overall total revenue figures. 8/20/07 Tr. 146:14-147:18 (Benston). Because that total advertising revenue number includes the net non-music advertising number, the result is that the net non-music advertising revenue is both a deduction from programming expenses and an addition to total revenue.²⁶ 8/20/07 Tr. 147:20-148:10 (Benston). Stated differently, because Dr. Benston calculated the non-music content cost as a percentage of total revenue by dividing adjusted net non-music programming expenses by total revenue, 8/20/07 Tr. 148:11-19 (Benston), the net-non-music advertising revenue is both included in the denominator and subtracted from the numerator in his calculations. 8/20/07 Tr. 148:20-149:14 (Benston).

585. That Dr. Benston's calculations yield absurd results can be seen by using a hypothetical. Dr. Benston was asked to suppose, hypothetically, that a satellite radio service had

²⁶ In its SEC filings, Sirius reports the advertising revenues that are shared with a content provider as one of its non-music content costs. According to Sirius's 2006 10-K, "Advertising revenue share payments are recorded to programming and content expense during the period in which the advertising is broadcast." Sir. Trial Ex. 62 at Sir. Exhibit 47, p. 28.

\$10 million in advertising revenue in a year, and no other revenue. The hypothetical satellite service made an up-front payment to its content providers of \$5 million in that year, and had a 50/50 advertising revenue split with the content providers. 8/20/07 Tr. 149:17-150:6 (Benston). In that hypothetical situation, Dr. Benston would put \$10 million in the total revenue line, \$5 million in the non-music programming expense line, and then he would deduct the \$5 million in ad revenue that the satellite service kept (by virtue of its 50/50 split of the \$10 million advertising revenue earned that year) from the programming expense, which would yield a net-non-music programming expense of \$0. 8/20/07 Tr. 152:13-154:20 (Benston).

586. Dr. Benston agreed that his method of calculating content costs as a percentage of revenue, when applied to the hypothetical satellite service described above, would yield a conclusion that the content providers are being paid \$0 when in fact they are being paid \$10 million. 8/20/07 Tr. 162:13-163:20 (Benston). Similarly, Dr. Benston agreed that calculating the percentage of revenue paid to the content providers in this hypothetical would yield a conclusion that the content providers were paid 0% of revenue. 8/20/07 Tr. 154:21-155:20 (Benston). Thus, Dr. Benston agreed that in the hypothetical above, his method of calculating content costs as a percentage of revenue would show that the content providers are receiving 0% of revenue, when in fact he agrees that the content providers in the hypothetical would actually be getting 100% of revenue. 8/20/07 Tr. 155:21-157:11 (Benston). This hypothetical merely shows the problem endemic to Dr. Benston's flawed methodology. By subtracting revenues from the cost of non-music programming, he radically shrinks the numerator of his calculations and skews any calculations of the overall percentage of revenue significantly. The proper approach is one taken by Dr. Pelcovits – costs on one side, revenues on the other. 7/09/07 Tr. 281:8-282:21 (Pelcovits).

587. With respect to the fact that Dr. Benston based his calculations on the later years of the non-music content and omitted the earlier years when costs as a percentage of revenue are higher, Dr. Benston admits that the non-music content contracts he used for his analysis were, for the most part, entered into prior to 2007. 8/20/07 Tr. 174:16-22 (Benston). He agrees that as a general matter, non-music content costs as a percentage of revenue decline over time. 8/20/07 Tr. 175:1-14 (Benston). One of Dr. Benston's criticisms of Dr. Pelcovits was that by looking only at 2006, he overstated the costs as a percentage of revenue because the percentages would be lower in later years. 8/20/07 Tr. 175:15-21 (Benston). Yet Dr. Benston's calculations did not take into account the beginning years of the non-music content contracts, 8/20/07 Tr. 177:3-6 (Benston), and thus he did precisely what Dr. Pelcovits did, except in reverse.

588. It is a matter of simple math to take the numbers in Dr. Benston's charts and recalculate them to correct the errors outlined above.

Figure 27. Recalculation of Benston's "Correction" of Dr. Pelcovits's Non-Music Benchmark for Sirius

	2006 ²⁷	2007	2008	2009	2010	2011	2012
Total Revenue	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Non-music Programming Expense	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Add Non-music Prog. Equity Expense		[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Add Ad Revenue Share (w/o Stern)		[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Deduct Musical Works Royalty	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Deduct Music	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

²⁷ The 2006 numbers for Sirius are taken from the Pelcovits Amended WDT at 10, SX Trial Ex. 70. The total programming expense of \$552 million reported in the Pelcovits Amended WDT was reduced by the music programming expense of 22.5 million and the music royalties of \$23.4 million (*see id.*) to come up with the figure for non-music programming expense.

	2006 ²⁷	2007	2008	2009	2010	2011	2012
Programming Expense							
Deduct Music Prog. Equity Expense		[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Adjusted Benchmark Net Non-Music Programming Expense	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
% of Total Revenue	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

Figure 28. Recalculation of Benston’s “Correction” of Dr. Pelcovits’s Non-Music Benchmark for XM

	2006	2007	2008	2009	2010	2011	2012
Total Revenue	[REDACTED]						
Non-music programming and content costs	[REDACTED]						
Add Content Provider Revenue Share	[REDACTED]						
Deduct musical works fee of 2.3% of total revenue	[REDACTED]						
Deduct music Programming and Content Costs	[REDACTED]						
Adjusted Benchmark Net Non-Music Programming Expense	[REDACTED]						
% of Total Revenue	[REDACTED]						

Combined Revenue-weighted average²⁸ for both SDARS = 12.7%

²⁸ Dr. Benston reported the overall percentage of revenue paid to non-music content providers as a weighted average of total revenue. He did this by taking the sum of the net non-music content

As the chart above demonstrates, the weighted average of non-music content as a percentage of total revenue for 2006 through 2012 is 12.7% using a corrected version of Dr. Benston's methodology. Furthermore, as the Wind survey demonstrated (and Dr. Woodbury's channel cancellation index confirmed), music produced more than half of the value added by content on the SDARS services. Taking the 56% figure used by Dr. Pelcovits in his analysis of the Howard Stern benchmark, *see supra* Section V.B.2, if non-music content is paid 12.7% of revenue for producing 44% of the revenue, then music content should be paid 16.1% of revenue ($56/44 = 1.27$, and $1.27 \times 12.7\% = 16.1\%$) for producing 56% of the revenue.

C. Dr. Ordover's Analysis of Digital Music Distribution Contracts Supports the SoundExchange Rate Proposal

1. Because the SDARS Offer Consumers Functionality Similar to Other Digital Distribution Services, and Because the SDARS Are Substitutes for Other Digital Distribution Service, the License Agreements Between Record Companies and Digital Services Provide Useful Benchmarks

589. Record companies have voluntarily negotiated agreements establishing royalty rates for the use of sound recordings by a variety of digital distribution services. To complement Dr. Pelcovits's analysis of the SDARS non-music content deals, Dr. Janusz Ordover was able to make use of this data derived from these agreements and provide benchmark analysis based on marketplace rates negotiated for several different distribution channels for digital music.

Ordover WDT at 43, SX Trial Ex. 61.

590. These digital distribution service benchmarks have two principle advantages: (i) the underlying licensed content includes the same sound recordings that are played on satellite radio; and (ii) the licensed content is transmitted, as in this case, over digital distribution

costs for all years and dividing it by the sum of total revenue for all years. 8/20/07 Tr. 129:6-131:17 (Benston).

channels. Ordover WDT at 37-38, SX Trial Ex. 61; Noll WRT at 14, SDARS Trial Ex. 72 (“The usefulness of a benchmark depends on the extent to which it represents the sale of comparable rights by comparable sellers to comparable buyers for comparable purposes and on the reliability of the estimate of the actual transaction price in the benchmark.”).

591. There are at least three reasons why sound recording license agreements with digital distribution services provide useful benchmarks.

592. First, the prices that listeners pay for access to music, and license fees paid by distributors, ultimately are a function of the value to the consumer of the music as transmitted over the distribution channel. The data reflects that some distribution channels offer greater value to consumers on average, and copyright owners receive a share of that higher consumer value. There is no *a priori* reason why owners of copyrighted sound recordings should receive different compensation for their product depending on the *identity* of the distribution channel. That is, if consumers place a given value on mobile or portable music, for example, Dr. Ordover would expect the copyright owners to receive similar shares of that value regardless of the identity of the distributor. Ordover WDT at 45, SX Trial Ex. 61.

593. Second, it is therefore not surprising that in arms-length bargains the record companies and the various services that sell their music divide up the surplus value created by their joint product in a similar manner. Indeed, Dr. Ordover reports that there are studies that show from a behavioral point of view that it is common and expected that bargaining parties take a similar share in analogous situations. 8/27/07 Tr. 23:22-25:12 (Ordover).

594. Third, as multiple economic experts in this case have attested, royalty rates received by copyright owners from one music service will affect the royalty rates that copyright owners charge for use of sound recordings by a different music service, where the two

services are to some degree substitutes for one another. *See infra* Section V.E.1. Insofar as various distribution channels are substitutable, the sound recording copyright owner would aim to obtain a comparable percentage of the music's ultimate value to the consumer. Ordoover WDT at 44-45, SX Trial Ex. 61. That is because the copyright owners incur an opportunity cost if sales in one distribution channel where they earn lower royalties substitute for sales in a different distribution channel where they earn higher royalties. And all of the testifying experts who addressed the subject agreed that opportunity costs are a floor beneath which a seller will not willingly price. 8/30/07 Tr. 20:5-17 (Herscovici); SX Trial Ex. 119 at SX Exhibit 209, Tr. 193:20-196:18 (Chipty); 8/23/07 Tr. 163:5-10 (Woodbury); 8/20/07 Tr. 182:12-184:6 (Benston); Noll WRT at 19, 55, SDARS Trial Ex. 72; 8/16/07 Tr. 40:7-17 (Noll). Record company witnesses confirmed this fact: "If music in a given service offering to a consumer is substituting for other types of products or services that [they] may also sell to the user, [they] have to take that into account in pricing the product in a given service." 6/18/07 Tr. 149:12-17 (Eisenberg); Eisenberg WDT at 6, SX Trial Ex. 53. The greater the substitution effect, the greater the need to ensure that the record companies receive a royalty sufficient to compensate for losses in revenues from other uses of recorded music. Eisenberg WDT at 8, SX Trial Ex. 53.

595. The SDARS themselves assert that satellite radio competes with, and substitutes for, other types of digital services. In regulatory filings with the Federal Communications Commission seeking approval for their proposed merger, XM and Sirius have argued that the "relevant market" for merger analysis purposes includes any services with which the SDARS compete and for which the SDARS substitute. SX Trial Ex. 106 at 38. The SDARS urge that satellite radio "competes with and is substitutable for numerous other audio entertainment services and devices," including not only terrestrial radio, but also "Internet radio, iPods, MP3

players, wireless phones, and HD Radio.” SX Trial Ex. 106 at 37; *see also id.* at 8 (“Satellite radio competes vigorously with and is substitutable for numerous other audio entertainment services and devices . . .”). Similarly, XM and Sirius state that “[a]ll available evidence demonstrates that consumers have an abundance of reasonable substitutes for satellite radio, including . . . wireless phones, iPods and other MP3 players, and Internet radio.” SX Trial Ex. 106 at 35.

596. Supporting their merger filings, the SDARS submitted an expert report by economists at CRA International – the same firm at which Dr. Woodbury is employed. 8/23/07 Tr. 163:22-164:3 (Woodbury). CRA believes that “[t]he relevant market should include all the products that are reasonably interchangeable” with satellite radio. SX Trial Ex. 106 at Exhibit A, ¶ 20. And CRA finds that “the relevant market is audio entertainment, a broad set of listening devices that include AM/FM radio, HD radio, Internet radio, iPods and other MP3 players, audio content-enabled wireless phones (including those with MP3 capability), and CD players, as well as satellite radio.” SX Trial Ex. 106 at Exhibit A, ¶ 16. CRA notes, for example, that “[a]lmost all wireless carriers offer phones enabled for listening to music, sports, news, talk and other audio entertainment content.” SX Trial Ex. 106 at Exhibit A, ¶¶ 6, 39.

597. No one suggests that these digital music services are perfect substitutes for satellite radio, but they need not be perfect substitutes in order to be relevant, as the SDARS effectively admit: “satellite radio, terrestrial radio, iPods and other MP3 players, wireless phones, and Internet radio ‘are differentiated along various dimensions, but they nonetheless compete.’ And in any event, *perfect* substitution is not required for two products to be part of the same market.” SX Trial Ex. 106 at 53 (citing *id.* at Exhibit A, p. 3) (emphasis in original). Likewise, perfect substitution is not required for benchmark purposes – it is sufficient that these products

belong to the same broad audio entertainment market and would thus substitute for each other to some degree.

598. If the “audio entertainment market” is the proper market for merger purposes – as the SDARS claim – so too is it the proper market at which to look for an appropriate benchmark in setting a rate in these proceedings. As these products are all part of the same “audio entertainment market,” and as they are substitutable for one another, it is logical to expect that the prices freely negotiated in the market for content on each would be similar. Accordingly, marketplace agreements for the licensing of sound recordings by these competing audio entertainment services provide a useful benchmark for establishing a fair rate that satellite radio should pay for the same content. Ordover WDT at 45, SX Trial Ex. 61.

599. In the next section, SoundExchange will describe the license agreements for the use of sound recordings by digital distribution services, and in the following section will discuss Dr. Ordover’s analysis of those agreements.

2. Record Companies License Their Sound Recordings to Digital Distribution Services at Royalty Rates that Uniformly and Substantially Exceed the SDARS’ Proposed Royalty Rate

600. The record companies have entered into a substantial number of contracts to license sound recordings for use by a variety of digital distribution services, and all of those agreements have at least one thing in common: the royalty rates paid by the buyers exponentially exceed the rate proposed by the SDARS.

601. The record companies generally employ a “greater-of” rate structure in their agreements to license their music catalogs. 6/18/07 Tr. 150:9-152:4 (Eisenberg); Eisenberg WDT at 16, SX Trial Ex. 53. Typically, the digital services pay the record companies the “greater of” three different calculations: (1) a pro rata percentage of gross revenues derived from

the service (which gives the record companies an “upside” potential to the extent that the service generates significant revenue); (2) a per subscriber minimum (which protects the record companies on the “downside” by giving them a minimum level of guaranteed compensation); and (3) a per-play metric that is based on consumption and value to the end user (which also protects record companies on the “downside” by providing a minimum level of guaranteed remuneration). 6/18/07 Tr. 152:3-153:17 (Eisenberg); Eisenberg WDT at 16-17, SX Trial Ex. 53; Kenswil WDT at 6-7, SX Trial Ex. 66. *See also* 6/27/07 Tr. 33:2-10 (Kenswil).

602. These different rates “are meant to cover different ways the services may use the music,” and to ensure that the copyright owners are sufficiently compensated regardless of how the service uses the music and thus to capture the value of that music. 6/27/07 Tr. 34:2-17 (Kenswil); Eisenberg WDT at 17, SX Trial Ex. 53. This structure is “a key point” in licensing negotiations, as it ensures that the record companies and their artists receive fair value for their sound recordings regardless of how the service decides to use that music. Kenswil WDT at 7, SX Trial Ex. 66. The percentage of revenue formula ensures that record companies and their artists are fairly compensated even in the case of a service that has high margins but relatively low use of sound recordings. Kenswil WDT at 7, SX Trial Ex. 66. The per-play rate and the per subscriber minima ensure that the record companies and their artists earn a fair return from a service that may charge discounted rates to consumers – thus earning diminished revenues from the music content – while monetizing their service through other means. *Id.* at 7, SX Trial Ex. 66.

603. Many of the record company agreements involve digital distribution services that provide online on-demand streaming and conditional download services to consumers. Through these services, consumers can select specific tracks from the record companies’ catalogs which

will then be played as either an on-demand stream, a non-portable conditional download (where the music is tethered to a computer and access expires at the end of the consumer's subscription), or a portable conditional download (where the download can be transferred to a portable device). Eisenberg WDT at 15, SX Trial Ex. 53. Generally speaking, these agreements are divided into two broad categories: (1) non-portable subscription services, and (2) portable subscription services. *Id.* at 16. The retail value of these different services vary from \$4.99 per month for non-portable non-interactive services, to \$9.99 per month for non-portable interactive services, to \$14.99 per month for portable subscription services. Kenswil WDT at 9, SX Trial Ex. 66; 6/27/07 Tr. 25:1 (Kenswil).

604. For non-portable on-demand subscription streaming services, where consumers cannot take the music with them but rather are tethered to their computers, SONY-BMG typically receives about [REDACTED] of the money derived by the service, between [REDACTED] per subscriber minimum, and [REDACTED] per play. Eisenberg WDT at 15-17, SX Trial Ex. 53. Similarly, UMG receives the greater of: (1) a pro rata share of [REDACTED] of the service's gross revenues; (2) a per stream rate of [REDACTED] per play; and (3) a per subscriber minimum of [REDACTED] per month. Kenswil WDT at 10, SX Trial Ex. 66. *See also id.* at SX Exhibit 105DR at 2-3. Under the "greater of" formula, SONY BMG usually receives [REDACTED]. 6/18/07 Tr. 158:3-160:10 (Eisenberg); Eisenberg WDT at 17, SX Trial Ex. 53. While these services contain an on-demand component, they also contain a component of pre-programmed playlists, selected by the services' staff, that are then pushed onto the users in a fashion that is very similar to how the SDARS program and broadcast their music channels. 6/19/07 Tr. 16:1-17:6 (Eisenberg). And the rates these services pay for the pre-programmed service are precisely the same as the rate they pay for the on-demand component. 6/19/07 Tr. 17:7-13 (Eisenberg).

605. For portable on-demand subscription streaming services, where consumers can download music onto a device and listen to it where they want, when they want, the retail price is much higher and thus the rates the record companies receive are also much higher. UMG receives the greater of: (1) UMG's proportionate share of [REDACTED] of the service's gross revenues; (2) a per stream rate of [REDACTED] per stream or download, [REDACTED]; and (3) a per subscriber minimum of [REDACTED] per month per subscriber the first year, increased to [REDACTED] per subscriber the second year. Kenswil WDT at 10, SX Trial Ex. 66. *See also Id.* at SX Exhibit 105 DR at 3. SONY BMG receives the greater of [REDACTED] of revenues, [REDACTED] per subscriber minimum, and [REDACTED] per play. Eisenberg WDT at 17, SX Trial Ex. 53. SONY BMG's per subscriber minimum – [REDACTED]. 6/18/07 Tr. 162:2-10 (Eisenberg); Eisenberg WDT at 17, SX Trial Ex. 53. This is [REDACTED]. 6/18/07 Tr. 162:2-10 (Eisenberg). The per-play rate for portable on-demand subscription streaming services – [REDACTED] per play – is also [REDACTED]. 6/18/07 Tr. 162:2-21 (Eisenberg). This increased rate reflects the greater value to consumers of portability and the greater “potential and realities of displacement” from portable services than non-portable services. 6/18/07 Tr. 163:3-8 (Eisenberg). Portable services have a substitutional effect that is reflected by the higher rates the record companies' obtain for the use of their music by such services. 6/18/07 Tr. 279:19-280:1 (Eisenberg).

606. For permanent audio download services, where music tracks are sold through online stores and consumers receive a permanent copy of that song on their computers that they

can then put on portable devices or on a CD, UMG receives approximately [REDACTED] of the retail price, no less than [REDACTED] per single-track download or [REDACTED] for album download. Kenswil WDT at 12, SX Trial Ex. 66. SONY BMG receives between [REDACTED] of the consumer receipts, with a floor of [REDACTED] per single-track download. 6/18/07 Tr. 167:3-7 (Eisenberg). For permanent audio downloads of albums, SONY BMG receives between [REDACTED] per album, with the average price of [REDACTED].²⁹ 6/18/07 Tr. 109:3-8 (Eisenberg); Eisenberg WDT at 21, SX Trial Ex. 53. These rates reflect the substitutional effect of permanent audio downloads on other forms of music sales, among other factors. 6/18/07 Tr. 265:19-266:6 (Eisenberg).

607. For wireless full length audio downloads, where consumers can download sound recordings directly to their cellular phones and thus can listen to the music portably, SONY BMG receives the greater of [REDACTED] of the revenues derived from the service and between [REDACTED] per unit rate.³⁰ 6/18/07 Tr. 169:22-171:2, 172:16-22 (Eisenberg); Eisenberg WDT at 18-19, SX Trial Ex. 53; Eisenberg WRT at 5, n.3, SX Trial Ex. 126. Typically, SONY BMG

²⁹ For example, in SONY BMG's agreement with Yahoo! Inc. for Yahoo!'s permanent audio download service, for digital single tracks, SONY BMG receives [REDACTED] per track, plus [REDACTED] [REDACTED]. For top-tiered digital albums, SONY BMG receives [REDACTED] per album, plus [REDACTED] [REDACTED], while for second-tiered albums, SONY BMG receives [REDACTED] per album, plus [REDACTED] [REDACTED]. See Eisenberg WDT, SX Trial Ex. 53 at SX Exhibit 107 DR. Under its agreement with Verizon for online permanent audio downloads, SONY BMG receives [REDACTED] per digital track for top-tier tracks, plus [REDACTED] [REDACTED]. For online downloads of second tier tracks, SONY BMG receives [REDACTED] per download, plus [REDACTED] [REDACTED]. For online downloads of digital albums, SONY BMG receives [REDACTED] per album for top-tier albums, plus [REDACTED] [REDACTED]. And for online downloads of second-tiered albums, SONY BMG receives [REDACTED] per album, plus [REDACTED] [REDACTED]. See Eisenberg WDT. SX Trial Ex. 53 at SX Exhibit 104DR.

³⁰ For example, in SONY BMG's agreement with Verizon for Verizon's distribution of wireless full length audio downloads, in addition to [REDACTED] [REDACTED], SONY BMG receives [REDACTED] per wireless download, plus [REDACTED] [REDACTED]. See SX Trial Ex. 53 at SX Exhibit 104 DR, p. 40; SX Trial Ex. 126 at SX Exhibit 254 RR, p. 2.

is paid under the per-unit rate. 6/18/07 Tr. 173:22-174:1 (Eisenberg). UMG receives the greater of (1) [REDACTED] per download, or (2) [REDACTED] of the gross retail price per download. Kenswil WDT at 12, SX Trial Ex. 66. The premium that consumers place on the portability of wireless downloads is reflected in the retail prices of these services, which generally cost consumers \$2.50 per download. Eisenberg WDT at 18, SX Trial Ex. 53.

608. For ringtones, which are sound clip excerpts of sound recordings that play when a cell phone rings and cost approximately \$2.50 at retail, SONY BMG receives the greater of an average of [REDACTED] of the price paid by the consumer and a [REDACTED] per ringtone minimum. 6/18/07 Tr. 174:19-176:22 (Eisenberg); Eisenberg WDT at 18, SX Trial Ex. 53. *See also* Eisenberg WRT, SX Trial Ex. 126 at SX Exhibit 256 RR, p. 8; Eisenberg WRT, SX Trial Ex. 126 at SX Exhibit 257 RR, p. 9. SONY BMG usually is paid based on the [REDACTED] for ringtone services, which amounts to [REDACTED]. 6/18/07 Tr. 175:22-176:3 (Eisenberg). For ringtones and mastertones accessed directly by the cellular phone, UMG receives the greater of: (1) [REDACTED] per mastertone or (2) [REDACTED] of the retail price charged to the consumer for each mastertone. Kenswil WDT at 12, SX Trial Ex. 66.

609. For wireless ringbacks, which are sound clip excerpts of sound recordings heard before the person called answers his phone that cost approximately \$2.50 at retail, SONY BMG receives the greater of [REDACTED] of the price paid by the consumer and [REDACTED] per ringback minimum. 6/18/07 Tr. 176:7-177:7 (Eisenberg); Eisenberg WDT at 18, SX Trial Ex. 53. *See also* Eisenberg WRT, SX Trial Ex. 126 at SX Exhibit 256 RR, p. 8; Eisenberg WRT, SX Trial Ex. 126 at SX Exhibit 257 RR, p. 9. Under these agreements, SONY BMG usually receives the [REDACTED]. 6/18/07 Tr. 177:7-8 (Eisenberg).

610. For video streaming services, which are ad-supported music video services that play videos created to help provide exposure and visibility for the artists, SONY BMG receives [REDACTED] of the advertising money that the service generates, as well as guaranteed advances of [REDACTED]. 6/18/07 Tr. 177:13-178:12 (Eisenberg); Eisenberg WDT at 19, SX Trial Ex. 53. Under agreements for other video services, *see, e.g.*, Eisenberg WRT, SX Trial Ex. 126 at SX Exhibit 258 RR, SONY BMG receives [REDACTED] gross revenues, pro-rated for SONY BMG's share of videos played on a PC-based service, and receives [REDACTED]. *Id.* at 6-7. SONY BMG receives these premium rates even though videos provide promotional value to a particular release. Eisenberg WDT at 19, SX Trial Ex. 53. UMG receives the greater of: (1) UMG's pro rata share of at least [REDACTED] of gross revenues, and (2) [REDACTED] per play for interactive streams, plus [REDACTED] per play for non-interactive streams. Kenswil WDT at 11, SX Trial Ex. 66. Thus, the ratio between interactive and non-interactive video streaming service fees is approximately [REDACTED]. These agreements are trending towards increased fees such that currently UMG is receiving up to [REDACTED] of a video streaming service's gross revenues. *Id.* at 11.

611. The digital distribution services described above comprise approximately 90% of the total marketplace for SONY BMG's digital music, 6/18/07 Tr. 180:8-13 (Eisenberg), and over 95% of UMG's digital marketplace. 6/27/07 Tr. 47:11-22 (Kenswil).

612. To summarize the SONY BMG wholesale pricing (Eisenberg WDT at 17-21, SX Trial Ex. 53):

Service	Per subscriber per month	Per play / Per unit	Revenue share
Non-Portable Subscription Streaming	[REDACTED] per subscriber per month	[REDACTED] per play of SONY BMG tracks	[REDACTED] of revenue
Portable Subscription Streaming	Pro rata share of [REDACTED] per subscriber per month, with some discounts for annual subscriptions	[REDACTED] per play of SONY BMG tracks	[REDACTED] of revenue
Permanent Audio Downloads	n/a	[REDACTED] per download (plus [REDACTED] of retail price in excess of [REDACTED]) [REDACTED] per digital album	[REDACTED] of revenue
Wireless Full-Length Audio Downloads	n/a	[REDACTED] per download	[REDACTED] of revenue attributable to the content
Wireless Ringtones	n/a	[REDACTED] per ringtone	[REDACTED] of retail price
Wireless Ringback Tones	n/a	[REDACTED] per ringtone	[REDACTED] of retail price
Video Streaming	n/a	n/a	[REDACTED] of revenue ([REDACTED] intro rate); [REDACTED] in recoupable advances

613. To summarize the UMG digital distribution pricing (Kenswil WDT at 10-13, SX Trial Ex. 66):

Service	Per subscriber per month	Per play / Per unit	Revenue share
Non-Portable Services	[REDACTED] per subscriber per month	[REDACTED] per play of UMG tracks	[REDACTED] of revenue
Portable Services	[REDACTED] per subscriber per month	[REDACTED] per stream or download of UMG tracks [REDACTED] [REDACTED]	[REDACTED] of revenue
Permanent Audio Downloads	n/a	No less than [REDACTED] per download or	Approximately [REDACTED] of retail price

Service	Per subscriber per month	Per play / Per unit	Revenue share
		[REDACTED] per album downloaded	
Wireless Audio Downloads	n/a	[REDACTED] per download	[REDACTED] of retail price
Wireless Ringtones	n/a	[REDACTED] per mastertone	[REDACTED] of retail price
Video Streaming	n/a	[REDACTED] per play for interactive (or on-demand) streams; [REDACTED] for non-interactive (or pre-programmed) streams	[REDACTED] of revenue

614. The rates described above, standing alone, understate the compensation that the copyright owners receive when they license sound recordings to digital distribution services. Eisenberg WDT at 13, SX Trial Ex. 53. There are also a number of non-monetary considerations that the record companies view as critical to these deals; without which the record companies would undoubtedly require additional compensation. Kenswil WDT at 6, SX Trial Ex. 66. Such considerations include requiring licensees to adhere to specific security requirements, allowing the record companies to conduct audits, and providing guaranteed promotional opportunities for the artists and albums. Kenswil WDT at 6, 8, SX Trial Ex. 66. In almost all of its marketplace agreements, SONY BMG receives either a significant non-refundable but recoupable advance payment, or a significant non-refundable but recoupable minimum monthly revenue guarantee. Eisenberg WDT at 14, SX Trial Ex. 53. Where SONY BMG does not receive satisfactory upfront guarantees, it includes a floor rate to protect itself in the event that there is a lot of music usage by the service but not sufficient revenue generated by the service provider. 6/18/07 Tr. 178:13-179:22 (Eisenberg).

615. In addition, these licensing deals provide record companies the right to approve all devices through which their content will be distributed, an important factor considering the

proliferation of unsecured wireless access and portable devices that have developed over the last several years. Kenswil WDT at 7-8, SX Trial Ex. 66. These agreements also require the services to submit regular reports concerning consumers' use of sound recordings, and provide for extensive security protections and guarantees. Kenswil WDT at 8, SX Trial Ex. 66; 6/27/07 Tr. 41:1-10 (Kenswil). And these agreements are generally limited to a term of two years or less in order to protect the record companies from the unpredictability of these services in the rapidly evolving digital market. Kenswil WDT at 8, SX Trial Ex. 66. 6/27/07 Tr. 41:21-42:8 (Kenswil). Should a service desire a longer term agreement, UMG would likely charge a higher rate or would require a very large guarantee to ensure it would receive sufficient remuneration for its content.³¹ 6/27/07 Tr. 42:9-19 (Kenswil); *see generally* Eisenberg WDT at 13-14, SX Trial Ex. 53.

³¹ For example, in UMG's agreement with RealNetworks, UMG includes as part of its deal a detailed [REDACTED] provision which delineates several of the non-monetary deal points that are critical to the agreement. SX Trial Ex. 66 at SX Exhibit 105 DR at A-1-A-15.

This provision outlines [REDACTED], *id.* at A-1-A-2, [REDACTED], *id.* at A-4, includes [REDACTED], *id.* at A-7-A-8, and includes [REDACTED]. *Id.* at A-8-A-10. In its permanent audio download agreement with Yahoo! Inc., SONY BMG requires Yahoo! to *inter alia* [REDACTED]

[REDACTED], and affords SONY BMG the right to *inter alia* [REDACTED]

[REDACTED]. SX Trial Ex. 53 at SX Exhibit 107DR. *See also* SX Trial Ex. 53 at SX Exhibit 104DR (SONY BMG agreement with Verizon, containing similar deal points, including, *inter alia*, requiring Verizon [REDACTED]

[REDACTED], and granting SONY BMG the right *inter alia*, to [REDACTED]

3. Dr. Ordover’s Analysis of the License Agreements with Digital Distribution Services Concludes that the SDARS Should Pay Royalty Rates in Excess of 19% of Revenue or \$2.81 Per Subscriber

616. Dr. Ordover used the agreements discussed above to calculate reasonable royalty rates for the use of sound recordings by the SDARS.³² Ordover WDT at 43, SX Trial Ex. 61; 6/21/07 Tr. 148:13-22 (Ordover). The following is Dr. Ordover’s summary of that data (Ordover WDT at 44, SX Trial Ex. 61):

Channel	Retail Rate	Per-Play or Per Unit	% of Revenue	Per Subscriber
Permanent Audio Download	\$.99/track	[REDACTED]	[REDACTED]	
Cellular (OTA Download)	\$2.50	[REDACTED]	[REDACTED]	
Cellular (Ringtone)	\$2.50	[REDACTED]	[REDACTED]	
Video Streaming (Non-Interactive)	Ad-supported	[REDACTED]	[REDACTED]	NA
Video Streaming (Interactive)	Ad-supported	[REDACTED]	[REDACTED]	NA
Interactive Subscription (Portable)	\$12.50/mo	[REDACTED]	[REDACTED]	[REDACTED]
Interactive Subscription (Non-Portable)	\$8.00/mo	[REDACTED]	[REDACTED]	[REDACTED]

617. In his analysis of agreements between digital distribution services and copyright owners, Dr. Ordover did not attempt to value the non-monetary consideration included in those

[REDACTED]

³² Dr. Ordover and his staff independently reviewed a variety of contracts between the four major record labels and digital distribution services, and found that the royalty rates were substantially similar to the SONY BMG and UMG contracts discussed above. Ordover WRT at 9, SX Trial Ex. 119.

agreements, and the analysis is to that extent conservative. Looking only at the monetary terms of these agreements, however, Dr. Ordover concluded a reasonable royalty rate in this case would range from 19% to 28% of the SDARS total revenue, or from \$2.48 to \$2.81 per subscriber per month. *See infra.*

618. At a general level, this compilation of data offers several insights into market rates. First, in every case in which sound recordings (or music videos) essentially make up a service, sound recording copyright owners receive a substantial share of gross revenues earned by the distributor. Second, with respect to audio distribution, the percentages of revenues that record companies receive are within a relatively narrow range, clustering around [REDACTED] (though higher for permanent audio downloads). Ordover WDT at 44, SX Trial Ex. 61.

619. Beyond those general observations, however, Dr. Ordover attempted to adjust both the percentage of revenue rates and the per subscriber rates observed in the agreements with digital distribution services in order to derive an appropriate rate for the SDARS. His derivation of a percentage of revenue rate, and a per subscriber rate, will be discussed in turn below.

a. The Percentage-of-Revenue Rate Data from Agreements with Digital Distribution Services Suggests an SDARS Percentage of Revenue Rate Between 19% and 28%.

620. Although the “per-play” and “per-unit” fees to which the record companies and the digital music services have voluntarily agreed may affect the ultimate economic terms of these agreements (in all cases, under the “greater of” rate structure, to the benefit of the record companies), and leaving to one side the [REDACTED] of revenue deals with services like iTunes, sound recording copyright holders and distributors have agreed to fees that cluster between [REDACTED] [REDACTED] % of “percent of revenue.”

621. The similarity of the percentage of revenue figures across different services shows that the more valuable to consumers a service is (as represented by its retail price), the more the content provider receives for its content in absolute dollar terms, confirming that royalty rates do indeed reflect the derived consumer demand for the retail service. Ordover WDT at 46, SX Trial Ex. 61; Kenswil WDT at 11, SX Trial Ex. 66.

622. More importantly, this data shows that the value created by the use of the music as reflected in revenue figures is shared [REDACTED] between the record companies and the digital music services, independent of the dollar amount of revenue generated by the service. Because these digital music services do not offer non-music content, and the SDARS do, it is necessary to adjust this percentage so that, in effect, it is applied only to the music-related revenues of the SDARS. To do this, Dr. Ordover relied on Dr. Wind's survey. That survey provided a variety of measures of the importance and value of music to a representative sample of current subscribers to satellite radio networks. By a wide margin, all of these measurements identified sound recordings as the most valuable content delivered by satellite radio to its customers. Based on those findings, Dr. Ordover concluded that music accounts for approximately 55% of the value of all SDARS programming content. Ordover WDT at 41, SX Trial Ex. 61. Although Dr. Ordover did not rely on it, it is worth noting that Dr. Woodbury's channel cancellation index would have produced essentially the same result, inasmuch as Dr. Woodbury calculated that music and comedy channels represented [REDACTED] of the value of the SDARS programming content. *See supra* Section IV.E.

623. Based on the survey data that roughly 55% of the SDARS' total revenues can be fairly attributed to music, with the rest going to other content, Dr. Ordover concluded a reasonable range of rates for sound recordings would be between 19% of the SDARS' revenue

(i.e., 55% x 35% of revenue) and 28% of the SDARS' revenue (i.e., 55% x 50% of revenue).

Ordover WDT at 46, SX Trial Ex. 61; 6/21/07 Tr. 156:12-158:5.

b. The Per Subscriber Rate Data from Agreements with Digital Distribution Services Suggests a Per Subscriber Rate for the SDARS Between \$2.48 and \$2.81

624. The per subscriber rates in the agreements between the record companies and digital distribution services vary more widely than the “percentage of revenue” rates, suggesting that the value to a listener from accessing music does depend on the mode of delivery (that is, specific characteristics that the music service provides). Therefore, reliance on the per subscriber license fees for gauging proper rates to satellite radio requires adjustments for the differentiating characteristics of these other services. Ordover WDT at 46, SX Trial Ex. 61.

625. Because of the lack of extensive data and the multiple differences between satellite radio and these other digital music services, it is not possible to perform a statistical study such as a hedonic regression that would “price out” the value to an average listener of the various features that differentiate each of these distribution modes from another. It is nevertheless helpful to identify the differences among the digital distribution services that pay market-based rates, and the services offered by the SDARS, and then to attempt to make adjustments to account for these differences. It is possible to make qualitatively meaningful adjustments, and then to compare the adjusted marketplace rates with the other evidence of how rates for this statutory license would be set in a competitive marketplace. Ordover WDT at 47, SX Trial Ex. 61. In subjecting these rates to qualitative scrutiny, Dr. Ordover followed two different approaches. The first looked at the different characteristics of these various services and adjusted for those differences. The second made a comparison based on the retail rates of the services – the ultimate indication of the consumer value offered by the service. Each of the

approaches is instructive in establishing a reasonable range of rates that the Court should consider. Ordover WDT at 47, SX Trial Ex. 61.

i. Adjustments Based on Differences in the Services.

626. As noted above, the per subscriber rates for different digital distribution services vary because the services' rates are a function of the consumers' derived demand for the different services, which vary from service to service. By taking account of these differences, it is possible to get some sense of where satellite radio falls within the range of observed market rates that compensate the record companies. Ordover WDT at 47, SX Trial Ex. 61.

627. In relevant respects, satellite radio is a portable, immediately available, non-interactive subscription service. It is portable insofar as the service is available wherever the satellite radio is located (*e.g.*, a traveling listener in the car has continuous access to satellite radio programming and, once at a destination, the listener can remove the unit from the car or purchase a separate portable unit and listen to it at home or in the office). In addition to being portable, the satellite radio companies deliver content wherever and whenever the consumer wants to hear it on the receiver. With respect to this feature, satellite radio is perhaps closer to music downloaded or streamed to a cellular handset, and thus can be differentiated from a portable music player which can only play music after completion of a two-step process – downloading music onto a computer, and then uploading the music from the computer onto the portable player. Ordover WDT at 47-48, SX Trial Ex. 61.

628. Additionally, satellite radio is non-interactive. Although the listener may pick a particular channel, even one devoted to a narrowly defined genre of music, the listener cannot choose what song, artist, or album to play at any given time. In this way it differs from interactive services which allow a customer to choose a particular song to play. Finally, satellite

radio is a subscription service. The marketing model requires the listener to pay the same monthly (or annual) fee to have access to the service irrespective of the hours of programming that the subscriber accesses. Ordover WDT at 48, SX Trial Ex. 61.

629. Given the attributes of satellite radio service, one plausible candidate for rate comparison is a portable, interactive subscription service such as Rhapsody To Go. Like satellite radio, this service is sold on a subscription basis and is portable. Unlike satellite radio, it is interactive, and songs must be downloaded to the computer and then uploaded on a portable device, through a two-step process. Ordover WDT at 48, SX Trial Ex. 61.

630. Thus, before one can make a meaningful use of the rates paid by services like Rhapsody To Go as a benchmark for SDARS rates, it is important to make some estimate of the premium that interactivity and immediate reception command in the marketplace. To get a sense of the importance of these attributes to average subscribers, Dr. Ordover compared the license rates that record companies receive for interactive and non-interactive, and computer-based and immediately available music services that are otherwise similar. This type of comparison informs the assessment of the benefits that consumers derive from interactivity and from the ability to access music immediately as opposed to going through the process of copying music files from a computer onto a portable player. Ordover WDT at 48-49, SX Trial Ex. 61.

631. *Value of Interactivity.* To assess the value of interactivity, Dr. Ordover reviewed data for interactive and non-interactive streaming music video services, neither of which is subject to regulated rates. Copyright holders license these services generally at [REDACTED]

[REDACTED]

Copyright holders license music for interactive video service at approximately [REDACTED] per play.

The same music when used in a non-interactive service is licensed [REDACTED]

██████████] per play. Kenswil WDT at 11, SX Trial Ex. 66; Ordover WDT at 49, SX Trial Ex. 61.

In other words, music licensed for a non-interactive video streaming distribution channel commands a rate that is approximately ██████████, on a per-play basis, which gives one qualitative gauge of the value of interactivity in services whose rates are unaffected by regulatory considerations. Ordover WDT at 49, SX Trial Ex. 61.

632. When this interactivity ratio is used to adjust a per subscriber rate, it is necessary to consider whether the interactive service is used more or less intensively than the non-interactive service. If, for example, a non-interactive service is used more intensively, this fact needs to be taken into account if (as is the case) the interactivity adjustment is being applied to a per subscriber rate for which the customer can listen to as many songs as it chooses to for the subscription price. Ordover WRT at 18 n.20, SX Trial Ex. 119. The record evidence is that non-interactive video services are used twice as intensively as interactive video services. Eisenberg WDT at 19, SX Trial Ex. 53; *see also* 8/27/07 Tr. 101:6-7 (Ordover). This requires that the interactivity adjustment be decreased by a factor of two, to a ratio of [██████████] ([██████████] x 2) when as here it is being used to adjust a per subscriber rate. Ordover WRT at 18 n.20, SX Trial Ex. 119.

633. *Value of Immediate Accessibility.* Dr. Ordover estimated the value of immediate accessibility in the same manner. He compared services that allow a user to download a song to a computer hard drive and then transfer a copy onto a portable player, with services that allow immediate downloads through a wireless cell phone connection. Each of these services is completely portable, but only one allows a user to access music anytime and anywhere. Record companies license music for computer downloads, such as through iTunes, at the rate of approximately ██████████ per track. At the time of Dr. Ordover's testimony in the direct case, the

same music is licensed for wireless cell phone downloads at the rate of approximately [REDACTED] per track. Ordover WDT at 49-50, SX Trial Ex. 61.

634. These differences offered some gauge of the value of being able to download music directly to a portable device, without first downloading the music to one's computer – that is, it provides a measure of the value that consumers may place on not being tethered to the computer (and a two-step process) before they can listen to music on a portable device. Based on this data available at the time Dr. Ordover prepared his written direct testimony, there appeared to be a substantial premium for immediate accessibility via transmission to a wireless handset, with the ratio of the two fees being [REDACTED]. Whatever the value that consumers place on the ability to obtain music anytime and anywhere, sound recording copyright owners were paid a premium by distributors for the right to distribute sound recordings in this manner.

635. Subsequent to the filing of his direct written testimony, however, Dr. Ordover learned that both SONY BMG and Universal have entered into new contracts for audio download services to cell phones that are [REDACTED] the rates he relied upon in his direct written testimony, suggesting a change to his “immediacy” adjustment. 6/21/07 Tr. 186:13-187:17 (Ordover). In those contracts, the rate for over the air cell phone downloads is [REDACTED]
[REDACTED]
[REDACTED]. *Id. See also id.* at 308:15-18.

636. Dr. Ordover would expect that the rate for music licensed to an immediately available, non-interactive service like satellite radio to be approximately the same as for the same music licensed to a portable, computer-based, interactive webcasting, so long as the latter was

adjusted for both interactivity and for immediate accessibility. Sound recording copyright holders receive approximately [REDACTED] per subscriber per month for sound recordings supplied to a portable, interactive webcasting distribution channel. In order to get an indication of what the rate for a negotiated blanket license to SDARS would be, Dr. Ordover started with the rate of [REDACTED] and then adjusted it by, first, reducing it to account for satellite radio's non-interactivity, and then by increasing it to account for the immediate availability of the satellite radio signal. Ordover WDT at 50, SX Trial Ex. 61.

637. [REDACTED] this two-step adjustment leads to a suggested copyright fee of at least \$2.81 per subscriber per month, in the following manner. First, the [REDACTED] retail rate needs to be multiplied by [REDACTED] (*see supra*) to adjust for lack of interactivity, to arrive at a minimum figure of \$2.81 per subscriber per month, based on the assumption that the market no longer recognize a premium for immediacy, as one would conclude based on the recent SONY BMG and Universal contracts. 8/27/07 Tr. 96:18-97:18 (Ordover). Assuming that there is still some added value for immediacy, the appropriate rate would be greater than \$2.81. Ordover WDT at 50, SX Trial Ex. 61 (describing methodology).

ii. Adjustments Based on Differences in the Retail Rate.

638. A second method of placing satellite radio rates in the range of benchmark rates recognizes that, as a whole, these benchmarks show that the greater the overall value that the subscriber derives from any particular type of service – as measured by the retail price of the service – the higher the royalty rate. This relationship make sense: to the extent the consumer derives greater value from certain attributes, these attributes will command a premium in the marketplace, as measured by retail prices to consumers. Moreover, if these same features have

the effect of diverting demand from other sources of revenue (such as CDs), copyright owners likely will insist on a higher license fee. This observed relationship between functionality, retail price and share of revenue provides another way of deriving a plausible value for a market-based “share of revenue” license fee that would likely be paid by SDARS. Dr. Ordover does so by comparing the retail rate of the SDARS service to the retail rate for interactive non-portable subscription services. *See* Ordover WDT at 50-51, SX Trial Ex. 61.

639. The average retail rate for non-portable interactive subscription services is \$9.97 per subscriber per month.³³ Ordover WDT at 50-51, SX Trial Ex. 61. Dr. Ordover calculates that the average monthly per subscriber price for satellite radio is \$11.25. In order to get a comparable price for a music-only service, Dr. Ordover first makes an adjustment for the fact that SDARS distribute content other than sound recordings, while the benchmark services do not. As previously discussed, *see supra*, survey data suggest that approximately 55% of the value of satellite radio to average subscriber comes from its music content. This suggests that consumers consider \$6.19/subscriber/month ($\$11.25 \times .55$) to be a reasonable estimate of the value they derive from having music content delivered over satellite radio. Ordover WDT at 51, SX Trial Ex. 61; 6/21/07 Tr. 168:21-169:22; *see also* 6/13/07 Tr. 52:1-7 (Woodbury) (testimony by Dr. Woodbury agreeing that subscribers pay approximately \$6 per month for music content on the SDARS service).

640. If one takes \$6.19 as the adjusted retail price of a hypothetical satellite radio service that offered only music, then that service has about 77% of the value to the consumer as a

³³ This data is updated from the lower number that appears in Dr. Ordover’s direct testimony to reflect the updated information provided by a more recent survey of retail pricing undertaken by Dr. Ordover’s staff as part of his rebuttal presentation. *See* Ordover WRT at 10, SX Trial Ex. 119; SX Trial Ex. 119 at SX Exhibit 210 DP; 6/21/07 Tr. 170:1-6 (Ordover) (lower retail rate number used in direct written testimony was now an underestimate); *id.* 306:2-4 (retail prices have gone up).

non-portable interactive subscription service, which retails on average for \$9.97/month (\$6.19/\$9.97 = 62%). SX Trial Ex. 119 at SX Exhibit 210 RP (\$9.97/month is average retail rate for non-portable interactive service); Ordover WDT at 51, SX Trial Ex. 61 (performing calculation based on the earlier retail rate data).

641. Record companies receive approximately [REDACTED] for licensing sound recordings to non-portable interactive subscription services. As a result, record companies ought to receive slightly less than this rate for licensing sound recordings to satellite radio. Applying the .62 ratio of prices calculated above, this benchmark yields a comparable rate of \$2.48/subscriber/month ([REDACTED]). Ordover WDT at 51, SX Trial Ex. 61 (as adjusted by most up to date data on retail pricing of non-portable interactive services, *see supra*); 6/21/07 Tr. 170:1-171:21 (Ordover).

4. Analysis of Per Play Rates for Digital Distribution Services, and in Particular the Rate Set by This Court for Statutory Webcasting Services, Confirms the Validity of the Ordover Benchmarks

a. The SoundExchange Proposed Rates, Converted to Per Play Rates, Are Consistent with Market Rates, While the SDARS Proposed Rates are Dramatically Below the Market on a Per Play Basis.

642. Dr. Woodbury asserts that the cost differential between digital distribution services and the SDARS undermines Dr. Ordover's use of the former as benchmark rates. Woodbury WRT at 27, SDARS Trial Ex. 80; 8/23/07 Tr. 125:8-15 (Woodbury) ("To the extent that Dr. Ordover is relying on percentage rates based upon these benchmarks, I think that reliance is misplaced and I think it's misplaced because he doesn't account for the cost differential between the kinds of services that are being provided over the internet versus the kind that are being provided over the SDARS."). Dr. Woodbury is incorrect, for multiple reasons.

643. First, as is obvious from an examination of Dr. Ordovery's results, it is clear that sound recordings are compensated primarily based on value to the consumer, with record companies receiving substantial and similar shares of the retail price. That is true regardless of the distribution mechanism – a wholesaler or retailer, the owner of facilities (*e.g.*, a cellular provider) or not, or the means of distribution (cellular or Internet). *See supra*.

644. Second, Dr. Woodbury's criticism of Dr. Ordovery concerning his alleged failure to adjust his benchmark rates for the cost differences between the digital distribution services and the SDARS does not apply if the Court is analyzing per play rates. Dr. Woodbury himself agrees that if one is using a per play rate from an interactive market as a benchmark and trying to adjust it for the SDARS market, there is no need to adjust for any cost differential between the two markets. 8/23/07 Tr. 179:1-180:4 (Woodbury); *see also* 6/13/07 Tr. 5:19-9:5 (Woodbury) (stating that although "portability is a cost input," if rates were set on a per unit of music basis, Dr. Woodbury expects that the per-unit price of music would be the same for a portable and non-portable music service).

645. Dr. Woodbury's admission that cost adjustments are unnecessary when using a per-play rate as a benchmark fatally undermines his criticism of Dr. Ordovery. Dr. Pelcovits converted both the SDARS rate proposal and the SoundExchange rate proposal into the equivalent of per play rates (using the methodology described in Section V.C.4.b *infra*), and then compared them to other per-play rates for digital distribution services set in the market or by this Court. Pelcovits WRT at 15, SX Trial Ex. 124. The table below provides a year-by-year comparison of those rates (Pelcovits WRT at 17, SX Trial Ex. 124):

	2007	2008	2009	2010	2011	2012
Portable Interactive Per-Play Rate ³⁴	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Non-Portable Interactive Per-Play Rate ³⁵	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Statutory Webcasting Per-Play Rate	\$.0011	\$.0014	\$.0018	\$.0019	\$.0019	\$.0019
SoundExchange Per-Play Rate	\$.00092	\$.00120	\$.00156	\$.00161	\$.00206	\$.00265
SDARS Per-Play Rate	\$.00011	\$.00012	\$.00012	\$.00013	\$.00013	\$.00013

646. The results from the comparison are striking. On a per-play basis, the SoundExchange rate proposal is close to, although generally lower than, the statutory webcasting rate set by this Court, and significantly lower than other marketplace rates. If Dr. Ordover's benchmark analysis, which forms in part the basis for the SoundExchange rate proposal, had overstated the appropriate rate because of his alleged failure to account for the SDARS' cost structure, then presumably his analysis would yield a per play rate that is out of step with per play rates observed in the market. The fact the SoundExchange rate proposal, expressed on a per play basis, is quite consistent with (albeit somewhat lower than) actual marketplace rates cannot be explained away on the theory that the SDARS would be able to negotiate even lower per play rates due to their high cost structure, since Dr. Woodbury acknowledges that such cost differences are irrelevant when considering per-play rates. 8/23/07 Tr. 179:1-180:4 (Woodbury). In short, Dr. Woodbury's claim that consideration of the SDARS' cost structure would alter the outcome of the Ordover benchmark analysis cannot be squared with the fact that Dr. Ordover's

³⁴ See *supra* Section V.3.a.

³⁵ *Id.*

analysis produces results consistent with actual marketplace per play rates that Dr. Woodbury agrees would not be influenced by distribution costs.³⁶

647. Conversely, as the per play rate analysis prepared by Dr. Pelcovits demonstrates, the rate proposed by the SDARS is less than one-tenth of the statutory webcasting rate and an even smaller fraction of other marketplace rates. Pelcovits WRT at 17-18, SX Trial Ex. 124. The comparison between the SDARS proposed rate (expressed as a per-play rate) and the statutory webcasting rate set by this Court is particularly striking. Unlike the SDARS, the statutory webcasting services generally are not mobile. As is evident from the chart above, the copyright owners obtain higher royalty rates from music services that offer portable or mobile music. Indeed, for the record companies, a “key factor” in determining the rates the record companies seek from a given service is whether the proposed service can be accessed by the consumers anytime, anywhere, *i.e.*, whether the service is “portable.” Eisenberg WDT at 6, SX Trial Ex. 53; 6/18/07 Tr. 148:22-149:6 (Eisenberg); Pelcovits WRT at 17-18, SX Trial Ex. 124. The higher the portability and the higher the quality of the listening experience, the greater the likely the substitution effect and the higher the rate the record companies will negotiate for and will ultimately receive in the free marketplace for use of their music by a given service. 6/18/07 Tr. 149:22-150:8 (Eisenberg).

³⁶ The fact that the SDARS service is a high-cost service relative to the benchmark services does not affect the benchmark analysis for the reasons discussed above. Those costs may, however, be taken account of under the fourth statutory factor, which requires the Court to consider the extent to which the SDARS can afford royalties at a given level. 6/21/07 Tr. 190:14-22 (Ordover); 8/27/07 Tr. 18:1-12 (Ordover). Although SoundExchange relied on the economic analysis of Dr. Ordover and Dr. Pelcovits to formulate its rate proposal, including Dr. Ordover’s digital distribution benchmark analysis, SoundExchange adjusted the marketplace rates suggested by that analysis downward for, in all probability, all but the final year of the rate period based on the fourth of the 801(b) factors.

648. Because the record companies seek higher royalty rates for mobile music services, and the empirical evidence shows that they in fact receive higher rates, Dr. Pelcovits would expect that a market-based rate for the SDARS to be higher than the statutory webcasting rate. Pelcovits WRT at 17, SX Trial Ex. 124. Yet the SDARS' proposed rate, on a per play basis, is a small fraction of the webcasting rate. Here again, Dr. Woodbury cannot claim that cost differences between the SDARS and statutory webcasting is the cause, as he admits cost differences should not effect per play rates. 8/23/07 Tr. 179:1-180:4 (Woodbury); 6/13/07 Tr. 5:19-9:5 (Woodbury). Given that the SDARS and statutory webcasting services both offer a substantial number of music channels, in digital quality, without interactivity, and the SDARS have the added advantage of mobility, the fact that the SDARS' proposed rate is dramatically lower than the webcasting rate demonstrates that the SDARS' proposal is deeply flawed.

b. Dr. Pelcovits's Methodology for Calculating Per Play Rates.

649. This section described the methodology and the evidence used by Dr. Pelcovits to translate the SoundExchange rate proposal and the SDARS' rate proposal into per play rates similar to those appearing in marketplace agreements and utilized by this Court in *Webcasting II*.

650. In various marketplace agreements and in this Court's webcasting decision, a "play" is a broadcast of one song that is listened to by one listener. Internet music services are able to capture information about how many people listen to each song. But the SDARS do not and, given existing equipment and technology, apparently cannot know how many people listen to each song that is broadcast. Pelcovits WRT at 15-16, SX Trial Ex. 124. Since data on the total number of plays is not available, it was necessary for Dr. Pelcovits to translate the percentage of revenue rates proposed by the SDARS into equivalent per-play rates, based on estimates of the number of plays. Dr. Pelcovits calculated the per-play rates by multiplying the

number of songs broadcast per channel per hour (assumed to be 15.5, consistent with the frequency set forth in the webcasting case regulations) times the number of hours per month that each subscriber listens to music. This calculation provides the number of plays per subscriber per month. Dr. Pelcovits then divided that number into the revenue per month that would be generated by the SDARS' rate proposal (using the average revenue per subscriber for each year based on Mr. Butson's current projections) in order to derive an effective per-play rate.

Pelcovits WRT at 16, SX Trial Ex. 124.

651. A critical factor in this calculation is the total time spent listening to music per month by the average SDARS subscriber. Dr. Pelcovits based his calculation on an estimate of the time spent listening to music of 14 hours and 45 minutes per week, per subscription. Dr. Pelcovits used survey data provided in discovery by Sirius and XM as the basis for this estimate, although use of the data required some assumptions. Pelcovits WRT at 16-17, SX Trial Ex. 124.

652. In order to calculate an effective per performance rate it was necessary to estimate the average number of plays per subscription per month. Dr. Pelcovits relied on the survey and diary evidence provided by the SDARS to obtain this estimate. According to the latest survey provided by Sirius (Second Quarter 2006), the average weekly time spent listening to Sirius is [REDACTED]. See SX Trial Ex. 35 (Sirius Satellite, Customer Satisfaction Monitor, August 31, 2006) at 22. Pelcovits WRT at Appendix A, p. 1, SX Trial Ex. 124. Documents provided by XM provide two other estimates. The OTX on-line diary study from the Fall of 2006 shows average weekly time spent listening of [REDACTED]. See SX Trial Ex. 52 at SX Exhibit 113DR, attached to Wind AWDT, SX Trial Ex. 52 (XM Beta Online Diary Study – Fall 2006, dated January 2006 (sic)). The Arbitron survey from Fall 2006 shows average weekly time spent listening of [REDACTED]

[REDACTED]. See SX Trial Ex. 52 at SX Exhibit 114DR (Arbitron, XM Satellite Radio Custom Study Analysis, Fall 2006) (“Arbitron Study”) at 31. A different survey provided by XM estimates that [REDACTED] of the average subscriber’s time spent listening to XM is for music programming. See SX Trial Ex. 10, excerpt from XM Research Overview, June 13, 2006. Based on this estimate, average weekly time spent listening to music would be between [REDACTED] and [REDACTED], depending on which survey is used to estimate total weekly listening. Pelcovits WRT at Appendix A, p. 1, SX Trial Ex. 124.

653. Dr. Pelcovits’s calculations had to account for two other key factors. The first factor concerned listening by the SDARS subscribers on media for which the SDARS royalty would not apply. The second factor concerned time spent listening by other household members to the SDARS. Pelcovits WRT at Appendix A, pp. 1-2, SX Trial Ex. 124.

654. As to the first factor, the Sirius survey includes within total hours spent listening the time spent listening on-line to Sirius’s webcasting service and on Dish TV to the Sirius-supplied channels, neither of which should be included for purposes of calculating a per-play fee for the SDARS. The OTX diary also appears to include listening on-line and on DirecTV. Apparently, however, the Arbitron survey does not include time spent listening other than on the satellite radio itself. Dr. Pelcovits inferred this from XM’s claim to advertisers that its audience listens “for an average of 24 hours per week.” Since XM’s on-line and DirecTV services include very few non-music channels, and its music channels are commercial free, the time spent listening on these media would not be relevant to advertisers. Dr. Pelcovits would expect that XM in presenting the 24 hours per week figure to advertisers (for which it cites to the Arbitron Customer Study - Spring 2006), would only include listening and performances on the satellite radio itself. Pelcovits WRT at Appendix A, p. 2, SX Trial Ex. 124.

655. As to the second factor, the current SoundExchange and SDARS fee proposals would be assessed on a per subscription or percentage of revenue basis (which Dr. Pelcovits converted to a per subscription fee.) Since satellite radios can be used by other members of the subscriber's household, it is necessary to include an estimate for this listening time in Dr. Pelcovits's computation of the effective per performance fee. There is every reason to believe that there is a significant amount of listening by other members of the subscriber's household. The aforementioned Sirius survey estimates that there are [REDACTED] listeners per household. *See* SX Trial Ex. 35 at 13 (Sirius Satellite, Customer Satisfaction Monitor, August 31, 2006). The Arbitron survey estimates [REDACTED] additional listeners, which implies [REDACTED] listeners per household. *See* Arbitron Survey at 23. Pelcovits WRT at Appendix A, p. 2-3, SX Trial Ex. 124. Since there is no data available to adjust either the Sirius survey for performances outside the SDARS royalty or to include listening time by other household members, Dr. Pelcovits set these two factors off against each other. Therefore, Dr. Pelcovits based his per-performance benchmark on the simple average of the listening to music from the Sirius survey and the Arbitron survey for XM. Pelcovits WRT at Appendix A, p. 3, SX Trial Ex. 124. Dr. Pelcovits also found that an estimate of weekly listening time in the range of 24 to 26 hours is consistent with the reported results of a recent Arbitron survey that found [REDACTED] minutes listening per week to satellite radio by its diary keepers who listed a satellite radio channel in their diary. Since this survey is not limited to the primary listener in the household and evidently does not include listening other than on the satellite radio itself, it should side-step the concerns Dr. Pelcovits expressed about some of the other surveys. The ratio of listeners per subscription for XM and Sirius averages 2.1, which implies total weekly listening to satellite radio of 22 hours and 35

minutes, which is slightly below the range upon which Dr. Pelcovits based his estimate for time spent listening to music. Pelcovits WRT at Appendix A, p. 3, SX Trial Ex. 124.

D. The Prices Paid by Satellite Television for Content Provide Further Confirmation That the SoundExchange Rate Proposal is Reasonable

656. In a further effort to assess the possible significance of the difference in cost between the SDARS' services and the Internet-based digital services use as benchmarks, Dr. Ordover also looked at content payments incurred by satellite television providers. These companies have capital structures that are more similar to the SDARS' than those of the digital music services, so allowed Dr. Ordover to evaluate if differences in capital structures between the music services and the SDARS would be a significant impediment to using the information obtained from the music services' contracts. Review of the satellite television payments suggested that these cost differences did not result in greatly different content royalty payments. Ordover WDT at 37-38., SX Trial Ex. 61.

657. Satellite TV, also known as Direct Broadcast Satellite (DBS), and satellite radio employ roughly similar business models and similar capital structure:

- Both rely on the delivery of content to subscribing customers by means of a satellite signal delivered to the subscriber's receiving unit (be it a television set or a radio);
- Both require significant upfront investments in satellites and satellite infrastructure;
- Both benefited from attracting "early adopters." For example, in the first two to three years after launch, the DBS firms attracted roughly four million subscribers;
- Both needed to subsidize hardware, offer rebates on installation, and provide discounts on programming package to stimulate additional subscriptions;
- Both utilize "big box" stores (*e.g.*, Best Buy, Circuit City, etc.) and electronics stores (*e.g.*, Radio Shack), as well as direct sales, to attract new subscribers; and
- Both rely extensively (or predominately) on subscriber revenues to cover the costs of programming and other variable costs (such as marketing) as well as generate a risk-adjusted competitive rate of return on the invested assets.

Ordover WDT at 38, SX Trial Ex. 61.

658. By 1997 – at least three years after the launch of DBS – Kagan Associates (a leading analyst of media industries) estimated that none of the providers was profitable. However, the fact that DBS vendors (such as DIRECTV) were “losing” money in the accounting sense would not provide a public policy rationale for content providers to be required to offer the DBS companies “discounts” on programming relative to cable television distributors (such as Cablevision or Comcast). Content provider rates with DBS networks were set through market transactions within the broad strictures set by pertinent regulations. Now, when DBS is an established distribution channel for video programming with a very large subscriber base, its content costs as measured by percentage of subscriber revenues are equal to 40%. Ordover WDT at 39, SX Trial Ex. 61.

659. The similarities between satellite TV’s and satellite radio’s business model and early history suggest that voluntary agreements between satellite TV providers and content providers offer a plausible benchmark for rates (measured as percentage of revenues) that would result from voluntary licensing agreements between SDARS and the record companies in the absence of the compulsory license. The share of revenues that DBS network pay for content is an informative metric for gauging what the SDARS’ content costs likely would be absent a blanket compulsory licensing rate.³⁷ Ordover WDT at 39-40, SX Trial Ex. 61.

³⁷ Most music programming on the SDARS is offered on a commercial-free basis and thus the SDARS today earn minimal advertising revenue. DBS firms do not earn advertising revenue on most of the channels they offer (*e.g.*, DBS firms do not earn any advertising revenue on premium channels, such as HBO or Showtime, since those networks have no commercials, and they do not earn advertising revenue on local broadcast stations). DBS firms do earn advertising revenue on certain cable programming networks, but the share of total revenue derived from such sources is small and unlikely to bias significantly the benchmarking analysis presented below. Ordover WDT at 40 n.32, SX Trial Ex. 61.

660. Given the similarities in their business models, and especially in light of the fact that programming content represents the critical input for both satellite television and satellite radio networks, it is reasonable to assume that the SDARS, in an unfettered market setting, would be willing and able to spend on content a percentage of subscriber revenues that does not markedly differ from the aforementioned expenditures by the DBS providers. In order to get an estimate of the share of revenues that would likely accrue to music, however, it is necessary to adjust for fact that both music and non-music programming are available on satellite radio. That is, sound recording copyright holders would receive only some portion of total content expenditures. Ordover WDT at 41, SX Trial Ex. 61.

661. DBS offers two potential benchmarks for the compulsory license rate: (1) 49.3%, which is the percentage of subscriber revenues generated by premium network programming that the DBS providers pay for premium network content; and (2) 40%, which is the percentage of total subscriber revenues that the DBS providers pay for content overall (but which does not account for the advertising revenues received by DBS content providers). Ordover WDT at 41, SX Trial Ex. 61; 6/21/07 Tr. 192:16-194:13 (Ordover).

662. *Premium Content Benchmark.* Dr. Ordover's principal satellite television benchmark involved an examination of DBS providers' programming costs as a percentage of revenues for premium networks only, since premium networks, like music programming on satellite radio, are commercial-free. These premium networks include HBO, Showtime, and others. Ordover WDT at 40, SX Trial Ex. 61. The pricing of premium networks is not subject to any regulatory overhang – there is no compulsory licensing of premium network programming. 6/21/07 Tr. 142:1-5 (Ordover); 6/21/07 Tr. 254: 2-3 (Ordover).

663. Music is even a more essential feature of satellite radio than premium channels are to satellite television. 6/21/07 Tr. 261:7-262:2 (Ordover). Music over satellite radio is like premium content on satellite television in that it is advertising-free and supported by fees. *Id.* Tr. 262:20-22.

664. The license fees paid by DBS to the premium networks amount to nearly one-half (49.3%) of the DBS subscriber revenues that are attributable to these premium services. Ordover WDT at 40, SX Trial Ex. 61. Because approximately 55% of the value of the SDARS service is associated with the music content, Ordover WDT at 40-41, SX Trial Ex. 61, while the DBS provider's premium service is 100% derived from the premium service content, to use the 49.3% figure as a benchmark it is first necessary to multiply the 49.3% value by 55%, for a comparable music content value of 27%. Finally, it is necessary to subtract from this the royalty payment the SDARS make to the music publishers, which Dr. Ordover estimated from public sources collected by Mr. Butson to be 3.5% (in fact as Dr. Woodbury described in his testimony, the actual music publisher rate is somewhat lower, leading to a somewhat higher benchmark than Dr. Ordover calculated. *See* Woodbury WDT at 38, XM Exhibit 8. That yields a benchmark rate of 23.5%. Ordover WDT at 41-42, SX Trial Ex. 61.

665. *All Content Benchmark.* The second benchmark is derived from an analysis of the DBS networks' subscription revenues by calculating programming costs as a share of revenues. Overall programming expenses for DBS today account for 40% of subscriber revenue. Ordover WDT at 40, SX Trial Ex. 61. As with the prior calculation, this number must then be reduced by 55%, and from this must be subtracted the publisher's share, leading to a benchmark rate of 18.5% of revenue. Ordover WDT at 41-42, SX Trial Ex. 61.

666. In two respects this latter benchmark is inaccurate and its application will lead to a lower benchmark rate than appropriate. First, providers of non-premium content to DBS earn not only a share of the subscription fees charged by the DBS firms, but also a substantial portion of the advertising revenues generated by the broadcast of their programming. The availability of these advertising revenues reduces the price at which providers of non-premium content would be willing to license their programming to the DBS firms. Thus, this second benchmark, based on a comparison of the DBS firms' programming costs (which are supplemented by advertising revenue received by the content providers) and the SDARS' music programming costs (which are not), underestimates the music programming costs of the SDARS as a percentage of their subscription revenues. Ordover WDT at 40, SX Trial Ex. 61.

667. Second, some of the programming on DBS networks is subject to regulatory pricing. The effect of this regulatory pricing would be to drive prices down and so lead to a benchmark rate that is if anything below the rates that would occur if there were not regulatory overhang. 6/21/07 Tr. 143:12-147:15 (Ordover).

668. DBS spending on content also can be used to estimate reasonable per-subscriber rates. As shown in the table below Dr. Ordover used the two DBS content expenditure benchmarks (*i.e.*, the 40% and 49%) to project analogous per-subscriber amounts for SDARS in 2004, when satellite radio programming consisted almost entirely of music-based programming. Dr. Ordover's calculations yield figures of \$2.17 to \$2.70, which represent the range of amounts that the SDARS would pay as of 2004 for music content on a per-subscriber, per-month basis. Ordover WDT at 42, SX Trial Ex. 61. Because this benchmark is based on the satellite networks' revenues at a time when their principal programming was music, it needs no further

adjustment to reflect the value of non-music programming. Ordover WDT at 42-43, SX Trial Ex. 61.

Figure 29. Projected Rates for Satellite Radio Using 2004 DBS Content Expenditure Benchmarks

Revenue (\$MM)	\$311.3	\$311.3
Projected Programming Expense (\$MM)	\$124.52 (40%)	\$152.54 (49%)
Publishers' Share (\$MM)	\$10.9 (3.5%)	\$10.9 (3.5%)
Sound Recording Share (\$MM)	\$113.62	\$141.64
Avg. Number of Subscribers (MM)	4.37	4.37
Projected Programming Expense/Sub/Month	\$2.17	\$2.70

Ordover WDT at 42, SX Trial Ex. 61.

E. The SDARS Are Net Substitutes for Sales of CDs and Other Recorded Music, Creating an Opportunity Cost for the Copyright Owners that Sets a Floor for Their Pricing

1. Why opportunity costs resulting from substitution matter – the effect of opportunity costs on price setting

669. Another means of measuring appropriate royalties is to look at the opportunity costs the copyright holder bears in licensing the copyright. In a marketplace negotiation, record companies would consider whether programming on satellite radio has the effect of displacing sales of sound recordings through other channels. 8/30/07 Tr. 20:5-17 (Herscovici). The evidence in this case demonstrates that satellite radio does indeed displace other sound recording sales, in an amount calculated by Dr. Pelcovits at \$1.29 per SDARS subscriber per month. That substitution is an opportunity cost, and every testifying expert who addressed the subject in this

case agreed that a seller will not price below its opportunity cost, and that any royalty rate set below that opportunity cost is unfair, *i.e.*, it violates the second statutory objective.

670. There are many different ways that consumers listen to music, and they are not perfect substitutes for each other. Some are better suited for home, some for the car, some have higher sound quality than others, and some give the consumer more choice, to name just a few obvious distinctions. While acknowledging these distinctions, it is also the case that these services are all fundamentally similar because they all provide sound recordings to consumers. Music played on the SDARS will cannibalize listening to and revenues from music on other services. If the SDARS' license is set artificially low this effect will be even more pronounced. Ultimately this will lead to less creative effort by artists and record companies over the long run. Pelcovits WDT at 6, SX Trial Ex. 68.

671. This effect is not controversial— the SDARS' economic experts, both in this proceeding and Docket No. 2005-5 – agree that sound recording rights holders would seek compensation for the substitutional effect of licensing performance rights. If a music service carries a risk of displacing CD sales, Dr. Chipty would expect that the copyright owners would charge more for the use of music by that music service. SX Trial Ex. 119 at SX Exhibit 209 RP, Tr. 193:20-196:18 (Chipty). And if a music service has the effect of displacing CD sales, Dr. Woodbury would likewise expect the record labels would take that cost into account when setting the price at which they license music to that service. 8/23/07 Tr. 163:5-10 (Woodbury). Similarly, in Dr. Benston's view, if licensing sound recordings to satellite radio services causes a net loss of revenue to the copyright owners, that is an opportunity cost. 8/20/07 Tr. 183:21-184:6 (Benston). And opportunity costs represent a floor below which the seller is not going to sell. 8/20/07 Tr. 182:12-15 (Benston). Finally, Professor Noll discussed the point at length,

finding that the price for sound recordings “should not be less than marginal costs” – including the “opportunity costs . . . arising from substitution affecting other distribution channels.” Noll WRT at 19, SDARS Trial Ex. 72. “If the record companies now earn a competitive return (absent monopoly rents or Ricardian rents), and if the growth of satellite radio causes a reduction in profits from other distribution channels” then “fairness requires that the SDARS compensate record companies for the fall in their returns that is caused by satellite radio.” Noll WRT at 55, SDARS Trial Ex. 72. *See also* 8/16/07 Tr. 40:7-17 (Noll) (stating that if the satellite radio leads to substitution, causing the returns from other revenue streams to decrease, then this must be taken into consideration as an opportunity cost of dealing with satellite radio).

672. The factual testimony of SoundExchange’s record label witness bears out this economic theory. For example, SONY BMG’s gross margin on the sale of a top-line priced CD is [REDACTED], before accounting for costs such as recording costs, A&R, marketing, overhead, and unrecovered artist advances. Eisenberg WRT at 12, SX Trial Ex. 126. This margin represents the net sale price of a top-line CD of [REDACTED], less average variable costs of sale of [REDACTED]. Eisenberg WRT at 12, SX Trial Ex. 126. SONY BMG depends on this margin to pay for things such as recording costs, A&R, marketing, overhead, and unrecovered artist advances. Eisenberg WRT at 12, SX Trial Ex. 126. In fact, this profit margin has to pay for all the additional costs required for creating the final sound recording product. 8/28/07 Tr. 271:20-272:1 (Eisenberg). In negotiating licenses with the music services, therefore, SONY BMG will demand a higher rate as part of the deal to compensate for any loss of CD sales caused by substitution. Just to break even, SONY BMG insists on being able to recover at least the value of the lost CDs through the negotiated rate. Eisenberg WRT at 12, SX Trial Ex. 126; 8/28/07 Tr. 272:13-20 (Eisenberg). And to maximize compensation in these deals, SONY BMG demands – on top of the break-even

sum – the licensing fee it would be entitled to in the marketplace absent the substitution effect. Eisenberg WRT at 12-13, SX Trial Ex. 126. “If music in a given service offering to a consumer is substituting for other types of products or services that [they] may also sell to the user, [they] have to take that into account in pricing the product in a given service.” 6/18/07 Tr. 149:12-17 (Eisenberg).

2. The Record Evidence of Substitution is Compelling

a. Introduction

673. The record evidence overwhelmingly demonstrates that satellite radio substitutes for the sale of CDs. Indeed, the SDARS cannot reasonably dispute the proposition, as they have made that same point repeatedly to federal regulators. In the SDARS’ own view, there is “substantial substitution among satellite radio and various other services and devices.” SX Trial Ex. 106 at 37. “[W]hen people activate a satellite radio subscription, they substitute satellite radio programming for other audio entertainment to which they historically listened.” SX Trial Ex. 106 at 37. This is because satellite radio belongs to an ever-growing “audio entertainment market,” consisting of new devices and services that “compete[] vigorously with and [are] substitutable for” one another.” SX Trial Ex. 106 at 8, 35, 37, 38. In sum, “satellite subscribers can and do substitute” for “many other popular audio entertainment options,” including “CD players,” “MP3s and iPods,” “mobile phones that can receive and play audio and video content,” and “Internet Radio.” SX Trial Ex. 106 at Ex. A at 11-12.

674. *None* of the quoted phrases above came from SoundExchange’s witnesses. Instead, they all came from a July 24, 2007 FCC filing made by the SDARS in support of their proposed merger. Outside of this Court, the SDARS have freely acknowledged – indeed they have strenuously argued – that their service is substitutional for CDs and other forms of audio

entertainment. It is not surprising, therefore, that the SDARS' claims in this Court have been limited to broad qualitative assertions about a supposed promotional effect of their services. The actual quantitative evidence before the Court reveals different facts – the facts that the SDARS have recognized and trumpeted outside of this tribunal.

- *Mantis*: Using a survey methodology that is well-established in consumer research, Mr. Mantis found that satellite radio listeners purchase 2.6 fewer CDs per year as a result of satellite radio. Mantis WRT at 1, SX Trial Ex. 132.
- *Economist testimony*: In preparing their analyses of the economic impact of a substitution effect, Dr. Pelcovits and Dr. Herscovici reviewed and relied upon both the Mantis survey and a survey by Dr. Wind, which found – using a classic test and control group design – that satellite radio caused subscribers to purchase 2.7 fewer CDs per year. Both economists concluded on the basis of these and other studies that satellite radio displaced the sale of approximately 2.6 CDs per year per subscriber. Pelcovits WRT at 33, SX Trial Ex. 124; 8/30/07 Tr. 98:2-7 (Herscovici).
- *Sirius and XM*. Sirius and XM both measure listening time upon obtaining satellite radio, and each company found a substantial reduction in CD and MP3 listening time upon getting satellite radio: [REDACTED] and [REDACTED] respectively. Wind WRT at 16-20, SX Trial Ex. 129. While these surveys measured listening time and not purchases, the SDARS cited changes in “listening behavior” as evidence for “substantial demand substitution between satellite radio and audio entertainment devices.” SX Trial Ex. 106 at 37. Dr. Wind also testified marketing science also understands usage to be correlated with demand. 8/29/07 Tr. 119:13-21 (Wind).
- *NARM*. Dr. Wind reviewed a third-party study commissioned by retailers who sell both CDs and satellite radio. The study found that satellite radio users were 24% less likely to have bought CDs in the past year, and that 87% of them stated that the reason they did so was because they were satisfied with the music on satellite radio. Wind WRT at 20-23, SX Trial Ex. 129.
- *Record Companies and Artists*. The record company witnesses testified that they view satellite radio to be substitutional for their other distribution channels, and Mr. Renshaw testified that artists do not view satellite radio as a important means of promoting their music. *See infra*.

In short, the SDARS got it right when they told the FCC this summer that satellite radio is substitutional for CD purchases and other forms of audio entertainment. The empirical evidence

that SoundExchange has presented in this proceeding demonstrates the truth of the SDARS' FCC submissions. It is only in this proceeding that the SDARS have made incorrect and unsupported assertions about a supposed promotional effect of their service. This Court should reject those self-serving claims.

b. The Mantis survey

i. Overview

675. Mr. Mantis conducted a survey of 690 satellite radio listeners to determine whether and to what extent satellite radio affected their purchases of CDs and downloads. Mantis WRT at 2, SX Trial Ex. 132. Using a before and after methodology that is well-accepted in the marketing community, and defining substitution very narrowly, Mr. Mantis found that satellite radio caused subscribers to purchase 2.6 fewer CDs per year than they otherwise would. Mantis WRT at 2-16, SX Trial Ex. 132. With respect to downloads, Mr. Mantis explained that he had difficulty finding respondents who listened to satellite radio and purchased MP3s. Mantis WRT at 21, SX Trial Ex. 132. As a result, he was unable to achieve a sample size large enough for him to render an expert opinion about satellite radio's effect on the purchase of downloads 8/30/2007 Tr. 208:6-13 (Mantis).

ii. Methodology

676. The Mantis survey employed a before and after methodology that is well-accepted in the marketing community. Mr. Mantis explained that such surveys are as reliable as "diary" surveys in which the respondent contemporaneously keeps track of the number of purchases he makes. 8/30/2007 Tr. 239:19-242:10 (Mantis).

677. The Mantis survey was administered to 690 respondents who listened to satellite radio and who lived in a household that subscribed to satellite radio. Mantis WRT at 5, SX Trial

Ex. 132. Mr. Mantis described how he obtained a random selection of potential subscribers from Survey Sampling, Inc., which is a well-respected sampling firm used by large businesses to conduct marketing surveys. 8/30/2007 Tr. 169:2-16 (Mantis).

678. Mr. Mantis employed a screener to ensure that only properly qualified and randomly-selected individuals were allowed to take the survey. Mantis WRT at 5, SX Trial Ex. 132. Screener questions ensured that the respondent was in fact a listener to satellite radio in a household that subscribed to satellite radio. Mantis WRT at 5, SX Trial Ex. 132. While the names from Survey Sampling, Inc., were randomly selected, the Mantis survey ensured further randomization by selecting as the respondent the person in the household with the next birthday (and who otherwise qualified). Mantis WRT at 5, SX Trial Ex. 132. Thus this extra randomization was a common feature of surveys and ensured that all otherwise-qualified members of the household had an equal chance of participating in the sample. 8/30/2007 Tr. 175:1-20 (Mantis).

679. Mr. Mantis also described the safeguards he employed to ensure that the questionnaire was administered in a neutral and fair fashion. 8/30/2007 Tr. 177:1-13 (Mantis); Mantis WRT at 7-8, SX Trial Ex. 132. The interviewers were trained in the administration of the survey through the use of practice interviews. 8/30/2007 Tr. 171:14-172:4 (Mantis). Moreover, a large percentage of the interviews were monitored during the course of the survey by an independent third party. Mantis WRT at 7-8, SX Trial Ex. 132. Neither the interviewers nor the respondents knew the purpose or sponsor of the survey. 8/30/2007 Tr. 171:7-13 (Mantis). Mr. Mantis stated that it would be “virtually impossible” for a respondent to know what result the survey’s sponsor hoped to find. 8/30/2007 Tr. 174:3-9 (Mantis).

680. Respondents were first asked if they had ever purchased CDs prior to listening to satellite radio. Mantis WRT at 6, SX Trial Ex. 132. This was a filter question that ensured that respondents were not led to say that they purchased CDs when in fact they had not. 8/30/2007 Tr. 178:17-179:10 (Mantis). Respondents who answered affirmatively were asked how many CDs they purchased during a typical three month period during that time. Mantis WRT at 6, SX Trial Ex. 132. Mr. Mantis used a three-month window because in his experience that gave consumers a workable period to consider. 8/30/2007 Tr. 179:11-22 (Mantis). Mr. Mantis noted that Sirius used a similar question to gauge listening habits of consumers in the car. 8/30/2007 Tr. 248:22-249:13 (Mantis). Respondents who indicated that they had never purchased CDs prior to getting satellite radio were treated as having purchased no CDs prior to getting satellite radio. 8/30/2007 Tr. 254:14-255:4 (Mantis).

681. Consumers were then asked if they had purchased CDs after they began listening to satellite radio. Mantis WRT at 6, SX Trial Ex. 132. If they had, they were asked how many CDs they purchased in a typical three-month period since they began listening to satellite radio. Identical questions were asked regarding MP3 purchases. Mantis WRT at 6, SX Trial Ex. 132. Half the respondents received the MP3 questions first and half received the CD questions first. Mantis WRT at 5, SX Trial Ex. 132.

682. Mr. Mantis used a control question to determine which changes in CD and MP3 purchases were due to satellite radio. A control question is a commonly-used feature of surveys to isolate the phenomenon in question. SDARS Ex. 2 at 256. The control question provided a reliable and conservative means of measuring the effect of satellite radio. Mantis WRT at 16, SX Trial Ex. 132. The survey asked respondents why they thought that they purchased fewer (or more) CDs since they began listening to satellite radio. Mantis WRT at 6, SX Trial Ex. 132.

Respondents then were asked if they had anything else to add, and thus were given an additional opportunity to explain their purchase behavior through use of a neutral prompt. Mantis WRT at 6, SX Trial Ex. 132. The question was phrased as “Any other reasons?” and thus was asked without any reference to satellite radio. Mantis WRT at 6, SX Trial Ex. 132.

683. As Mr. Mantis explained, this type of control question is common in the business community and is an appropriate question. 8/30/2007 Tr. 231:1-14 (Mantis). He noted that the question needed to refer to satellite radio to give consumers an appropriate reference point in their purchase history. 8/30/2007 Tr. 231:1-14 (Mantis). In other words, it would have been ineffective and inappropriate to have simply asked consumers “why they thought they purchased fewer CDs,” as the respondent would have been forced to ask fewer “before what?” 8/30/2007 Tr. 229:3-15 (Mantis).

684. Mr. Mantis also explained that he took a conservative approach in determining which changes in CD purchases were attributable to satellite radio. A respondent who gave a reason for changed purchases unrelated to satellite radio was not counted in the analysis even if the person also gave satellite radio-related reason. 8/30/2007 Tr. 198:13-199:14 (Mantis). Thus, a person who said that they reduced their CD purchases because (a) they no longer needed to buy CDs because of the music on satellite radio, and (b) because they got an iPod was not counted (even in part) as reducing due to satellite radio. 8/30/2007 Tr. 198:13-199:14 (Mantis).

iii. Results

685. The majority of survey respondents purchased fewer music CDs since they began listening to satellite radio. Mantis WRT at 9, SX Trial Ex. 132. Only a relative handful of respondents stated that they purchased more CDs since subscribing. Mantis WRT at 9, SX Trial Ex. 132. There were 8.5 times as many respondents who reported that they purchased less as

compared to more. Mantis WRT at 9, SX Trial Ex. 132. The net result was that overall satellite radio listeners purchased .66 fewer CDs per three months, or 2.6 fewer CDs per year as a result of listening to satellite radio. Mantis WRT at 15, SX Trial Ex. 132.

686. Mr. Mantis coded the responses and grouped them into four categories. Category 1 accounted for 162, or 44.0%, of the 368 respondents who said that they reduced their purchases. These respondents cited satellite radio *and no other reasons* for purchasing fewer music CDs. Category 2 contained 24 respondents who give a satellite-related reason *as well as a reason that is not related to satellite radio*. Category 3, accounting for 17 respondents, gave *ambiguous reasons* that may or may not be related to satellite radio. In Category 4 are the remaining 165 respondents who clearly *do not attribute fewer purchases to satellite radio*. Mantis WRT at 10-15, SX Trial Ex. 132.

687. Mr. Mantis included all of the verbatim responses in his report. Typical Category 1 answers for (a) (why purchased fewer or more CDs), and (b) (do you have anything else to add) include:

- 48 a. I really don't know but you know we bought a lot of CDs and that is what we would listen to. Now I have satellite radio so I have Willy all the time.
- b. No, that's probably it.
- 084 a. I purchase less because satellite radio is commercial free and I can listen to what I want.
- b. No.
- 095 a. Cause I can get any assortment I want depending on what I listen to on satellite radio.
- b. No.
- 103 a. Because on satellite radio I can hear the music I want to hear.

- b. That is it.
- 156 a. Because there is a lot more mixed music on satellite, not repeating music.
- b. No.
- 162 a. Because I'm satisfied with the music that's on now uninterrupted.
- b. No.
- 172 a. Because I listen to the radio I don't need to purchase CDs.
- b. No.
- 235 a. I purchase less because I like the music on satellite radio.
- b. No, that's it. No five minutes of advertisements or commercials, just straight music.

Mantis WRT at App. D, SX Trial Ex. 132.

688. Mr. Mantis noted at trial that the verbatim responses focused on music programming, and that he believed that it was likely given the context of the question that respondents who mentioned satellite radio programming generally were referring to music programming. 8/30/2007 Tr. 198:13-199:14 (Mantis). He further stated that he was not aware of a single respondent who cited a specific non-music program (*e.g.*, Howard Stern or traffic reports). 8/30/2007 Tr. 192:21-193:3 (Mantis).

Typical Category 2 answers included:

- 159 a. Well for one thing everything I like is on satellite radio and pretty much oldies and things I like from the 50's and 60's I have already purchased.
- b. No.
- 258 a. Cause I listen to the radio. Sometimes I listen to the talk radio station.
- b. No, I listen to an I-Pod and I have a bunch of CDs.
- 270 a. I just don't buy very much music at all and we use satellite radio when we are traveling.

- b. No.
- 357 a. Well because the satellite radio has such a diverse music group and because I can always download specific songs from the Internet if I need to.
- b. Nope, that's it.
- 373 a. More variety on satellite radio.
- b. Cutting back on budgets.
- 380 a. Well I think most of the music I listen to is on satellite.
- b. No, I don't think so well because we download a bunch of songs off I-Tunes.

Mantis WRT at App. D, SX Trial Ex. 132.

689. Although all of these responses cited satellite radio as a reason for reducing CD purchases, Mr. Mantis included none of these answers (and many others like them) in his analysis because they also included non-satellite radio reasons. 8/30/2007 Tr. 198:13-199:14 (Mantis). Mr. Mantis described this as a conservative approach. Mantis WRT at App. 15-16, SX Trial Ex. 132. Although it was clear that some portion of these respondents' reductions were due to satellite radio, by not including them, the Mantis survey avoided having to determine "which of the two responses was the response that was more important to the respondent."

8/30/2007 Tr. 198:14-198:19 (Mantis).

690. Likewise, the Mantis survey did not include responses (catalogued in Category 3) that were ambiguous.

- 077 a. Well I am in the car now more than I used to be.
- b. No, not that I know of.
- 167 a. Satellite is what we were looking for.

- b. No.
- 171 a. Before I probably purchased one or two a year. We use satellite in the vehicle and in our home.
- b. I just don't bother with them.
- 264 a. We have it in the house and we have it in the cars.
- b. No, just haven't thought about it.
- 296 a. Cause we are in the car more.
- b. No.
- 331 a. Because I listen to my satellite radio in my truck and that's also where I listen to my CDs.
- b. No.

Mantis WRT at App. D, SX Trial Ex. 132.

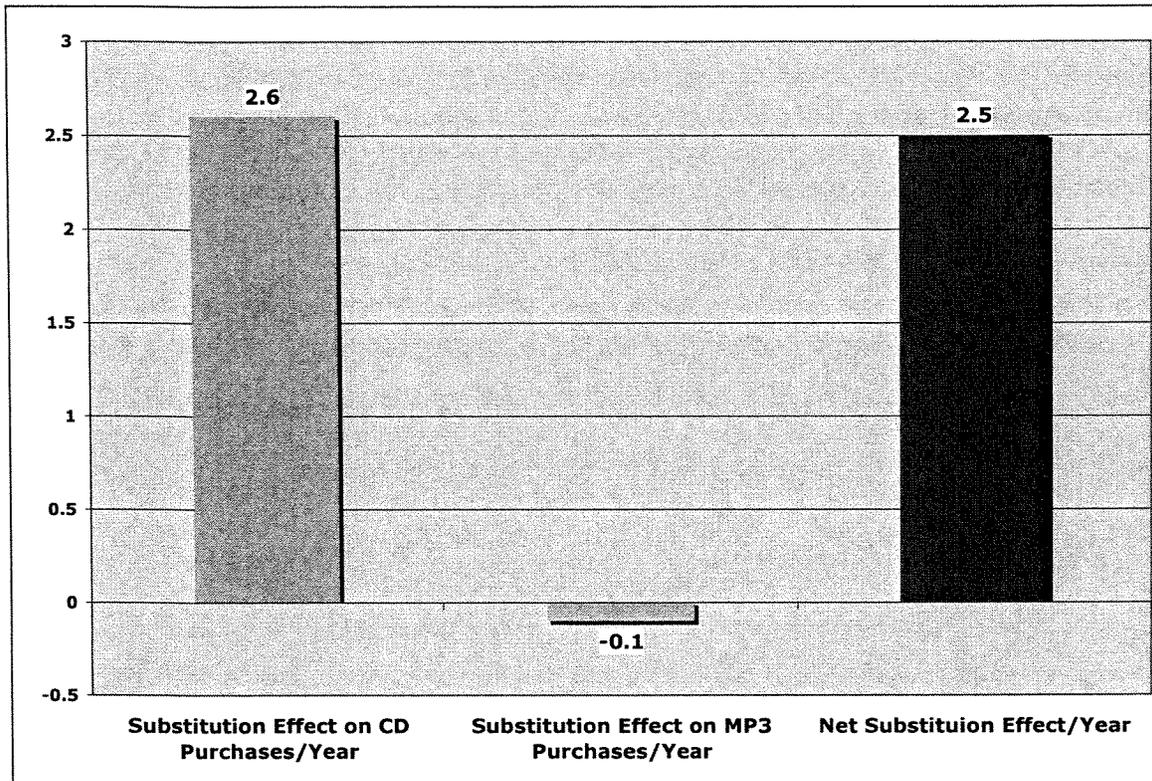
691. Mr. Mantis found that in total 44% of respondents gave solely satellite radio-related reasons for reducing their purchases. Mantis WRT at 10, SX Trial Ex. 132. And in total, the Mantis survey found a net reduction of 8.0 CDs per year by listeners of satellite radio. Mantis WRT at 15, SX Trial Ex. 132. Based on the categorization above, Mr. Mantis found that he could attribute 2.6 CDs of that reduction to satellite radio. Mantis WRT at 15, SX Trial Ex. 132. Put another way, his survey distinguished between the 5.4 per year CD reduction caused by possible other reasons and the 2.6 per year CD reduction that was caused exclusively by satellite radio. Mantis WRT at 15, SX Trial Ex. 132.

692. Mr. Mantis performed the same analysis with respect to music downloads, but because his sample size was too small, was unable to render an expert opinion as to the effect of satellite radio on download purchases, except to say that it was very small, especially as compared to the sizeable substitution effect on CDs. 8/30/2007 Tr. 208:6-209:9 (Mantis). A

total of 24 respondents stated that they reduced their download purchases solely because of satellite radio and 19 respondents stated that they increased their download purchases solely because of satellite radio. Mantis WRT at 19-20, SX Trial Ex. 132. Using the same methodology as he used for CD purchases, Mr. Mantis found as a “rough approximation” that satellite radio led to an increase of .26 downloads per average three month period, or 1.0 downloads per year. Mantis WRT at 20-21, SX Trial Ex. 132.

693. Mr. Mantis noted that compared to the results regarding CD purchases, which were based on a significantly larger sample size and revealed a far more sizeable effect of 2.6 CDs/year, any promotional effect on downloads is swamped by the larger substitutional effect on CD purchases. Mantis WRT at 21-22, SX Trial Ex. 132. He found that assuming ten download tracks per CD, a 1.0 download promotional effect yields a net substitutional effect of 2.5 CDs/year. Mantis WRT at 21-22, SX Trial Ex. 132.

**Figure 30. The Mantis Survey Reveals
A Net Substitutional Effect Of 2.5 CDs Per Year**



Mantis WRT at 4, SX Trial Ex. 132.

c. Economist Testimony

694. In addition to the Mantis survey, Dr. Pelcovits and Dr. Herscovici reviewed a study by Dr. Yoram Wind, who conducted a telephone survey employing a test and control group approach. Pelcovits WRT at 31, SX Trial Ex. 124; Herscovici WRT at ¶ 26. The survey reports the results of 200 current satellite radio subscribers (the test group) and 101 individuals who are considering subscribing to satellite radio in the near future (the control group). Pelcovits WRT at 31, SX Trial Ex. 124. The fundamental concept behind this survey approach is that because considering subscribers are likely to have the same characteristics as current subscribers, any differences between the two groups with respect to the numbers of CDs and downloads

purchased can be attributed to the fact that the subscriber group listens to satellite radio, while the control group does not. Pelcovits WRT at 31, SX Trial Ex. 124. The Wind survey asked respondents to recall when their two most recent CD and MP3 purchases took place, and how many CDs and MP3s they purchased on those occasions. Pelcovtis WRT at 31, SX Trial Ex. 124. These data then were used to calculate typical purchase frequencies and quantities. The results show that the considering subscribers purchased 2.7 more CDs and 4 more downloads per year than current subscribers. Pelcovtis WRT at 31, SX Trial Ex. 124. Because the only relevant difference between these two groups is that the test group respondents are current subscribers who listen to satellite radio, and the control group respondents have not yet subscribed and therefore do not listen to satellite radio, the significantly greater number of music purchases by the control group respondents demonstrates that satellite radio has a substitutional effect. Pelcovits WRT at 31, SX Trial Ex. 124. 8/30/07 Tr. 98:20-98:7 (Herscovici).

695. For 2007, this will mean that approximately 37 to 40 million CDs fewer will be sold as a result of satellite radio. 8/30/07 Tr. 97:20-99:6 (Herscovici). Moreover, the SDARS-related substitution for other forms of record company revenues – Internet radio, subscription on-demand services, etc. – means that this underestimates the opportunity cost caused by satellite radio. Herscovici, WRT at 10, SX Trial Ex. 130.

d. The XM/Sirius surveys

i. XM Listening Study

696. Dr. Wind reviewed a study from July 2006 known as the Recent XM Activation Satisfaction Study. Wind WRT at 16-17, SX Trial Ex. 129. The study tracks the percentage of time that XM subscribers spend listening to CDs and MP3s, and shows those percentages both *before and after* subscribers began listening to XM. The results are striking. Prior to getting

XM, subscribers reported that CD listening comprised [REDACTED] of their audio listening time, and that MP3s comprised another [REDACTED] of listening time. SX Trial Ex. 15 at 35. After getting XM, CD listening time [REDACTED], and [REDACTED]. SX Trial Ex. 15 at 35. In total, and as the figure below shows, CD and MP3 listening time was [REDACTED]. Wind WRT at 16-17, SX Trial Ex. 129.

Figure 31. Reduction in CD and MP3 Listening After Getting XM



697. Dr. Wind explained at trial that it is well understood in the marketing community that time spent using a product is correlated with actual purchases of the product. 8/29/07 Tr. 119:13-21 (Wind). But there is no need to take Dr. Wind's word for this common-sense

assertion. The SDARS themselves make precisely the same point in their filing before the FCC. In those papers, the SDARS argue that their own listening studies – *i.e.*, studies just like the Recent Activation Study – “demonstrate that there is substantial demand substitution between satellite radio and other audio entertainment devices.” SX Trial Ex. 106 at 37. SX Trial Ex. 106 at 12 (“*Usage data* from Sirius and XM demonstrate that there is substantial demand substitution between satellite radio and other audio entertainment devices.”) (emphasis added). And XM’s website makes the point clearly with a testimonial from a satisfied customer: “[S]ince I activated my service two weeks ago, I have yet to listen to anything other than the XM format. Unbelievable sound quality, content, and selection. No need to ever buy another CD.” SX Trial Ex. 4. *See also* 6/5/07 Tr. 88:5-17.

ii. Sirius Consumer Satisfaction Monitor.

698. Sirius’s internal analyses tell much the same story. Wind WRT at 17-18, SX Trial Ex. 129. As part of its submission to this Court, Sirius presented a copy of its 2Q 2006 Customer Satisfaction Monitor (“CSM”). According to the testimony of Sirius witness Christine Heye, the CSM is relied on by Sirius executives in making day to day business decisions. Heye WDT at ¶ 17, SIR Trial Ex. 37. The CSM tracks the percentage of time Sirius subscribers spend listening to various forms of audio entertainment in the car, and in particular, it tracks audio listening by subscribers both *before and after* they obtained Sirius.

699. The CSM shows that prior to getting Sirius, respondents spent [REDACTED] in their vehicles listening to CDs or MP3s. SX Trial Ex. 35 at 00004460. After getting Sirius, CD/MP3 usage [REDACTED]

[REDACTED]. As the SDARS explained in the FCC filing, and Dr. Wind explained during his

testimony, a reduction in listening time reduces the demand for the old product. SX Trial Ex. 106 at 37; SX Trial Ex. 106 at 12; 8/29/07 Tr. 119:13-21 (Wind). Indeed, Mr. Karmazin made a similar point during his testimony when he agreed that Sirius competes with playing CDs in a car. 6/6/07 Tr. 335:2-5 (Karmazin). Dr. Pelcovits also reviewed these Sirius and XM surveys. He believes this decline in listening time would have an impact on individuals' purchases of CDs, because "if people listen less, they will buy less." 7/09/07 Tr. 286:14-288:13 (Pelcovits). *See also* Herscovici WRT at 19-20, SX Trial Ex. 130 (same).

**Figure 32. Reduction in Vehicle CD and MP3 Listening
After Getting Sirius**



iii. The NPD/NARM survey

700. Dr. Wind also reviewed a March 2007 study commissioned by the National Association of Recording Merchants ("NARM") that examines, among other things, the CD and

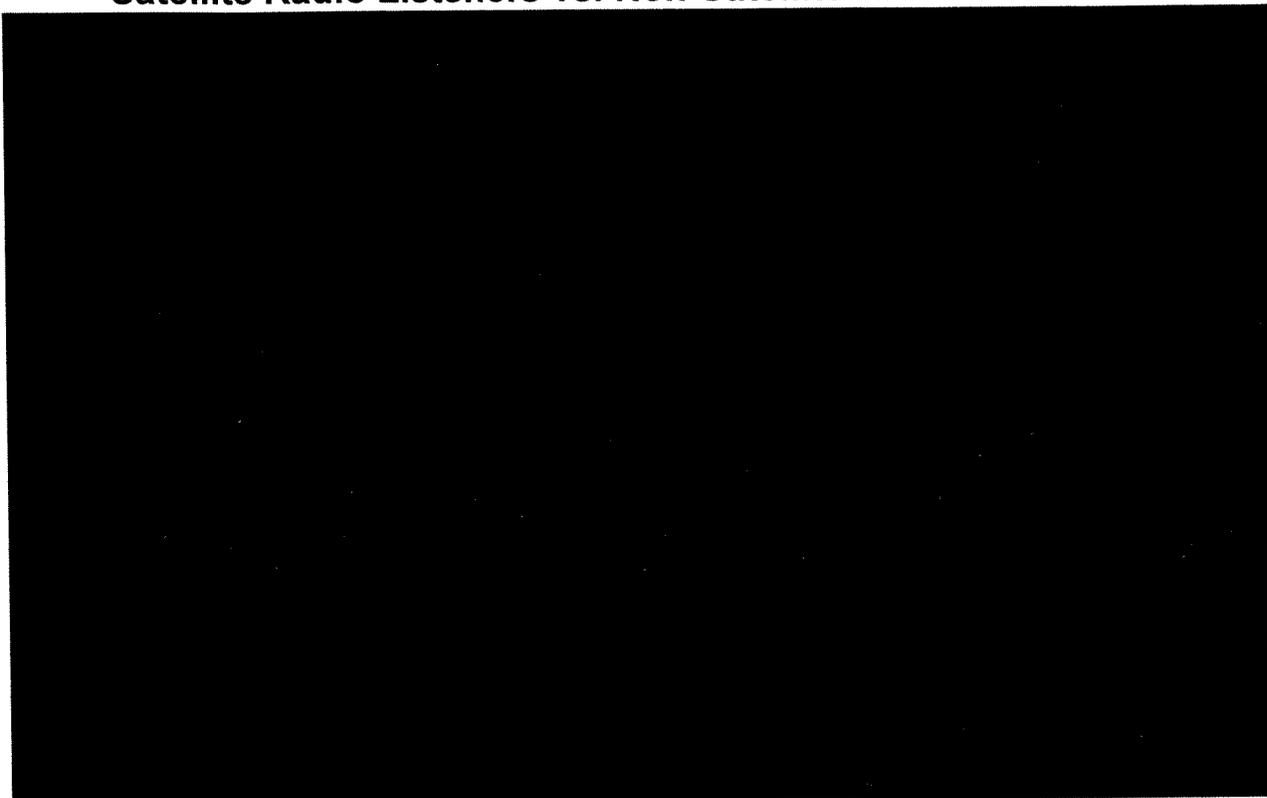
MP3 buying habits of satellite radio subscribers. Wind WRT at 20, SX Trial Ex. 129. This study was not created for purposes of this litigation, and was instead conducted at the request of an independent trade group for its own purposes. Wind WRT at 20, SX Trial Ex. 129. The members of this group include many large retailers, such as Circuit City, Target, and Amazon, that sell satellite radio as well as music. Wind WRT at 20, SX Trial Ex. 129. NARM's members account for almost 85% of the music sold in the United States. Wind WRT at 20, SX Trial Ex. 129.

701. The Internet study looked at the responses of 3,136 consumers, including 326 who listened to satellite radio. Wind WRT at 21, SX Trial Ex. 129. [REDACTED]
[REDACTED]. Wind WRT at 21, SX
Trial Ex. 129. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]. Wind WRT at 22, SX Trial
Ex. 129.

702. The results provide further support for the conclusion that satellite radio serves to substitute for other forms of music. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]. Wind WRT at 22, SX Trial Ex. 129. In other words, the more subscribers rely upon satellite radio, the more likely they are not to purchase music in other forms. Wind WRT at 21-22, SX Trial Ex. 129. Indeed, these heavy users of satellite radio may represent a particularly large loss of music sales because they may be precisely the type of consumer who would otherwise be purchasing large amounts of music. Wind WRT at 21-22, SX Trial Ex. 129.

**Figure 33. Percentage *Not* Purchasing Music
Satellite Radio Listeners vs. Non-Satellite Radio Listeners**



Wind WRT at 22, SX Trial Ex. 129.

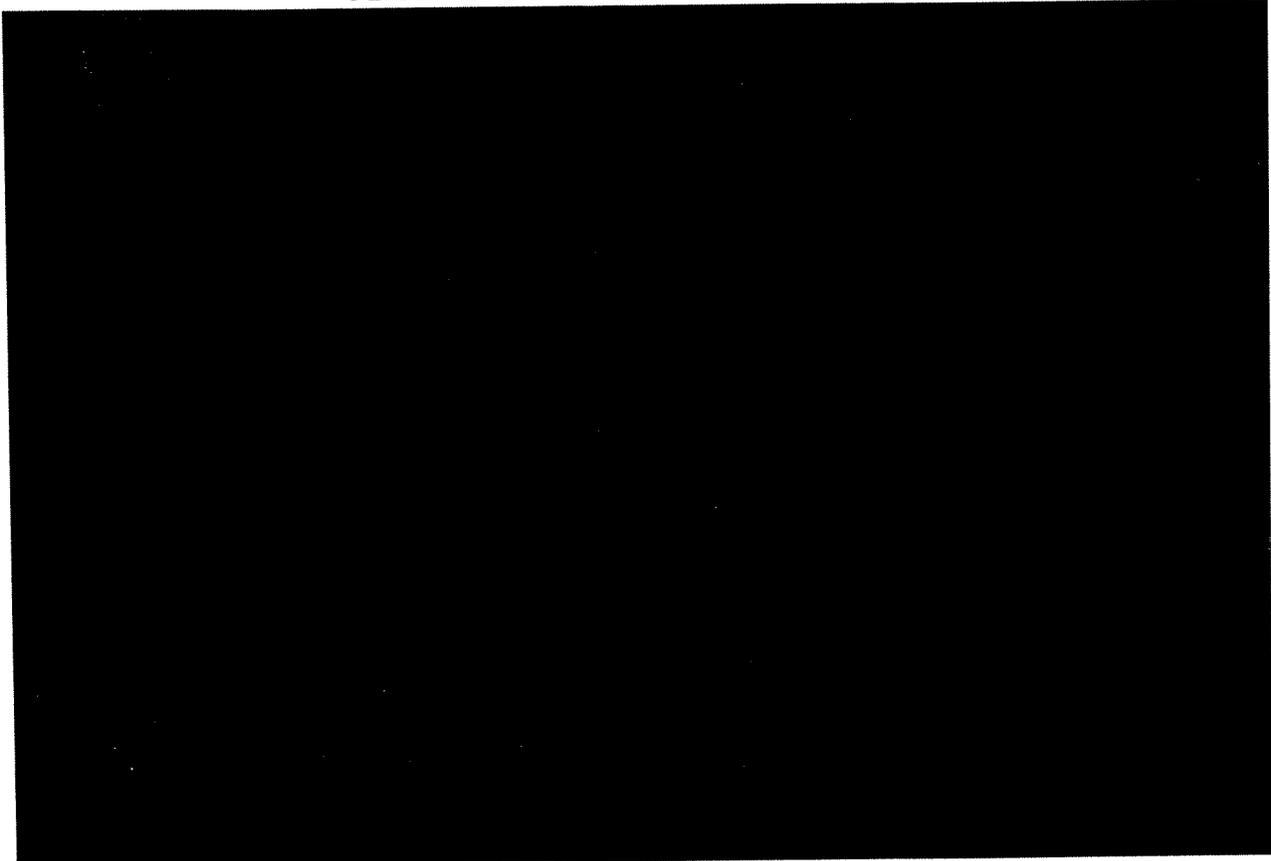
Similar results hold when looking at satellite radio listeners' purchases of CDs and MP3s separately. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]. Wind WRT at 22, SX
Trial Ex. 129.

**Figure 34. Satellite Radio Listeners Were Less Likely To Have Bought
CDs And MP3s In The Last Year**



Wind WRT at 23, SX Trial Ex. 129.

703. Perhaps most importantly, the NARM survey asked those respondents who had not purchased CDs in the last year why that was the case. *A full 84.7%* of satellite radio users said that they bought less music because “they were satisfied listening to the music on satellite radio.” 8/29/07 Tr. 158:7-1594. Dr. Pelcovits found the NARM survey reliable and found that its conclusions support the conclusion that satellite radio has a significant substitutional impact. Pelcovits WRT at 33, SX Trial Ex. 124.

iv. The Services' FCC filing/CRA analysis

704. As noted above, the SDARS have reached the same conclusions about the substitutional effect of their service. In presentations about the proposed merger between XM and Sirius, the two companies each argue that satellite radio competes with other music services – and competition means substitution. Herscovici WRT at 10 & App. J, SX Trial Ex. 130; 8/29/07 Tr. 230:11-231:15 (Herscovici). These statements directly contradict the arguments the Services make in this proceeding. Herscovici WRT at 10, SX Trial Ex. 130.

705. Their FCC filing consists of a brief drafted by the SDARS and an economic analysis commissioned by them and conducted by Charles River Associates, the firm at which Dr. Woodbury is a principal. The FCC filing is unequivocal about the substitutional effect of satellite radio.

706. It asserts that the “relevant market” in which the SDARS compete includes “CD players,” along with “AM/FM radio, HD radio, Internet Radio, iPods and other MP3 players.” SX Trial Ex. 106 at 9. The SDARS note there are 243 million vehicles in the country and “virtually all of them are equipped with ... CD Players,” in addition to the CD players “used at home.” SX Trial Ex. 106 at Ex A at 11. “Satellite subscribers can and do substitute” the SDARS service for these “popular audio entertainment options.” The result is that there is “strong substitutability among audio entertainment services” SX Trial Ex. 106 at 64, such that “when people activate a satellite radio subscription, they substitute satellite radio programming for other audio entertainment to which they historically listened.” SX Trial Ex. 106 at 37. Indeed, in their FCC papers, the SDARS believe that the substitution effect is so clear that that

they describe it as the “predictable” effect “[w]hen people activate satellite radio subscriptions.” SX Trial Ex. 106 at Ex. A at 12.

e. Record Company and Artist Evidence

707. Record company witnesses testified to the substitutional effect of satellite radio. The record companies have seen a transition over the years in terms of the functionality of different music services. Whereas they formerly viewed such services as falling somewhere on a scale between promotional and substitutional, today they look at services as falling on “a spectrum of substitutionality.” 6/18/07 Tr. 237:1-3 (Eisenberg). Virtually all digital services are substitutional in some respect. Eisenberg WDT at 8, SX Trial Ex. 53. Whether a particular service is promotional is not a material consideration; rather, the record companies look at these services as falling along a “continuum of substitutionality, with certain elements of promotion, perhaps, at different parts of the spectrum, or within different types of services.” 6/18/07 Tr. 237:3-15 (Eisenberg). Where a digital service is substitutional for other paid uses of sound recordings, the record companies must receive sufficient compensation to offset otherwise resulting losses of income. Eisenberg WDT at 8, SX Trial Ex. 53.

708. Mr. Eisenberg explained that the SDARS’ hit music channels operate much like an on-demand streaming service and are very substitutional. Record companies earn approximately 90% of their revenues from the top 10% of their tracks; thus, when the SDARS stream these tracks multiple times a day, without commercial interruption, and a consumer knows he can listen to these top tracks over and over again, the listening experience substitutes for purchases of these tracks. 6/18/07 Tr. 130:16-131:5 (Eisenberg). For example, XM’s 20-on-20 plays the top 20 hits back-to-back, without commercial interruption, eight times every day. This creates a “very satisfying consumer experience,” and precludes the need for a consumer to

buy any of these tracks: why would a consumer have to buy the tracks when he can listen to it eight times a day, end to end, on these hit channels? 6/18/07 Tr. 129:8-130:13 (Eisenberg).

709. Likewise, the SDARS' additional music channels play a diversity of musical genres, commercial-free, that consist of deeper catalog tracks. The record companies rely on catalog sales to generate revenue; thus, where a service plays these catalog tracks – especially where it does so in a commercial-free environment thereby creating a more satisfying experience for the consumers – it becomes substitutional, as these consumers will no longer need to purchase these catalog tracks in order to satisfy their appetite for such music. 6/18/07 Tr. 132:14-133:21 (Eisenberg); Kenswil WDT at 3, SX Trial Ex. 66. While SDARS subscribers cannot pick particular tracks on an on-demand basis, the “narrowly tailored channels . . . limit the amount or the types of repertoire that [subscribers are] going to hear,” and so subscribers “have a good hunch” of what artists and songs will come up, thus creating an on-demand-like experience and inducing a substitutional effect. 6/18/07 Tr. 255:19-256:18 (Eisenberg).

710. More generally, consumers are limited in both the money and time they can spend on music entertainment. With a subscription price of \$12.95 per month, the SDARS' services put pressure on consumers' ability to spend additional money on music. Thus, subscribers have less money to spend on other forms of music, such as CDs or digital downloads, or for other services that may provide more just compensation to the record labels. 6/18/07 Tr. 134:7-15 (Eisenberg); Eisenberg WDT at 12, SX Trial Ex. 53. In addition, subscribers of satellite radio have less time to spend listening to other forms of music, so they are therefore purchasing fewer albums and tracks. 6/18/07 Tr. 134:7-136:2 (Eisenberg); Eisenberg WDT at 12, SX Trial Ex. 53; Kenswil WDT at 3, SX Trial Ex. 66. *See also* 6/27/07 Tr. 20:6-18 (Kenswil) (describing how the SDARS are “narrowcasting” music, rather than broadcasting it such that niche channels

satisfy consumers' musical tastes and replace their need to purchase CDs or to invest in other services that provide a greater rate of return to the record companies than does satellite radio).

711. Artists and artist managers do not consider satellite radio as overall promotional. In fact, when creating marketing and promotional plans for his artists, Simon Renshaw, President of Strategic Artist Management and manager of popular bands such as the Dixie Chicks, explains that marketing through satellite radio is "really close to the bottom of the list" of media outlets used to promote artists. 6/21/07 Tr. 40:14-18 (Renshaw). Television is currently viewed as "the most important" media for promoting artists, as it "is a huge, huge driving factor in terms of launching artists and creating familiarity and awareness for an artist and their talents." 6/21/07 Tr. 13:6-11 (Renshaw). After television, "print media," "interviews," "photographs," "cover placement," and "the internet" are the additional media outlets most effective at "introducing and developing the artists and their music." 6/21/07 Tr. 13:1-14:8 (Renshaw).

712. While SDARS do play a role in marketing plans, it is only a minor role. 6/21/07 Tr. 20:1-5 (Renshaw). In fact, it is often one of the very last media that artists consider in their marketing plans. 6/21/07 Tr. 40:14-18 (Renshaw). And while artists appear on shows on Sirius and XM, there is no correlation between such appearances and any impact on sales or publicity. 6/21/07 Tr. 23:22-24:11, 38:12-17 (Renshaw). In fact, artists generally agree to perform on such shows only after the rest of the marketing plan is in place, and only when there happens to be space available in that marketing plan, thereby providing a window of opportunity to perform on XM or Sirius. 6/21/07 Tr. 25:18-26:1 (Renshaw). XM and Sirius have only a national platform and not a local presence; thus artists cannot break into a local market through the SDARS, which is yet another reason why air play on SDARS is not promotional. 6/21/07 Tr. 81:19-83-22 (Renshaw).

713. For example, in developing a marketing plan for the release of the Dixie Chicks' 2006 album, Mr. Renshaw and SONY BMG did not intend to use radio – including satellite radio – for promotion at all. 6/21/07 Tr. 52:12-19 (Renshaw). The marketing plan for the album highlights detailed promotional efforts through retail markets such as Target, BestBuy, Wal*Mart, K-Mart, amazon.com, iTunes, and Starbucks, promotions in which the Dixie Chicks provided exclusive bonus tracks and offers such as a “digital booklet, photos, [and] handwritten lyrics.” SDARS Trial Ex. 23. After detailing the retail markets through which the album would be promoted, the marketing plan then discusses the press outlets, including numerous television programs and print media featuring interviews, announcements, articles, ads, photos and covers. SDARS Trial Ex. 23. Next, the marketing plan discusses promotion of the album on the television program “Medium,” and then describes promotion through television videos. SDARS Trial Ex. 23. Next, the plan details digital media marketing outlets, including AOL, MSN, Yahoo!, MySpace.com, DixieChicks.com, and amazon.com. SDARS Trial Ex. 23. Then the marketing plan turns to “Gay/Lifestyle Marketing,” and discusses promotional efforts through media targeting Gay Media. SDARS Trial Ex. 23. And finally, on the last page of the document, the very last two bullet points mention the Dixie Chicks' appearance on XM's Artist Confidential and on Sirius's Howard Stern show. SDARS Trial Ex. 23.

f. The Services' evidence of promotion

714. The SDARS' evidence of promotion is purely anecdotal. For example, Steven Blatter, Senior Vice President of Music Programming, devotes large parts of his testimony to describing the promotional efforts of the record label promotions departments. *See, e.g.*, 6/11/07 Tr. 66:5-67:15; 68:12-22; 71:16-76:21 (Blatter). Blatter WDT at ¶¶ 9, 11, 31-43, SIR Trial Ex. 36. But the SDARS offer no empirical evidence of promotion and provide no quantification of

any promotional benefits that the SDARS assertedly provide to the labels, openly acknowledging that they have no way to quantify that type of information. *See* 6/11/07 Tr. 109:8-112:22 (Blatter) (unable to track quantity of CDs or downloads attributed to airplay on Sirius).

715. The SDARS admit that when bands – such as the Rolling Stones and The Who – sign an agreement with the SDARS for a special promotional program or channel, they do not forego their royalties in exchange for any promotional benefit they may receive from the program or channel. 6/11/07 Tr. 143:8-15 (Blatter). Rather, the promotional benefit is merely on top of whatever royalties they otherwise receive. Thus, despite any promotional benefit from airplay on Sirius, artists are not willing to sacrifice royalties to which they are entitled. The SDARS also acknowledge that having bands come and perform on the Service is a two-way street: both the SDARS and the bands may benefit from such programs. 6/11/07 Tr. 169:17-170:5 (Blatter). 6/5/07 Tr. 266:17-267:2 (Logan). In fact, the SDARS themselves acknowledge that record companies do not expend significant effort promoting to the SDARS, as compared to the energy they direct at other tried and true avenues of exposure, such as television, cable, print, retail exposure, and websites. SX Trial Ex. 38; 6/11/07 Tr. 165:10-166:6 (Blatter).

716. Even if airplay on satellite radio could be used to promote sales of individual sound recordings, that would not mean that sales of sound recordings overall or in the aggregate for a record company. Any impact of radio airplay on sales is likely to be heterogeneous – helping some artists and harming others. Herscovici WRT at 8, SX Trial Ex. 130. Moreover, to the extent that airplay may be of value to some sound recordings, record companies and satellite radio companies have demonstrated that they can enter into individual agreements to encourage airplay of particular recordings. Such agreements show that a market can adjust for heterogeneity in the impact of airplay on sound recordings, but also amplify that there is no basis

for discounting the royalties on all sound recordings for satellite radio. Herscovici WRT at 8-9, SX Trial Ex. 130.

717. To the extent that the SDARS offer “evidence” of promotion through excerpts of subscriber emails that purport to show promotional benefits; it is not quantifiable evidence. It is impossible to extrapolate the purchasing behavior of 14 million subscribers from a few emails. Herscovici WRT at 9, SX Trial Ex. 130; 8/29/07 Tr. 233:19-234:22 (Herscovici). Even Dr. Woodbury admits this in his testimony. 6/12/07 Tr. 334:19-336:5 (Woodbury). That some people may buy a CD after hearing a sound recording played on satellite radio does not provide evidence that the Services have a promotional effect on sound recording sales overall because it does not account for those who would have purchased a CD in the absence of satellite radio or for the net effect of satellite radio overall. Herscovici WRT at 9, SX Trial Ex. 130.

718. Even the emails quoted by Dr. Woodbury in his written testimony provide evidence of substitution, showing that the satellite radio companies actually market their product by telling potential subscribers that they “would no longer need [their] CDs.” Herscovici WRT at 9, SX Trial Ex. 130. As indicated previously, XM brags to consumers on its website that new subscribers says that there is “no more need to ever buy another CD.” Herscovici WRT at 9, SX Trial Ex. 130; SX Trial Ex. 4 at 1.

719. Thus, substantial evidence contradicts the SDARS’ limited efforts to show that listeners to XM and Sirius on average will increase their purchases of recorded music. Quite to the contrary, the survey evidence produced by the SDARS as well as three surveys produced or obtained by SoundExchange, show that listening to XM and Sirius causes a substantial reduction in CD purchases. Pelcovits WRT at 30-31, SX Trial Ex. 124.

3. The Economic Impact of Substitution

720. Dr. Pelcovits reviewed the evidence of substitution cited above, including the Mantis and Wind surveys, the XM and Sirius listening surveys, the NARM survey, and the SDARS' FCC filing. Dr. Pelcovits also found that analysts who study the music industry believe that as the SDARS grow in scale the substitution effect increasingly will harm the music industry. Pelcovits WDT at 7, SX Trial Ex. 68. Taken together, these studies provide convincing evidence that Dr. Woodbury is wrong when he asserts that the SDARS' services are on net promotional. Instead, the empirical evidence is decidedly in the other direction: satellite radio's effect on music purchases is substantial and substitutional. Specifically, taking all the evidence into account, Dr. Pelcovits believes that it is reasonable to conclude that the net substitution effect for the average SDARS listener is 2.6 CDs per subscriber per year. Pelcovits WRT at 33, SX Trial Ex. 124.

721. A substitution effect of 2.6 CDs per year would have a substantial impact on the rates copyright owners would negotiate with the SDARS in a free market. Pelcovits WRT at 33, SX Trial Ex. 124. The record companies' gross margin on CD sales is [REDACTED] per full price CD,³⁸ according to the written rebuttal testimony of Mark Eisenberg. Eisenberg WRT at 12, SX Trial Ex. 126. Thus, lost profits per subscriber per month are [REDACTED] [REDACTED].³⁹ Pelcovits WRT at 34 & n. 58, SX Trial Ex. 124. That is, the loss of 2.6 CD sales per year is equivalent to a loss by the sound recording copyright holder of approximately \$15.47 per SDARS' subscriber per year (or \$1.29 per customer per month).

³⁸ The percentage of the record company's revenues represented by full price or top line CD sales is in the 80s. 8/28/07 Tr. 242:14-19 (Pelcovits).

³⁹ For his calculation of the CD margin, Dr. Pelcovits used the CD margin of one of the record companies as representative of all. He later obtained information for all of the major record companies, however, indicating that the CD margin for the other companies was in the same range but generally higher. 8/28/07 Tr. 242:20-243:18 (Pelcovits).

722. The lost CD margin of \$1.29 per subscriber per month would be a price floor for the record companies. Any lower royalty rates would mean that they would be losing money as a result of the SDARS' broadcasts.⁴⁰ 8/28/07 Tr. 118:5-19, 120:12-21 (Pelcovits).

723. Notably, the SoundExchange rate proposal proposes a royalty fee of only \$0.85 per month per subscriber, until the number of subscriptions reach 9 million. If, as the surveys indicate, the average subscriber to the SDARS purchases 2.6 fewer CDs per year, then the sound recording copyright owner would lose approximately \$1.29 per subscriber per month from CD sales, while receiving only \$.85 per subscriber per month under the SoundExchange rate proposal, for a net loss of \$0.44 per subscriber per month. As the SDARS subscriber base grows and the royalty fee increases under the SoundExchange rate proposal, this net loss becomes a modest net profit, assuming the substitution for CD sales does not increase. Even the highest tier of the SoundExchange rate proposal – the greater of 23% of revenue or \$3.00 per subscription – translates into a comparatively low rate after adjusting for substitution. The effective per subscription fee net of lost CD sales would be \$1.76 or approximately 15% of revenue. Of course, under the SDARS rate proposal, the substitution effect will result in substantial losses throughout the rate term, In either case, throughout the license term the loss in CD sales will take a big bite out of the royalty payments received by the copyright owners from the SDARS. Pelcovits WRT at 34 and n. 60, SX Trial Ex. 124.

724. Under § 801(b) factors, the evidence of substitution is extremely relevant because the loss of revenue as a result of substitution relates directly to the funds available to create

⁴⁰ Consistent with his testimony in the webcasting case, Dr. Pelcovits found that if the record companies were already charging a profit-maximizing price, an increase in their marginal costs due to substitution would not be passed on dollar-for-dollar. Here, however, the record companies are not presently charging a profit-maximizing price, and the same analysis does not apply, because the record companies would not in any event charge a price that causes them to lose money. 8/28/07 Tr. 234:17-236:6 (Pelcovits).

copyrighted works, the fair return to the copyright owners and performers, and the risks faced by the record companies. Pelcovits WRT at 33-34 and n. 57, SX Trial Ex. 124.

725. Thus, based on the survey evidence, Dr. Pelcovits concludes that the substitutional effect of SDARS listenership on sales of recorded music should weigh in favor of a substantially higher royalty fee. Pelcovits WRT at 37, SX Trial Ex. 124.

F. The Shapley Analysis

726. Using economic modeling techniques, Dr. Pelcovits analyzed the financial data for the SDARS, with respect to their anticipated costs and revenues, in an effort to determine how revenues and potential profits might be divided in the future between the SDARS and the content providers. 7/09/07 Tr. 83:3-83:21 (Pelcovits). The economic modeling techniques discussed below produced proposed royalty rates of 18% of revenue and \$2.37 per subscriber per month. *See infra*.

727. As the first step in his analysis, Dr. Pelcovits calculated the revenues the SDARS likely will generate in 2012 when by will be relatively more mature businesses. He subtracted from that number all of the SDARS' costs during that period, including a reasonable portion of a profit for their investors, other than the costs of the content they provide over their satellite systems. The result is the surplus generated by their business. Dr. Pelcovits then divided up that surplus among the various content providers and the SDARS themselves, using economic modeling to propose an optimal allocation of that surplus among the SDARS' shareholders and the various content providers. Pelcovits WDT at 14-15, SX Trial Ex. 68; 7/09/07 Tr. 84:3-84:15 (Pelcovits).

728. The results of this analysis show that in 2012 the SDARS will obtain a surplus of \$4.43 (in 2007 dollars) per customer per month, above and beyond their costs and a reasonable

rate of return on capital. Economic modeling shows that sound recording rights holders would derive 62 percent of that surplus, or \$2.75 per subscriber per month at the end of the statutory period if the rate were negotiated in the market. Pelcovits WRT at 38, SX Trial Ex. 124.

729. “Surplus,” for the purposes of this analysis, means total revenues minus costs, excluding content costs. Content costs are excluded to isolate the sum that would be available to divide with content providers. 7/09/07 Tr. 84:22-85:16 (Pelcovits). Excluding all content costs from the calculation of the surplus best satisfies the statutory factors, and in particular the first two statutory factors. It would be unfair to sound recording rights holders, and it would not maximize the availability of creative work to the public, if the sound recording royalty was based only on whatever happened to be left of the SDARS’ surplus after the SDARS had made their deals with all of the other content providers. This approach also best addresses the way a content provider would approach a negotiation with the SDARS in the real world. No content provider would accept an argument from an SDARS in the form of “we wish we could pay you more, but we gave all of our profit away to your competitor content provider x. So you will just have to take the little that is left over.” Pelcovits WDT at 15-16, SX Trial Ex. 68.

730. The surplus calculation included as a cost the normal return on capital. 7/09/07 Tr. 85:17-86:1 (Pelcovits). Dr. Pelcovits deducted from the available surplus not only the capital expenditure for the fixed asset infrastructure necessary to provide the service, but also the cost of that capital. In other words, the surplus divided among the parties is an amount above and beyond the SDARS normal (*i.e.*, competitive) return on capital. In this way, Dr. Pelcovits’s approach gives the SDARS their profit in two different ways. First, before the surplus even is divided, the SDARS are given a reasonable rate of return on the investment needed to build an

SDARS network. Second, the SDARS also participate in sharing the surplus created by their business. Pelcovits WDT at 15-16, SX Trial Ex. 68.

731. Dr. Pelcovits calculated the surplus for the year 2012, because that is the year in this rate period in which the SDARS achieve the greatest level of maturity. 7/09/07 Tr. 86:2-86:18 (Pelcovits). Prior to that time, the companies will be spending a great deal of money investing in their future. By definition, the revenue they anticipate in return from that investment has not yet appeared on their books. In that situation, the snapshot of an annual pro forma is misleading, and adjustments need to be made to income statements to give a clear picture of a company's financial situation. Use of 2012 for the purposes of this analysis therefore is appropriate. Pelcovits WDT at 17-18, SX Trial Ex. 68.

732. The revenue and cost numbers used by Dr. Pelcovits for the surplus analysis came from Mr. Butson's pro forma income statements, except, as described above, Dr. Pelcovits excluded content costs, and as explained below, utilized a different approach for capital costs. 7/09/07 Tr. 87:3-90:4 (Pelcovits).

733. With respect to capital costs, Dr. Pelcovits estimated the total capital cost of the SDARS fixed assets and then added a return on that capital that allows the SDARS to recover the capital costs over the life of the capital assets. 7/09/07 Tr. 90:5-91:17 (Pelcovits). The capital cost of the assets was determined for each of the SDARS using the net book value of Sirius's property, plant and equipment as of year-end 2005 per Sirius's annual report, plus the cost of one additional satellite. Pelcovits WDT at 20, SX Trial Ex. 68; 7/09/07 Tr. 214:3-215:10 (Pelcovits). Dr. Pelcovits estimated a cost of capital (grossed up for corporate income tax since in 2012 the SDARS will be paying tax) of 16.67%. Assuming an expected life of 9.5 years for capital assets,

this cost of capital yields a monthly capital cost charge of \$19 million, or an annual charge of approximately \$228 million. Pelcovits WDT at 20, SX Trial Ex. 68.

734. Because Dr. Pelcovits examined the SDARS services on a “going-forward” basis, he did not include in the SDARS costs any past operating losses; rather, he included the capital cost of the total physical assets of the SDARS that are needed to operate the services on an on-going basis, plus a “rental rate of return” on the cost of those assets. 7/09/07 Tr. 208:4-208:19, 209:21-211-22 (Pelcovits).

735. The results of the surplus calculation, based on the most recent projections provided by Mr. Butson, are shown in the table below (Pelcovits WRT at 37-38, SX Trial Ex. 124):

SDARS 2012 SURPLUS CALCULATION		
(in thousands of dollars, except subscribers)		
Updated		
	XM	Sirius
Number of Subscribers	15,407,971	15,459,960
Total Revenue	\$2,556,118	\$2,555,099
Revenue Share (est.)	\$374,851	\$323,406
PRO and Other Royalties	\$76,684	\$76,653
Customer Care and Billings	\$151,886	\$157,852
Cost of Merchandise	\$79,834	\$55,929
Ad Sales	\$48,149	\$0
Subsidies and Distribution	\$381,261	\$343,449
Variable Costs	\$1,112,665	\$957,290
Advertising and Marketing	\$205,304	\$260,468
Retention and Support	\$39,268	\$0
Semi-Variable Costs	\$244,572	\$260,468
Satellite and Terrestrial	\$57,061	\$36,625
Broadcast	\$25,875	\$0
Operations	\$42,052	\$0
R&D	\$28,443	\$56,986
G&A	\$73,158	\$116,936
Fixed Costs	\$226,589	\$210,547
Capital Cost	\$228,820	\$228,820
Total Costs	\$1,812,645	\$1,657,125
Surplus	\$743,473	\$897,974
Surplus Per Customer	\$4.02	\$4.84

736. The chart above demonstrates that the surplus per subscriber per month is \$4.02 for XM and \$4.84 for Sirius. The average of this surplus for the two SDARS is \$4.43 per subscriber per month. Pelcovits WRT at 38, SX Trial Ex. 124.

737. Dr. Pelcovits next used economic game theory to analyze how the surplus would be divided up among the SDARS and content providers. 7/09/07 Tr. 93:19-94:7 (Pelcovits). Game theory has been the subject of significant research and application over the past 50 years, and has been used extensively in both economics and political science. 7/09/07 Tr. 94:11-94:16 (Pelcovits). For example, in connection with regulatory analysis of a proposed merger between Sprint and MCI, game theory was used to model the impact of the proposed merger on pricing

and market concentration issues in filings with the U.S. Department of Justice, the Federal Communications Commission and the European Commission. 7/09/07 Tr. 96:11-98:2 (Pelcovits).

738. Generally speaking, game theory can be divided into “non-cooperative game theory” and “cooperative game theory.” 7/09/07 Tr. 94:8-95:1 (Pelcovits). Dr. Pelcovits chose to use a cooperative game theory approach. Cooperative game theory has been discussed in economic literature as having excellent fairness characteristics, because its results are not sensitive to strategic considerations such as which party negotiates first or last. In light of the § 801(b) statutory criteria, Dr. Pelcovits believed that the fairness of the cooperative game analysis made it appropriate for use in this case. 7/09/07 Tr. 95:3-96:10, 229:8-229:12 (Pelcovits).

739. Specifically, Dr. Pelcovits used the “granddaddy” of non-cooperative game theory solutions, called the Shapley solution. The Shapley solution attempts to determine how a coalition of parties brought together to perform some business activity would be compensated, based on the value that each brings to the coalition rather than on strategic considerations such as the order in which they join the coalition. 7/09/07 Tr. 95:6-95:22, 99:8-100:4 (Pelcovits). The Shapley solution is widely endorsed by economists. The Shapley theorem says that there is a unique set of prices that is the computational result of averaging the value of each player’s incremental contribution to all possible coalitions. The Shapley value does not give any particular player any bargaining advantage over the others, because it averages situations where each player is at a bargaining advantage and a bargaining disadvantage. Because of this, the Shapley value is widely recognized by economists as having a strong normative claim to being the best and “fairest” solution to a cooperative game, and therefore particularly addresses policy

expressed by the second § 801(b) statutory factor, as well as the third. Pelcovits WDT at 22-24, SX Trial Ex. 68.

740. In order to model the division of the economic surplus using the Shapley solution, Dr. Pelcovits used a model with 15 participants: two SDARS; two news content providers; two sports content providers; two talk providers; and seven music providers. Pelcovits WDT at 24-25, SX Trial Ex. 68; 7/09/07 Tr. 100:14-100:22 (Pelcovits). Dr. Pelcovits ran the Shapley model with different numbers of independent record labels, talk show content and so on, and the results did not greatly vary depending on whether there are more or less of these additional content providers. Pelcovits WDT at 25, SX Trial Ex. 68.

741. Each of the participants in the Shapley model was assigned a value based on the number of customers each type of programming brings to the SDARS service. For the purpose of assigning these values, Dr. Pelcovits used the results of the “willingness to pay” question in Dr. Wind’s survey. That survey determined the incremental revenues added by each type of programming, assuming that the other types of programming already were offered. The incremental revenue determined by the survey, stated as a percentage of total revenues when all four program types were offered, are 53.3% for sound recordings, 22.6% for news, 23.3% for sports, and 23.4% for talk/entertainment programming. Dr. Pelcovits normalized the results of the Wind survey so that the value attributed to each type of content based on the “willingness to pay” question was adjusted to make the total value of all content sum to 100%. The normalized value for music, for example, was 43% of overall content value. Pelcovits WDT at 25-26, SX Trial Ex. 68; 7/09/07 Tr. 102:2-103:5 (Pelcovits).

742. In addition to assigning values to different types of content based on the Wind survey, Dr. Pelcovits estimated that the SDARS would need at least 50% of the available content

to have a successful business, and would need 75% of the available music content. 7/09/07 Tr. 103:6-104:1. Dr. Pelcovits based his conclusion that 75% of music content was necessary on the information he learned in the webcasting case, in which industry witnesses testified that a successful broad-based, mass market service (similar to the SDARS) effectively needed the music portfolios of all four major record companies. Because the four major record companies comprise about 75% of the record business, Dr. Pelcovits modeled his surplus analysis based on a requirement that 75% of music content was needed by the SDARS. 7/09/07 Tr. 103:6-104:22 (Pelcovits).

743. Dr. Pelcovits ran the Shapley model using inputs other than those described above, using different assumptions with respect to the amount of music required by the SDARS, etc. The Table below shows how different assumptions would affect the amount of the surplus paid to music. 7/09/07 Tr. 105:8-106:7 (Pelcovits). The table shows the results of the model using the assumptions Dr. Pelcovits ultimately relied upon: the SDARS require at least 50% of all content in order to operate a successful service, the SDARS need at least 75% of all sound recordings to operate a successful service, the record companies have the unequal size that they have in the real world, and the second SDARS adds 5% to the total value of the game through product differentiation. The table also shows the extent to which the ultimate results change if any of these assumptions are varied, for example, if one assumes 60% of all content is required, or 90% of all music is required, or if the record companies were all the same size.⁴¹ Pelcovits WDT at 27-28, SX Trial Ex. 68.

⁴¹ The first three rows represent the results of computer model runs establishing sound recordings rights holders' fair and expected share of the surplus when the four major record labels are assigned their actual industry share of all sound recordings. The last three rows represent the same computer runs when the record companies are assumed to be of the same size. The rows in the chart then represent the results of computer runs based on assumptions

Figure 35. SoundExchange's Total Shapley Share

	Minimum Percent of Sound Recording Content Required	Minimum Percent of Content Required	
		50%	60%
		Shapley value for Share captured by sound recording rights holders	
Real World Record Company Size	65%	52%	47%
	75%	62%	57%
	90%	73%	68%
All Record Companies the Same Size	65%	52%	47%
	75%	66%	60%
	90%	83%	79%

744. Based on the inputs described above, the Shapley solution yielded a result that music would obtain 62% of the economic surplus in 2012. 7/09/07 Tr. 105:1-105:7 (Pelcovits). Multiplying 62% by the surplus of \$4.43 per subscriber per month produced a royalty rate of \$2.75 per subscriber per month. Pelcovits WRT at 38, SX Trial Ex. 124. That per subscriber rate, restated as a percentage of total revenue, equates to a royalty rate of 24% of revenue. Pelcovits WDT at 30, SX Trial Ex. 68; 7/09/07 Tr. 106:8-106:18 (Pelcovits). Further adjustments to remove the music programming costs incurred by the SDARS⁴² and treating the

that the SDARS need 65%, 75%, or 90% of all sound recordings in order to operate a successful service. As the chart describes, the share allocated to sound recording rights holders in the model increases as these percentages rise. Finally, the two columns represent two different assumptions about how much of the total available content (both music and non-music) is necessary to operate a successful SDARS. Pelcovits WDT at 28-29, SX Trial Ex. 68.

⁴² According to data received in discovery, in 2006, the SDARS each incurred expenses of approximately [REDACTED] for music programming costs, exclusive of publishers and sound recording royalties. Sirius's costs were approximately [REDACTED], and XM's costs for music programming were [REDACTED]. The fact that XM's and Sirius's music programming costs were approximately equivalent in 2006 even though XM's revenues are almost 50% higher, and the fact that Sirius's costs were roughly stable between 2005 and

musical works royalty as a deduction from the payment for music yields a royalty of 22% of revenue. Pelcovits Amended WDT at 4, SX Trial Ex. 70; 7/09/07 Tr. 106:19-107:8 (Pelcovits).

745. Multiplying this surplus estimate by the Shapley share – 62% – yields a per subscriber rate of \$2.75. The per subscriber rate would be approximately \$2.37 in 2007 dollars. Pelcovits WRT at 38-39, SX Trial Ex. 124. Dr. Pelcovits deflated the calculated surplus to 2007 dollars because the SoundExchange rate proposal is calculated in terms of 2007 dollars. 7/09/07 Tr. 93:5-18. (Pelcovits).

746. Stated as a percentage of revenue the fee would be approximately 20%. Dr. Pelcovits adjusts this figure downward by 2% to account for the SDARS' portion of the cost of producing music content and to adjust for the musical works royalty fee. Thus the recommended sound recording copyright fee is 18%. Pelcovits WRT at 38-39 and n. 64, SX Trial Ex. 124.

747. The Shapley solution yielded a result that 10 percent of the surplus would be paid to the SDARS. That payment, however, would be in top of the 12% return on capital which was already built into the model. 7/09/07 Tr. 107:13-108:4 (Pelcovits).

748. Dr. Pelcovits also ran the Shapley model for the years 2007 through 2011. 7/09/07 Tr. 108:5-109:9 (Pelcovits). This analysis shows that the present value of the sum of the Shapley value surplus across the entire rate period exceeds the revenues earned under the SoundExchange rate proposal. Pelcovits WRT at 39, SX Trial Ex. 124.

2006 even though its subscriber count and revenues were growing rapidly, both suggest that these costs are not scale sensitive. Thus, including an allowance for 3% annual inflation through 2012, these programming costs would increase from [REDACTED] in 2006 to [REDACTED] in 2012 for XM and Sirius combined. According to Mr. Butson's testimony, the SDARS' combined revenues are projected to increase from \$2.3 billion in 2007 to \$6 billion in 2012. Thus, over the 2007-2012 license period, music programming costs are expected to run between [REDACTED] and [REDACTED] of revenues. Pelcovits Amended WDT at 3-4, SX Trial Ex. 70.

G. The Hauser Survey Prepared for the SDARS Strongly Supports the SoundExchange Rate Proposal, Effectively Finding that The Copyright Owners Should Receive a Royalty of \$1.78 Per Subscriber Per Month

749. In their rebuttal case, the SDARS retained Dr. John Hauser to conduct a mall intercept survey that explored subscribers' willingness to pay for music. Ironically, Dr. Hauser's study strongly supports SoundExchange's rate proposal.

750. The analysis performed by the economists, described at length above, generally took the approach of determining the relative importance of different types of content through survey evidence, but determined how revenues would be split between a content provider and the SDARS by looking at the wealth of marketplace benchmarks or other economic analysis. Dr. Hauser, in contrast, attempted to determine not just the relative values of different types of content in the eyes of consumers, but also the relative values of the service's functionality (*e.g.*, nationwide coverage, high quality audio) in the eyes of consumers. Hauser WRT at Ex. J-1, SDARS Trial Ex. 77. Stated differently, the effect of Dr. Hauser's approach is to see how consumers value each aspect of the satellite service, including the functionalities contributed by the SDARS, rather than simply assessing the relative values of content and looking to marketplace evidence to determine how the content providers and the SDARS would share in the revenues.

751. Dr. Hauser's approach first determines – through his willingness to pay question – what consumers would be willing to pay for music programming, once all other programming is removed, and features like commercial free programming, and nationwide coverage are removed. Hauser WRT at ¶¶ 97-98, SDARS Ex. 77. He concludes that the value of music programming as a whole is \$2.93 per subscriber per month. He then – through his Internet

survey – finds that number is “reduced to \$1.78 when music is limited to music of the 70’s, 80’s, 90’s and today.” Hauser WRT at ¶ 11, SDARS Ex. 77.

752. “Based on this parsing, the value of music programming from the 70’s, 80’s, 90’s and today is \$1.78.” Hauser WRT at ¶ 16, SDARS Ex. 77. That number is entirely in keeping with SoundExchange’s rate proposal, which begins at 85 cents per subscriber per month, and likely rises to \$2.25 per subscriber per month (or \$3.00 per subscriber per month in the event that an SDARS reaches 19 million customers, which would likely happen only in the event of a merger).

753. By definition, under Dr. Hauser’s approach, SoundExchange and no one else – not the SDARS, and not other content providers – has contributed to the \$1.78/month. SoundExchange is not getting credit for the value of other programming. And SoundExchange is not getting credit for the features that the SDARS contribute, such as audio fidelity or nationwide coverage. Hauser WRT at Ex. J-1, SDARS Ex. 77. Nor is SoundExchange getting credit for pre-1972 music, or even functionality such as the display of artists and titles. Hauser WRT at ¶¶ 104-107, SDARS Ex. 77. In short, Dr. Hauser has calculated SoundExchange’s fair royalty through consumer valuation rather than economic benchmarking, and that fair royalty turns out to be precisely in line with SoundExchange’s other benchmarks.

754. Dr. Hauser’s analysis comes in two stages. First, he computes what consumers would be willing to pay for music programming by itself through his willingness to pay question. Then, he computes the value of the music programming that is due to the sound recordings at issue here. Although Dr. Hauser’s approach contains some biases, *see supra* Section IV.4.D, that artificially drive down the royalty rate, he is still left with a value of \$1.78 that is due solely (by definition) to SoundExchange’s contribution.

755. Dr. Hauser's willingness to pay question asks respondents in cumulative sequence how much they would be willing to pay for a service that (a) lacked music programming; (b) lacked sports programming; (c) lacked talk programming; (d) lacked news programming; (e) had commercials; (f) had FM sound quality; and (g) lacked nationwide reception. According to Dr. Hauser, his willingness to pay approach more fairly isolates what consumers are willing to pay for music programming because it removes the value of other programming, and other features. He finds after "reweighting" the results that subscribers are willing to pay \$2.93/month for music programming. Hauser WRT at ¶¶ 96-97, SDARS Ex. 77.

756. Dr. Hauser then argues that SoundExchange is not entitled to the full \$2.93 per month because the value of the music programming is greater than the value of the sound recording rights at issue. Thus, in his Internet survey, he calculates that the value of "music of the 70's, 80's, 90's and today" comprises 60.8% of the value of music programming as whole. Dr. Hauser then forthrightly concludes – indeed, it is the lead result he announces in his opening summary of his testimony – that the value of SoundExchange's contribution is \$1.78 per subscriber per month (i.e., 60.8% of \$2.93). Hauser WRT at ¶ 11, SDARS Ex. 77.

757. In other words, Dr. Hauser has calculated through consumer preference what consumers would pay for that portion of the SDARS service that SoundExchange is uniquely responsible for. There is no basis for divvying up that \$1.78 further. The other content providers' contributions were already taken care of in the willingness to pay question, as have the SDARS's contributions of nationwide coverage, high quality audio, etc. Even the value of pre-1972 recordings has been removed. Dr. Hauser has thus assiduously removed any component of the SDARS service not implicating the rights at issue here, and found that the value derived from SoundExchange's contribution is \$1.78 per subscriber per month.

758. This calculation, if anything, understates the value of SoundExchange's contribution. Most obviously, it gives the SDARS credit for the fact that their music is commercial free (the value of commercial free is removed in the willingness to pay question). Hauser WRT at ¶¶ 96-97, SDARS Ex. 77. Commercial-free is just a synonym for uninterrupted music. No one would think that the SDARS should be able to reduce their royalties by playing *more* music, and thus it is unfair to not include that value in SoundExchange's share.

759. Likewise, it is inappropriate to give SoundExchange no credit for the premium that customers place on features like nationwide coverage and sound fidelity. Those features would have no or little value without the music programming that SoundExchange provides. But even though it ultimately understates SoundExchange's contribution, the \$1.78 figure that Dr. Hauser reports is fully consistent with SoundExchange's other benchmarks and its rate proposal.

H. Summary of Benchmark Analyses

760. The various benchmarks and the surplus analysis all point to a similar range of rates that reflect what one would expect to see in the hypothetical market transactions between the SDARS and the individual record companies. In that way, the benchmarks collectively are powerfully corroborative of each other. Ordover WDT at 52; 6/21/07 Tr. 195:8-196:13 (Ordover).

761. The following table shows the results of the analysis provided by SoundExchange's economic experts:

Revenue and Per Subscriber Benchmarks

Method	% of Revenue	Per Subscriber Per Month
“Howard Stern” Benchmark ⁴³	23%	\$2.76
Non-Music Content Benchmark (Pelcovits) ⁴⁴	13.3%	n/a
Non-Music Content Benchmark (Pelcovits) (including Howard Stern) ⁴⁵	22%	n/a
Digital Music Services (Ordover) ⁴⁶	19-28%	\$2.48-\$281
Retail Rate Analysis ⁴⁷	n/a	\$2.48
Satellite Television Analysis ⁴⁸	18.5 - 23.5%	\$2.17 - \$2.70
Opportunity Cost Floor ⁴⁹	n/a	\$1.29
Shapley Model Analysis ⁵⁰	18%	\$2.37
Hauser Survey Data ⁵¹	n/a	\$1.78
SoundExchange Rate Proposal	8% - 17%	\$0.85 - \$2.25

⁴³ Pelcovits Amended WDT at 8 *see supra* Section V.B.2.

⁴⁴ 7/09/07 Tr. 278:1-279:13 (Pelcovits)

⁴⁵ *See supra* Section V.B.3.

⁴⁶ Ordover WDT at 46-51, SX Trial Ex. 61, amended by SX Trial Ex. 119 at SX Exhibit 210 RP.

⁴⁷ Ordover WDT at 50-51, as amended by data in SX Ex. 210 RP, *see supra* Section V.C.3.b.ii.

⁴⁸ Ordover WDT at 41-42, *see supra* Section V.D.

⁴⁹ *See supra* Section V.E.3.

⁵⁰ Pelcovits WRT at 38-39 & n.64, *see supra* Section V.F.

⁵¹ Hauser WRT at ¶ 11, SDARS Trial Ex. 77.

Per-Play Benchmarks

	2007	2008	2009	2010	2011	2012
Portable Interactive Per-Play Rate	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Non-Portable Interactive Per-Play Rate	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Video Streaming (Interactive)	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Video Streaming (Non-Interactive)	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Statutory Webcasting Per-Play Rate	\$.0011	\$.0014	\$.0018	\$.0019	—	—
SoundExchange Per-Play Equivalent	\$.00092	\$.00120	\$.00156	\$.00161	\$.00206	\$.00265

Pelcovits WRT at 17, SX Trial Ex. 124.

762. Based on these analyses, and after reviewing the statutory criteria, marketplace transactions in related areas, and Dr. Pelcovits's analysis based on the economic situation of the SDARS, Dr. Ordover concludes that SoundExchange's proposed rate, starting at a low level and rising to the greater of 17% of revenue or \$2.75/subscriber/month when the SDARS obtain between 15-17 million customers, as anticipated in 2012, and to the greater of 23% of revenue or \$2.75/subscriber/month if they obtain over 19 million customers, as is likely in the event of a merger, is a rate that both satisfies the statutory criteria and is consistent with what Dr. Ordover would expect to result from individual marketplace transactions between the recording companies and the two SDARS. Ordover WDT at 52; Ordover WDT at 4.

VI. APPLICATION AND ANALYSIS OF THE § 801(B) FACTORS

763. Section III, *supra*, discussed the economic theory underlying an interpretation of the four statutory objectives set forth in 17 U.S.C. § 801(b). This section expands on that interpretation and addresses the application of those factors based on the record evidence in this proceeding.

764. There are significant differences in the manner in which the SDARS and SoundExchange addressed the statutory factors. Dr. Woodbury, who provides the primary analysis of the statutory factors for the SDARS, purports to base his analysis on a comparison between the pre-existing subscription services (“PSS”) from 1996 and the SDARS today, looking at conclusions drawn in the Librarian’s Decision from 1998 and comparing them to the SDARS today. Woodbury WDT at 40-54, SDARS Trial Ex. 8. In so doing, however, Dr. Woodbury ignores completely the changes in the record industry from 1996 to the present, the differences in current success and future prospects of the fast-growing SDARS business today, when compared to the floundering PSS business in 1996, and the evidence that the SDARS’ service substitutes for sales of sound recordings. Herscovici WRT at 3-11, SX Trial Ex. 130.

765. As discussed in Section VII *infra*, Dr. Woodbury’s selection of the PSS rate as a benchmark is fundamentally flawed. But even if it were not flawed, his analysis of the impact of the four statutory factors on that benchmark is also fundamentally flawed. Herscovici WRT at 3-43, SX Trial Ex. 130. Dr. Woodbury’s failure to consider *at all* any evidence regarding the recording industry in his analysis of the statutory factors, his apparent refusal to consider the very positive prospects of the SDARS, and his incorrect “assumptions” about substitution all render Dr. Woodbury’s analysis useless in analyzing the type of rate that would best advance the four statutory factors.

766. Of particular note, the linchpin of Dr. Woodbury's entire analysis of the four statutory factors is his unsupported claim that satellite radio promotes the sale of sound recordings. In 1998, the Librarian found that the PSS services promoted the sale of sound recordings. *PESI*, 63 Fed. Reg. 25406. Whether that remains true or not with respect to the PSS today, Dr. Woodbury simply assumed that the SDARS service also promotes the sale of sound recordings – an assumption that is overwhelmingly rejected by the record, including many of the very pieces of evidence that Dr. Woodbury uses to support his assumption. *See infra*. Once that assumption is revealed as a fallacy, Dr. Woodbury's entire analysis of the four statutory factors falls as well. Herscovici WRT at 11, SX Trial Ex. 130; 8/29/07 Tr. 235:1-18 (Herscovici). Dr. Woodbury takes no account whatsoever for this difference between the SDARS service today and the finding of the Librarian about the PSS in 1998. As discussed above, all of the economists – even Dr. Woodbury – agree that, at a minimum, the rate set here must compensate sound recording copyright owners for the lost revenue as a result of substitution of sales in other channels. *See supra* Section V.E.1.

767. In contrast, Dr. Herscovici considered empirical evidence about both the record industry and the satellite radio industry in developing an interpretation of the statutory factors and applying them to the facts in the record. Herscovici WRT at 3-42, SX Trial Ex. 130. Dr. Herscovici has consulted in the music industry on a wide variety of issues, and has particular expertise on matters related to finance. 8/29/07 Tr. 168:11-181:13 (Herscovici). Dr. Herscovici spends approximately 500 hours per year on matters related to the music industry, including litigation and consulting matters. 8/29/07 Tr. 175:3-10 (Herscovici).

768. Dr. Herscovici examined both industries at this time in their history with reference to the four statutory objectives. As he found, the record industry is currently

undergoing substantial change, with declines in traditional revenue streams having a dramatic effect on the record companies' survival and ability to produce new sound recordings.

Herscovici WRT at 3, SX Trial Ex. 130. In contrast, the satellite radio industry is growing rapidly, has a bright future and, because of the potential for substitution, actually can result in the record companies' and recording artists' other sources of revenues diminishing, absent a sufficient royalty rate from this proceeding. Herscovici WRT at 3-11, SX Trial Ex. 130. These background trends are intimately related to the statutory objectives under § 801(b).

769. Moreover, again in contrast to Dr. Woodbury, Dr. Herscovici looked in detail at the economics of both industries in evaluating their contributions, risks, and investments, and also considered directly, relying on the projections of investment analysts and Mr. Butson, whether SoundExchange's royalty rate would in any way have a disruptive impact on the SDARS. Herscovici WRT at 21-42, SX Trial Ex. 130; both he and Mr. Butson concluded that SoundExchange's proposed royalty would not have a disruptive impact on the SDARS, who are projected – under any scenario – to have significant profitability on a long-term basis. Indeed, in the short-term, if SoundExchange's rate proposal is adopted, even the SDARS' own expert, Mr. Musey, predicted that the SDARS' stock price would rise significantly – not fall. *See infra.*

770. For the reasons discussed below, application of the statutory objectives to the facts of this proceeding compels the conclusion that 1) the rate must be set sufficiently high to compensate sound recording copyright owners and performers for lost revenue from substitution for other revenue streams, here principally lost CD sales; and 2) a rate, such as that proposed by SoundExchange, that ramps up until it begins to resemble a market rate, is consistent with the four statutory objectives, including, among other things, by minimizing any potential disruptive impact to the SDARS.

A. The First Statutory Factor (§ 801(b)(1)(A)) – “Maximize the Availability of Creative Works to the Public”

1. The Copyright Clause and the Economic Theory Behind It Stand for the Proposition that Compensation to Artists and Copyright Owners Is the Best Way to Maximize the Availability of Creative Works to the Public.

771. Section 801(b)(1)(A) seeks to “maximize the availability of creative works to the public.” The first factor goes to the very purpose of the Copyright Clause of the U.S. Constitution, U.S. Const. Art. I, § 8, – to stimulate the creation and dissemination of creative works to the benefit of the public.

772. “The economic philosophy behind the Copyright Clause . . . is the conviction that encouragement of individual effort by personal gain is the best way to advance public welfare through the talents of authors and inventors.” *Mazer v. Stein*, 347 U.S. 201, 219 (1954). “Accordingly, ‘copyright law *celebrates* the profit motive, recognizing that the incentive to profit from exploitation will redound to the public benefit by resulting in the proliferation of knowledge The profit motive is the engine that ensures the progress of science.’” *Eldred v. Ashcroft*, 537 U.S. 186, 212 n. 18 (2003) (quoting *American Geophysical Union v. Texaco, Inc.*, 802 F. Supp. 1, 27 (S.D.N.Y. 1992), *aff’d* 60 F. 3d 913 (2d Cir. 1994). “Rewarding authors for their creative labels and ‘promot[ing] . . . Progress’ are thus complementary; as James Madison observed, in copyright ‘the public good fully coincides . . . with the claims of individuals.’” *Eldred v. Ashcroft*, 537 U.S. 186, 212 n.18 (2003) (quoting The Federalist No. 43, p. 272 (C. Rossiter ed. 1961)).

773. Compensating copyright owners and performers stimulates both the creation of copyrighted works *and* their dissemination. *Eldred v. Ashcroft*, 537 U.S. 186, 205-06 (2003). “[T]he Framers intended copyright itself to be the engine of free expression. By establishing a

marketable right to the use of one's expression, copyright supplies the economic incentive to create and disseminate ideas." *Harper & Row Publishers, Inc. v. Nation Enterprises*, 471 U.S. 539, 558 (1985).

774. In contrast, nothing in the Constitution, the Copyright Act, copyright jurisprudence, or the economic philosophy behind copyright suggests that allowing the use of copyrighted works for low or below market rates will increase the dissemination of those works. Rather, low rates for those who disseminate will simply result in a dearth of creative works because such works will never be created or disseminated by authors in the first place. As the Supreme Court has explained, "[t]o propose that fair use be imposed whenever the social value [of dissemination] . . . outweighs any detriment to the artist, would be to propose depriving copyright owners of their right in the property precisely when they encounter those users who could afford to pay for it." *Harper & Row Publishers, Inc. v. Nation Enterprises*, 471 U.S. 539, 559 (1985) (internal quotation marks and citations omitted). As the Court noted, the result of privileging those who disseminate over those who create is that "the public [soon] would have nothing worth reading." *Harper & Row Publishers, Inc. v. Nation Enterprises*, 471 U.S. 539, 559 (1985) (internal quotation marks and citations omitted).

775. Providing compensation to copyright owners and performers also stimulates the creation and dissemination of older works because ensuring fair compensation encourages copyright owners to invest in the restoration and public distribution of their own works. *Eldred v. Ashcroft*, 537 U.S. 186, 206-07 (2003); H.R. Rep. No. 105-452, at 4 (1998) (explaining that extension of copyright term allowing copyright owners to earn revenues from copyrights for a longer period "provide[s] copyright owners generally with the incentive to restore older works and further disseminate them to the public").

776. As the Supreme Court has recognized, Congress has legislatively ensured that owners of existing copyrights receive the benefit of future copyright expansion. Thus, part of the incentive for creation of copyrighted works in the past was the belief on the part of authors and copyright owners that they would be fairly compensated in the future as technologies and laws change; that reliance was part of their calculus in deciding to create works in the past. *Eldred v. Ashcroft*, 537 U.S. 186, 214-15(2003).

777. Finally, ensuring additional income for existing works itself helps “to finance the production and publication of new works.” *Eldred v. Ashcroft*, 537 U.S. 186, 207 & n. 15 (2003) (quoting testimony of Marybeth Peters, Register of Copyrights). As the Register has explained,

Authors would not be able to continue to create . . . unless they earned income on their finished works. The public benefits not only from an author’s original work but also from his or her future creations. Although this truism may be illustrated in many ways, one of the best examples is Noah Webster[,] who supported his entire family from the earnings on his speller and grammar during the twenty years he took to complete his dictionary.”

Eldred v. Ashcroft, 537 U.S. 186, 207 & n. 15 (2003) (quoting testimony of Marybeth Peters, Register of Copyrights).

2. Prior Tribunals Have Made Clear that This First Objective Is Best Advanced by Fully Compensating Copyright Owners and Performers.

778. Previous tribunals have concluded that the principal way to achieve this objective is to assure that copyright holders are fully compensated for their creative efforts and continue to be incentivized to create additional works. *See, e.g., Phonorecords*, 46 Fed. Reg. at 10479 (the first factor is to provide “an economic incentive and the prospect of pecuniary reward” for the copyright owner’s “creative efforts”). As the Supreme Court has recognized – and the Librarian has affirmed – the goal of maximizing the availability of creative works “is achieved by allowing the copyright owners to receive a fair return for their labors.” *Twentieth Century Music v. Aiken*,

422 U.S. 151, 156 (1975) (“The immediate effect of our copyright law is to secure a fair return from an ‘author’s’ creative labor. But the ultimate aim is, by this incentive, to stimulate artistic creativity for the general public good.”); *PES I*, 63 Fed. Reg. at 25406.

779. The courts, the Librarian, and the former Copyright Royalty Tribunal have repeatedly rejected claims that those who use and disseminate copyrighted works are entitled to some reduction to the market rate based on this factor. They have uniformly concluded to the contrary that compensating authors is the most effective way to maximize the availability of copyrighted works. For example, in *PES I*, the Librarian reversed the decision of the CARP on this very point, finding the assertion that “a new mode of distribution will itself stimulate the creation of additional works” to be without foundation. 63 Fed. Reg. at 25406. Likewise, in the 1981 mechanical rate adjustment proceeding, the Copyright Royalty Tribunal rejected arguments that § 801(b)(1)(A) benefited those who use copyrights, finding instead that this factor focused on encouraging the creation and dissemination of copyrighted works and such encouragement “takes the form of an economic incentive” for the copyright owners. *Phonorecords*, 46 Fed. Reg. at 10476.

780. By providing protection for performances of sound recordings in the DPRA, Congress intended to ensure that record companies were adequately compensated to enable them to continue to produce creative works for public enjoyment. *See* S. Rep. 104-128 at 11 (the performance right may become an “incentive to[] the creation of” sound recordings).

3. Higher Rates Will Encourage The Creation of Future Creative Works and Their Dissemination.

781. These interpretations by the Supreme Court and statements by the Register are consistent with basic economic theory and an economic understanding of the objectives to be advanced by the first factor. The primary goal of copyright is to provide incentives for the

production of creative works. Dr. Herscovici interpreted the first factor, as an economic matter, to require that the rate set provide an incentive to stimulate activity to create new works. 8/30/07 Tr. 4:17-5:6.(Herscovici). As an economic matter, the primary means for accomplishing this objective – and thereby advancing the first statutory objective – is to ensure sufficient compensation to creators for their efforts. Herscovici WRT at 17, SX Trial Ex. 130.

782. As Dr. Herscovici explained, a higher rate will, all else being equal, most effectively advance the first statutory factor – maximizing the availability of creative works to the public. Herscovici WRT at 17, SX Trial Ex. 130. He further concluded that, on the facts of this case, a marketplace rate would advance the objectives of this first factor. 8/30/07 Tr. 5:7-22 (Herscovici).

783. As this Court has recognized, both economic theory and the long history of investment by record companies support the claim that revenues from dissemination of sound recordings from all sources (whether large or small) are essential for funding the creation and dissemination of sound recordings in the future. In rejecting arguments from webcasters that are identical to those made by the SDARS here, the Court noted that

As a matter of theory, Dr. Jaffe’s proposed benchmark analysis ignores the long-established pattern of investment in the recording industry. Thus, not only are there some *initial* sunk investments, but there is a requirement of *repeated* substantial outlays years after year or, in other words, the repeated “sinking” of funds. If sellers are faced with the prospect of not recovering such sunk costs, then the incentive to produce such sound recordings is diminished. And the record is replete with evidence of a substantially greater investment of this type in sound recordings as compared to musical works. . . . Furthermore, recording companies will necessarily make future investment decisions based on their best estimates of the revenue sources available to them in the future from all sources including revenue streams derived from the non-interactive webcasting of sound recordings.

Webcasting II, 72 Fed. Reg. at 24094.

784. The record in this case supports the same conclusion. Record companies bear the burden of the investments needed to identify and develop talent, make copyrighted sound recordings, and promote and distribute those creative works. They pay for all of the talent acquisition costs, the production costs (including studio time, equipment use, engineers, back-up musicians), the artwork, the marketing expenses (including promotion, advertising, touring, and music videos) and the distribution expenses, all before earning any revenue from the recordings. Herscovici WRT at 17 & n. 53, SX Trial Ex. 130; Kushner WDT at 5-12, SX Trial Ex. 65. Without these investments, sound recordings would not exist and would not be disseminated to the public in any form. Herscovici WRT at 17, SX Trial Ex. 130.

785. As discussed in more detail in Section II.C., the costs of creating sound recordings must be recovered across all revenue streams – not just one. Herscovici WRT at 17, SX Trial Ex. 130. And the importance of non-traditional revenue streams, especially digital revenues streams has grown and continues to grow. Herscovici WRT at 17-18, SX Trial Ex. 130.

786. Reductions in revenues to sound recording copyright owners and artists result directly in a reduction in creative works in the future. If record companies cannot recover their costs in creating sound recordings, they will be unable to continue to invest in the recordings, leading to a reduction in the availability of creative works and the creation of new works. Herscovici WRT at 17, SX Trial Ex. 130; Chmelewski WDT at 11-12, SX Trial Ex. 64.

787. Testimony from both major label and independent label witnesses confirm this point. As Mr. Kushner explained, an inability to earn sufficient revenues on each distribution platform, including satellite radio, means that there is less money to sign new artists and to make new sound recordings. Kushner WDT at 15-16, SX Trial Ex. 65. As a result, fewer artists are

signed and fewer sound recordings are made. 6/26/07 Tr. 123:1-11 (Kushner); 6/26/07 Tr. 124:20-125:7 (Kushner).

788. As Mr. Chmelewski explains, sound recordings are the intellectual property that record labels create; labels “expend significant resources and face considerable risks in creating them,” and they “cannot afford to license them at a discounted rate.” Chmelewski WDT at 3, SX Trial Ex. 64. In order for independent labels and artists to continue to produce the music that they produce, they must be adequately – and fairly – compensated when their sound recordings are purchased or licensed. Chmelewski WDT at 3, SX Trial Ex. 64.

a. **The Ongoing Decline in Physical Sales and in the Record Industry More Generally Means that It Is More Significant Than Ever that Record Companies Receive Significant Compensation from the SDARS Who Use Their Creative Works.**

789. That satellite radio is a small part of overall record company revenue is no reason for a low royalty rate. Record companies, like other companies, recover their costs across all revenue streams – and increasingly need revenue streams other than traditional physical sales of sound recordings. Herscovici WRT at 18, SX Trial Ex. 130; 8/30/07 Tr. 11:22-13:11 (Herscovici). The fact that a single revenue source is relatively small compared to others does not mean that one would charge a low rate for it. 8/30/07 Tr. 11:22-12:17 (Herscovici).

790. Revenue streams from licensing of public performances are increasingly critical to allowing record companies to recover costs, thereby enabling them to reinvest in the creation of new sound recordings and to maintain the level and variety of recorded music available to the public. Herscovici WRT at 18, SX Trial Ex. 130. Especially in a world where record companies rely on many different revenue streams, they must recover a fair return from each revenue stream in order to continue to create music. Herscovici WRT at 18-19, SX Trial Ex. 130.

791. The industry-wide decline in physical sales has had a notable impact on the record companies' ability to create and distribute music. As the revenues have declined, the number of new tracks and albums that record companies can produce and put out from new artists has shrunk. 6/18/07 Tr. 110:9-11-3 (Eisenberg). Rather than experimenting with new artists and new sounds, record companies are forced to focus on those artists with a much greater chance of success, those through which the labels can more assuredly recoup their investments. 6/18/07 Tr. 110:18-21 (Eisenberg). This in turn reduces the diversity of music available and limits consumer choice. 6/18/07 Tr. 110:22-111:3 (Eisenberg).

792. The current trend facing record companies – declining revenues while costs remain at the same level or are increasing – means that there will be a reduction in creative output. This can be seen in the reductions in staff and artists rosters at record companies over the last several years. Those declines are emblematic of an obvious point – a decline in the ability to earn a fair return on sound recordings means signing fewer artists, making fewer sound recordings, and reduced investment in future sound recordings. Herscovici WRT at 18, SX Trial Ex. 130; *see* Section II.C., *supra*.

793. Thus, the reduction in revenues received by sound recording copyright owners has a direct effect on their creative output. When sales are down, they have less revenue to invest in the creation of new sound recordings, A&R, and marketing and they sign fewer artists and put out fewer sound recordings. 6/26/07 Tr. 123:1-11 (Kushner).

b. The Suggestion that Revenues From Satellite Radio Are Of Little Importance to the Record Companies and Artists and Will Not Affect the Creation of New Sound Recordings Is Simply Wrong.

794. A look at the difference between SoundExchange's rate proposal and that of the Services leaves no doubt – satellite radio royalties are of real and increasing importance to record

companies and recording artists, and adoption of SoundExchange's rate proposal will stimulate more creative activity than that of the Services. 8/30/07 Tr. 15:3-16:11 (Herscovici). The difference between the rate proposals in this case is in the hundreds of millions of dollars on an annual basis. Additional revenue to the record companies is additional money for investment in new sound recordings; an additional \$1 million each year represents another album or an investment in up-and-coming artists. 8/30/07 Tr. 16:2-11 (Herscovici).

795. Moreover, regardless of the percentage of record industry revenue attributable to satellite radio, there can be no dispute that sound recordings are essential to satellite radio. Therefore, in a marketplace, sound recordings would command a significant portion of the revenues of satellite radio in royalties. Herscovici WRT at 18, SX Trial Ex. 130. This can be seen by looking at, for example, on-demand subscription services, which are a relatively small portion of record industry revenues, but for which record companies receive [REDACTED] of the subscription services revenues. Herscovici WRT at 11, 18 & App. F, SX Trial Ex. 130.

796. Finally, even if satellite radio is a small portion of record industry revenue today, that is not likely to remain so. Indeed, in 2002, digital downloads essentially did not exist and iTunes was not operating. By 2006, the iTunes store had sold 1 billion songs. From nothing in 2003, digital downloads, subscription services, ringtones, and other digital revenue streams now contribute \$1 billion in revenue to the record industry each year and makeup 16% of record industry revenue. Herscovici WRT at 18-19, SX Trial Ex. 130; 8/30/07 Tr. 13:17-15:2 (Herscovici).

797. As Mr. Kushner explained, although revenue from satellite radio may be relatively small today, it is an important driver in the future of record company digital revenues. 6/26/07 Tr. 157:13-19 (Kushner). The SDARS tout that they have obtained more subscribers

more quickly than nearly any other technology – outstripping technologies such as those that fueled the significant growth of digital downloads in just the last 4 years. *E.g.* Cook WRT at ¶ 24, XM Trial Ex. 6 (“[T]he pace to the first five million subscribers was faster than other new technology introductions, other than DVDs, such as cable television, internet service, cell phones, and MP3 players.”). The revenues of the SDARS will grow from almost nothing in 2002 to annual revenues of 1 billion dollars each in just 5 years. *See supra*. Thus, the claim that the amounts of money at issue are small or “incremental” – even if true today – provides no basis for setting a low rate here.

798. Dr. Woodbury further defends the SDARS’ low rate proposal by pointing out that the amounts paid by the SDARS to SoundExchange represent for the record companies a trivial fraction of their total revenues. 6/12/07 Tr. 327-328 (Woodbury). The implication is that a higher rate, namely one that is in-line with observed marketplace rates, will only slightly increase record company revenues, and thus will have, at best a minimal effect on their incentives to create new works and would not undermine criterion § 801(b)(1). Ordovery WRT at 13, SX Trial Ex. 61.

799. Dr. Woodbury’s argument is fatally flawed. First, even at current subscriber levels, that is, ignoring net subscriber additions going forward, the difference between the two sides’ proposals in dollar terms over the course of the statutory license is obviously quite substantial. The assertion that either the record companies or the individual artists would consider amounts of this magnitude to be a mere “rounding error” is without basis and not pertinent. 6/12/07 Tr. 327:21-328:3 (Woodbury). Dr. Woodbury has no basis on which to opine on the levels of additional revenues that record companies and artists would (or would not)

consider meaningful contributions to their revenue streams. Ordover WRT at 13-14, SX Trial Ex. 61.

800. Even taking Dr. Woodbury's characterization at face value, namely that payments by the SDARS amount to a trivial fraction of total record company revenues, the conclusion he draws is entirely inapt. Record companies undertake significant and irreversible investments to develop talent and produce new works, and in order to maximize their incentives to continue to do so, it is important that they receive from each distribution channel revenues that reflect the value of their contributions. Dr. Woodbury's view seems to be that record company revenues from a particular channel need only reflect the value of their contributions when the channel in question contributes a not insignificant amount to their overall revenues. 6/12/07 Tr. 327:17-328:3 (Woodbury). Such a conclusion finds no support in economics. Record companies' incentives to produce new music are based upon their expected revenues from all available sources. A claim that one particular channel should pay very little because it accounts at present for a small percentage of total record company revenues directly undermines incentives to create new works. Indeed, under this view, record companies would collect market-based rates only from CDs, and perhaps audio download services. This claim makes even less sense as record companies' businesses increasingly depend on a diverse range of revenue streams, none of which, as yet, is individually as significant as CD sales revenue. If record companies could not reflect the value of their contributions in all of their revenue streams because only one or two of them were adjudged to be sufficiently significant, their viability as a business going forward would be undermined. Moreover, such arbitrary limits on what each service should be required to contribute could distort a competitive playing field among music distribution channels, which would not be sound public policy. Ordover WRT at 14, SX Trial Ex. 61.

801. The SDARS' claim that the amounts of money at issue are incremental to the record companies and thus a low rate is warranted is inconsistent with how their own economists appear to treat the SDARS' businesses. Dr. Woodbury and Dr. Noll both argue that SDARS should pay very little for sound recording rights because the record companies are able to cover their costs and earn a normal rate of return from other available sources of revenue. Leaving aside whether such an opinion is even factually correct, the flaw in his reasoning is apparent when it is applied to the SDARS themselves. Indeed, there is no indication that the SDARS intend to offer very low rates to incremental subscribers once they have covered their costs and earned a normal rate of return from inframarginal subscribers. At roughly \$12 per month over 12 months, \$144 from an incremental subscriber is "a drop in the bucket" compared to an SDARS' annual revenues. Hence, by Dr. Woodbury's reasoning, each satellite radio distributor should offer subscription rates equal to marginal cost of serving one additional subscriber after it hits its revenue target (or an appropriate rate of return on its assets). It is quite clear that this would not make sense as a business or sound public policy: the SDARS, just like the record companies, undertake investments based upon the aggregate expected revenues from all sources and to arbitrarily curtail the revenues available from a particular source would only serve to weaken investment incentives on a going forward basis. Ordover WRT at 15, SX Trial Ex. 61.

802. The same error infects Dr. Noll's testimony. Regardless of the incremental cost of providing music to the SDARS, incremental pricing simply is not a directly relevant concept as it applies to valuing intellectual property. If intellectual property owners sold their product at incremental cost, they would go bankrupt (and no copyrighted works would be created), because they would never recover their fixed costs. Pricing intellectual property as if a particular

customer did not matter would be a prescription for disaster, if it were applied to the music industry, or if it were applied to the SDARS themselves. 8/27/07 Tr. 31:5-33:22 (Ordoover).

803. Additionally, there is a serious question about whether Dr. Noll and Dr. Woodbury's premise is correct as a matter of fact – that the record companies can rely on their CD sales and simply ignore satellite radio revenues. To the extent there is evidence of cannibalization of CD sales as a result of the SDARS' service, *see supra*, Section V.E, in Dr. Ordoover's opinion the record companies most certainly would not sell their music at a cost below their opportunity costs – the amount they were losing to CD sales as a result of their licensing to the SDARS. 8/27/07 Tr. 34:7-22 (Ordoover).

4. In Contrast, There Is No Evidence to Suggest that Lower Rates Will Incent the Creation of Copyrighted Sound Recordings and No Evidence to Suggest that Lower Rates Will Increase Dissemination of Sound Recordings.

804. As discussed above, prior interpretations of the first factor have made clear that the existence of a new mode of distribution (among many) does not stimulate the creation and dissemination of copyrighted works and does not maximize the availability of copyrighted works to the public. *PESI*, 63 Fed. Reg. at 25406.

805. But even if this interpretation were not foreclosed as a matter of law, there is no evidence or plausible economic theory to support the claim that lower rates will increase the dissemination of creative works. Whereas sufficient compensation to sound recording copyright owners will encourage the creation of the maximum amount of creative works for the public, there is no evidence that a low sound recording royalty rate for satellite radio will increase the availability of creative works to the public. *Herscovici WRT* at 19, SX Trial Ex. 130. The result of a low rate here would be lower costs for the SDARS, but no increased dissemination (and fewer sound recordings created and disseminated by record companies and artists).

806. There is no plausible evidence that increased costs will cause satellite radio services to cease offering sound recordings – indeed, it is likely they could not survive if they *stopped* offering sound recordings. But even if they did cease offering sound recordings, the satellite radio companies – as they emphasize in their merger filings – are only one of many services that disseminate wide numbers of sound recordings to the public. Herscovici WRT at 19, SX Trial Ex. 130. Even if satellite radio services were required to pay market rates for sound recordings, they would merely be doing what their competitors do and what they themselves do for all other forms of content. Herscovici WRT at 19, SX Trial Ex. 130.

807. The SDARS are just one of many ways that the public is able to avail itself of creative works. As the SDARS themselves acknowledge in their FCC filings, satellite radio competes in a broad and growing audio entertainment market with numerous other audio digital services such as iPods, portable subscriptions streaming services, digital download services, wireless services, and much more. *See* SX Trial Ex. 106 at 35, 37. As prior tribunals have concluded, “[t]here is no record evidence to support a conclusion that the existence of the digital transmission services stimulates the creative process.” *PES I*, 63 Fed. Reg. at 25406 (reversing the CARP for finding that the benefits associated with “disseminating creative works to the public” warranted setting a rate on the low side to advance § 801(b)(1)(A)).

808. The same is true on the record in this proceeding. Whereas a higher rate would result in more creative activity and more creative works, a lower rate is unlikely to lead to increased distribution of sound recordings. 8/30/07 Tr. 6:1-12 (Herscovici). There are many different channels through which sound recordings are distributed, but sound recordings are essential to the satellite radio companies and cannot be replicated. 8/30/07 Tr. 7:9-8:15

(Herscovici). Because there are many different distribution channels, a low rate would not result in an increased dissemination of copyrighted works. 8/30/07 Tr. 9:6-11:5 (Herscovici).

809. Finally, there is also no evidence to suggest that the SDARS, if they received a below-market rate, would lower their prices to consumers or would invest in other types of content. Rather, given the testimony by witnesses for the SDARS in this proceeding, there is every reason to believe that they would simply take every dollar not spent on sound recordings in this case directly to their bottom-line, leading to no increase in subscribership, no increased dissemination of their service, and no increased investment in non-music programming. Musey WDT at ¶¶ 11-12, XM Trial Ex. 9 (arguing that this Court must set a low rate to protect investors' expectations).

810. Thus, with or without satellite radio, sound recordings will be available to consumers on more platforms and in more ways than ever before. Herscovici WRT at 19, SX Trial Ex. 130. The real issue is whether new sound recordings will continue to be created – and that compels a relatively higher royalty rate for sound recording copyright owners. Herscovici WRT at 19, SX Trial Ex. 130.

5. The Substitutional Impact of Satellite Radio Also Means that a Higher Rate Is Necessary to Advance this Objective

811. Dr. Woodbury's claim that a low rate will advance the first factor depends again entirely on his claim that satellite radio promotes the sale of sound recordings. That claim is without empirical support and indeed is contradicted by the evidence, which shows a substitution effect of 2.5 CDs per year. *See generally supra* Section V.E.

812. The evidence that satellite radio substitutes for sales of sound recordings means that, if the rate is set too low, record companies will actually lose revenue and there will be

reduced incentives to create sound recordings. 8/30/07 Tr. 16:12-17:4 (Herscovici). This will mean the creation of fewer creative works in the future. 8/30/07 Tr. 17:5-19(Herscovici).

813. Even assuming the SDARS did have some promotional effect – which they do not – there is no evidence that this effect is any different than the promotional effect of other digital distribution services, and thus, as this Court concluded in *Webcasting II*, that effect is already built into the digital distribution services benchmarks analyzed by Dr. Ordover. 72 Fed. Reg. at 24092.

6. The First Factor Would Best Be Advanced by a Market Rate.

814. On balance, a rate on the higher end will provide incentives to create new music, which advances this first objective. Without such an incentive, some music that is valued by consumers would not be created. Herscovici WRT at 20, SX Trial Ex. 130. There is certainly no reason to depart from the types of rate that would be earned in a marketplace to advance this factor. Herscovici WRT at 20, SX Trial Ex. 130.

815. By granting copyright owners the right to negotiate royalties for their creative works, copyright regimes establish a property right in copyright owners whose value can be established through marketplace negotiations. Market-based rates provide the copyright holder with as much of the surplus (*i.e.*, value) generated through the use of its intellectual property as the marketplace will permit. In that way – by creating the right to exclude and the right to an expression – Congress itself has created a system designed to maximize the availability of creative works to the public, and that system is based on the operation of market forces under the umbrella of copyright law. Ordover WDT at 25, SX Trial Ex. 61.

816. For all of these reasons, Dr. Ordover concluded that the best way to determine whether a rate satisfies the first factor is to look to rates for licensing of music that have been

established in a functioning marketplace through arm's length negotiations, and then inquire whether these rates can inform the rates at issue here. 6/21/07 Tr. 105:14-22 (Ordoover).

B. The Second Statutory Factor (§ 801(b)(1)(B)) – “To Afford the Copyright Owner a Fair Return for His Creative Work and the Copyright User a Fair Income Under Existing Economic Conditions.”

1. As Prior Tribunals Have Held, the Second Factor Is Advanced by the Setting of a Market Rate.

817. The second statutory objective seeks “to afford the copyright owner a fair return for his creative work and the copyright user a fair income under existing economic conditions.” 17 U.S.C. § 801(b)(1)(B).

818. As prior tribunals examining this factor have found, this concept of fairness is best accomplished by replicating to the greatest extent possible the returns that would exist in workably competitive markets, where producers and distributors are rewarded for their risks and for the value of what they bring to the market. *See, e.g., Phonorecords*, 46 Fed. Reg. at 10479 (“We find that the copyright owner’s right to receive a fair rate or return for the compulsory use of his song derives from Congress’ decision to afford commercial protection to the author of a creative work [I]n most instances, the rate of return afforded the copyright owner is determined on the free market.”). *See also PES I*, 63 Fed. Reg. at 25409 (“proposed marketplace benchmarks” address the second factor).

2. As a Matter of Economics, The Second Factor Points to Market Rates.

819. The second policy objective requires “fair” returns and income for the copyright owner and the copyright user, respectively, under “existing economic conditions.” Insofar as “fairness” has a basis in economics, it relates to the outcomes that arise through unfettered market interactions in workably-competitive markets, that is, in markets that are not distorted by undue exercise of monopoly (seller) or monopsony (buyer) power. A rate that gives a party

more or less than it would receive in a competitive market is unfair. From that perspective, then, “fairness” too is achieved by maintaining consistency with rates that are the result of market-based transactions. Ordover WDT at 25-26, SX Trial Ex. 61; 6/21/07 Tr. 107:8-22 (Ordover).

820. Thus, an economist would understand the second statutory factor to point to a market rate. Herscovici WRT at 21, SX Trial Ex. 130. The objective would be advanced by a rate that makes both parties better off from the joint endeavor over the long term. 8/30/07 Tr. 22:19-25:2 (Herscovici). That is precisely what is accomplished in a marketplace negotiation. 8/30/07 Tr. 25:21-26:2 (Herscovici).

821. From the social welfare standpoint, prices determined by unfettered marketplace interactions result in a “fair” outcome for both sides – one in which each of the parties, without threat of regulatory compulsion, believed to be in its interest and to reflect a “fair” division of benefits from transactions over the long run. Ordover WDT at 26, SX Trial Ex. 61. A bargained-for rate is not so high that the potential user decides to forego licensing the rights. Nor is the rate so low that the content provider is injured by cannibalization of sales from other channels of distribution for recorded music. Ordover WDT at 35, SX Trial Ex. 61. Such a pricing outcome also is efficient in the sense that it may not be possible to change these allocations through regulatory or other interventions without at the same time reducing *aggregate* economic welfare. Ordover WDT at 26, SX Trial Ex. 61.

822. Dr. Ordover see no basis on “fairness” grounds for imposing on record companies and artists a rate in this case that would deviate from what would be freely determined through negotiations in the marketplace. Setting a blanket license rate at substantially below market rate is a prescription for inefficiency and inimical to sound public policy. Ordover WDT at 27, SX Trial Ex. 61.

3. A Fair Income and a Fair Return Can Be Examined by Looking at the Royalty Rates Record Companies Receive in Free Market Transactions and the Rates that the SDARS Pay for Non-Music Content.

823. In Dr. Ordover’s opinion, fairness also has a horizontal dimension. Thus, marketplace evidence on the terms of freely negotiated contracts with other content providers is relevant both to gauging the willingness of recording companies to offer “introductory” rates, and also to assessing the willingness and ability of the SDARS to pay for attractive content. Ordover WDT at 27, SX Trial Ex. 61.

824. A fair return for copyright owners and a fair income for the SDARS would be reflected in the fees that the recording copyright owners regularly receive in other markets and what the SDARS are willing to pay for other types of content. Herscovici WRT at 21, SX Trial Ex. 130. In voluntarily negotiated agreements for use of sound recordings by other digital audio services, record companies receive compensation based on the market value of the sound recording. *See, e.g.*, Bronfman WDT at 5, SX Trial Ex. 59. Likewise, when the SDARS negotiate in the free market for use of *non-music* content on their services, they are willing to pay a price that reflects the value of that content to the service. Karmazin WRT at ¶¶ 5-21, Sirius Trial Ex. 62; Bronfman WDT at 6, SX Trial Ex. 59. Accordingly, a fair rate in this proceeding is one that reflects the value of the copyrighted content – here, the sound recordings – to the copyright user – here, the SDARS.

825. The success of the SDARS should not come at the expense of the recording industry – the industry that provided the content upon which the SDARS’ services were built. Bronfman WDT at 9, SX Trial Ex. 59. Over the past several years, it is the record companies and the artists that have “essentially subsidized the payment of free market deals in almost every other area without getting fairly compensated or even close to fairly compensated [themselves].”

6/20/07 Tr. 31:3-9 (Bronfman). For record companies and artists to receive less compensation than Howard Stern's manager is simply not fair. 6/20/07 Tr. 31:10:16 (Bronfman). In fact, record companies would rather pull their content from the SDARS – if they had the option – than accept anything less than the fair value of their content. Bronfman WDT at 9, SX Trial Ex. 59. *See also* 6/20/07 Tr. 32:15-33:2 (Bronfman) (explaining that WMG would rather its content “not be distributed on satellite because the money we lose as a result of having this music available and the substitutional nature of it so far overwhelms any modest promotional opportunity”).

826. Considering the hundreds of millions of dollars the SDARS have agreed to pay each year for non-music content – content that does not attract or retain the quantity of subscribers that music content does – it is simply not logical or rational to expect the record companies – and the record companies alone – to bear the brunt of all of the SDARS' business decisions that have led them to have less money to pay for this music content in the first place. Bronfman WDT at 7, SX Trial Ex. 59. Music is the content upon which the SDARS built their entire service; it is not fair for the SDARS to leverage this music content to build their business and then to not pay fair compensation to the record companies and artists for this essential content, especially when the SDARS are paying fair value for all other content and are providing substantial subsidies to all other partners. Bronfman WDT at 7-8, SX Trial Ex. 59. It is impossible to envision the SDARS service without music; if music is what forms the bedrock of the SDARS experience, it is only fair to both the artists and the record companies that they receive fair value for their contributions to that experience. 6/20/07 Tr. 30:6-17 (Bronfman). It is certainly not fair for one industry to provide a “subsidy of such enormous enormity that it puts the future of [that] industry at risk in order to subsidize another industry who is then willing, able

and anxious to pay the highest possible market rates for every other form of content.” 6/20/07 Tr. 72:11-17 (Bronfman).

827. A price of sound recordings in the broader marketplace is based on the fair *value* of the copyrighted sound recording to the consumer. Bronfman WDT at 5, SX Trial Ex. 59. In voluntarily negotiated agreements with other digital services for the licensing of sound recordings, record companies receive compensation that is “orders of magnitude greater than the share of revenue” the SDARS are proposing in these proceedings. Bronfman WDT at 6, SX Trial Ex. 59. And when the SDARS voluntarily negotiate agreements with *non-music* content providers, they agree to pay rights fees that are significantly higher than what they propose to pay for the right to broadcast sound recordings, agreeing instead to pay these content providers the fair market value for their non-music content. Bronfman WDT at 6, SX Trial Ex. 59. And as discussed above, it is music – not non-music – that is the content that both attracts and retains subscribers of satellite radio: it is the predominant content on the SDARS and forms the centerpiece of their offerings. *See supra* Section IV.

828. When considering the fair return the record companies should receive for performance of their sound recordings, it is clear that the record companies should not be forced to subsidize the SDARS through discounted royalties given that the SDARS pay fair value – the price derived in the free market – for other non-music content. Bronfman WDT at 1, SX Trial Ex. 59. This is especially so because, as discussed in detail above, it is the vibrancy and creativity of the music that makes the SDARS’ business model possible. Bronfman WDT at 4, SX Trial Ex. 59. *See also* 6/5/07 Tr. 67:16-71:6 (Parsons) (explaining how music programming has the broad appeal necessary to draw a “mass market” that can support satellite radio’s “infrastructure”).

829. The SDARS are willing and able to pay substantial subsidies and fees to partners when such partnerships are important to the success of the service – with the sole exception of the record companies and artists, that is. For example, XM has “substantial payment obligations to GM,” as “this partnership was necessary for XM’s survival.” Cook WDT at 7, XM Trial Ex. 6. Moreover, XM provides lucrative incentives to its other automotive partners and to its retail partners as well. Cook WDT at 7-8, XM Trial Ex. 6; XM Trial Ex. 6 at Cook Ex. 1 & 2 (showing costs of the automotive and retail distribution channels respectively). For example, automotive partners receive an installation commission and an activation commission, XM pays for “certain expenses” to contact customers and try to convince them to sign up. 6/6/07 Tr. 56:8-22 (Cook). In addition, XM typically pays subscriber activation commission, pays the car companies a percentage of subscriber revenue once a customer has activated the XM service, and has even given the car companies a portion of their bandwidth. 6/6/07 Tr. 57:2-16 (Cook). XM justifies these payments as necessary “to build the scale required to really have a profitable business and a successful business.” 6/6/07 Tr. 58:15-18 (Cook). The same is true with music: as shown in studies of Dr. Wind, Dr. Hauser, and the SDARS themselves, music brings in more subscribers than any other form of programming or any other feature. *See supra* Section IV.

830. Just as the SDARS provide financial incentive to the automotive partners, so too do they offer subsidies and commissions to their retail partners. For example, retailers receive “substantial fees” in exchange for shelf space in their stores, commissions for each XM radio sold, and an ongoing percentage of XM’s subscription fees. Cook WDT at 8, XM Trial Ex. 6. XM also subsidizes the components of the hardware, provides marketing funds to pay for in-store merchandising, pays activation commission at the time the retailers sell the hardware, and provides an ongoing revenue share to some of the larger retailers. 6/6/07 Tr. 63:6-64:1 (Cook).

Even manufacturers and distributors get a piece of the pie, receiving subsidies for XM in exchange for the partnership. Cook WDT at 8, XM Trial Ex. 6. All of these automotive, retail, manufacturing, and distribution partners receive subsidies, commissions, and percentages of revenues for the benefits they provide to XM; fairness demands that the record labels and artists – who have provided the very content upon which the SDARS service was built and upon which the SDARS themselves continue to depend for the acquisition and retention of subscribers – receive the same return on their investment in the companies.

831. There is no reason to believe that providers of non-music content give any sort of discount on their prices because of start-up or other costs incurred by the SDARS. Bronfman WDT 6, SX Trial Ex. 59. The determination of content value should not depend upon the start-up or operational costs of a particular distribution service. Bronfman WDT at 6, SX Trial Ex. 59. “Cable companies and telecommunications companies have invested billions to install the infrastructure needed to deliver broadband to America’s homes, yet they receive no discount from copyright owners for the programming they provide to subscribers via these networks.” Bronfman WDT at 6, SX Trial Ex. 59. Likewise, as XM’s Stephen Cook explains, many cellular companies – including the company he worked for prior to his employment with XM – “had to purchase licenses, build a subscriber base from scratch, and convince consumers to purchase receivers in order to use the service.” Cook WDT at 3, XM Trial Ex. 6. And yet, the record companies do not discount their prices to account for these operating costs when licensing their copyrighted sound recordings to wireless services– indeed, these services pay a *premium* to make sound recordings available. Eisenberg WDT at 7, SX Trial Ex. 53. If the SDARS incurred these substantial costs in anticipation of lower rates to account for these costs, that would have been a very poor business decision. Bronfman WDT at 7, SX Trial Ex. 59.

4. A Rate that Does Not Compensate Record Companies and Performers for Amounts Lost Due to Substitution by Satellite Radio Cannot Satisfy the Second Objective.

832. The fairness considerations reflected in § 801(b)(1)(B) are not achieved if the record industry does not earn sufficient royalties from the SDARS to compensate for the substitution effect the SDARS have on revenues from other streams. Herscovici WRT at 21, SX Trial Ex. 130; Bronfman WDT at 11, SX Trial Ex. 59. Congress was undoubtedly concerned with such substitutional effects when it passed the DPRA and created copyright protection for the performance of sound recordings. *See* S. Rep. 104-128 at 15 (the DPRA aims to address the music community’s concerns “that certain types of subscription and interactive audio services might adversely affect sales of sound recordings and erode copyright owners’ ability to control and be paid for use of their work”).

833. Given the portability of the SDARS’ service, the high quality of the sound, its commercial-free delivery, and the ubiquity of its music broadcast, the SDARS have, overall, a very substitutional effect on sales of other forms of music. 6/18/07 Tr. 138:21-139:22 (Eisenberg). As discussed in more detail in Section V.E, *supra*, the record evidence of this substitutional effect is overwhelming. Consequently, because of the net substitutional effect of satellite radio, the record companies “have to get paid a fair return for the licenses or for the licensing.” 6/18/07 Tr. 140:4-14 (Eisenberg).

834. Thus, this factor cannot be advanced if, for example, the rate is set so low that sound recording copyright owners actually lose money from the existence of satellite radio through substitution. Herscovici WRT at 21, SX Trial Ex. 130; 8/30/07 Tr. 22:2-17 (Herscovici). A rate that is below the amount needed to make up for the approximately 2.5 fewer CDs purchased by satellite radio customers measured by Dr. Mantis (and by Dr. Wind)

cannot satisfy this objective. Herscovici WRT at 21, SX Trial Ex. 130; 8/30/07 Tr. 25:3-26:11 (Herscovici).

835. That is not to say that a rate that merely offsets the substitution for other revenues from sound recordings would best advance this factor; indeed, a market rate, which would best advance this objective, would generally be in excess of the amount needed to compensate record companies for the substitution effect caused by satellite radio – making both satellite radio and the record companies better off. Herscovici WRT at 21, SX Trial Ex. 130.

836. Indeed, the record companies receive significant royalties from digital music services that may actually have a promotional impact. Eisenberg WDT at 10, SX Trial Ex. 53. In fact, even with services whose sole purpose is to provide clips of music samples in a promotional setting to consumers looking to purchase a CD or digital download – a purpose that undoubtedly promotes sales of sound recordings – Sony BMG receives approximately [REDACTED] of the service’s revenues. Eisenberg WDT at 10, SX Trial Ex. 53.

837. A below-market rate that does not fully compensate record companies for the substitution effect will not only be unfair, but will also have harmful societal effects. Because satellite radio is, to varying degrees, substitutable for other channels through which recorded music is distributed to listeners, subsidizing satellite radio necessarily will divert sales from these other distribution channels. This diversion will occur even if these alternative modes of distribution are more efficient relative to satellite radio, and as a result society’s resource costs of music distribution will needlessly increase. Ordover WDT at 29, SX Trial Ex. 61.

838. Even Dr. Noll, the SDARS’ own expert, agrees that the record companies must, at a minimum, be compensated for the lost sales due to substitution. “If the record companies now earn a competitive return (absent monopoly rents or Ricardian rents), and if the growth of

satellite radio causes a reduction in profits from other distribution channels” – which empirical evidence shows that it does, *see, e.g.*, Mantis WRT at 15-16, SX Trial Ex. 132; Wind WRT at 16-23, SX Trial Ex. 129 – then “fairness requires that the SDARS compensate record companies for the fall in their returns that is caused by satellite radio.” Noll WRT at 55, SDARS Trial Ex. 72.

839. As Dr. Noll further explained, if “satellite radio is a sufficiently close substitute for other sources of revenue for the record companies that it plausibly could reduce their profits,” then the royalty rate set in these proceedings should be sufficient to “compensate record companies for the fall in their returns that is caused by satellite radio.” Noll WRT at 55-56, SDARS Trial Ex. 72.

840. Dr. Woodbury’s analysis of this objective fails because he again relies almost exclusively on the claimed, but unsupported, promotional effect of satellite radio. Herscovici WRT at 21, SX Trial Ex. 130. That satellite radio causes reductions in listening to terrestrial radio does not, of itself, account for the lost revenue to record companies and recording artists from reduced CD sales and reduced revenue from other sources. Herscovici WRT at 21, SX Trial Ex. 130.

C. The Third Factor (§ 801(b)(1)(C) – “Reflect the Relative Roles of the Copyright Owner and the Copyright User in the Product Made Available to the Public with Respect to Relative Creative Contribution, Technological Contribution, Capital Investment, Cost, Risk, and Contribution to the Opening of New Markets for Creative Expression and Media for Their Communication.”

841. The third statutory objective seeks to “reflect the relative roles of the copyright owner and the copyright user in the product made available to the public with respect to relative creative contribution, technological contribution, capital investment, cost, risk, and contribution

to the opening of new markets for creative expression and media for their communication.” 17 § 801(b)(1)(C).

842. As discussed in more detail below, consideration of the relative contributions of the record companies and the SDARS reveals that it is the record companies – not the SDARS – that have taken far more risks, invested far more capital, and spent far more money than the SDARS “in the product made available to the public.” § 801(b)(1)(C). As this Court determined, the record industry makes “repeated substantial outlays year after year” to make its creative works available to the public. *Webcasting II*, 72 Fed. Reg. at 24094. This includes substantial investments in new artists, the cost of which has not abated despite the dramatic decline in CD sales over the past several years, as well as the risks associated with these investments. Kushner WDT at 5, SX Trial Ex. 65; 6/26/07 Tr. 115:13-18 (Kushner).

843. It is the record companies that take the risks in investing in the acquisition, production, marketing, and promotion of new talent before earning any revenue for such efforts, investments that are significant in amount and essential for the SDARS’ ability to broadcast music over their service. Currently, the record industry is facing declining revenues and sales and thus faces greater risks than at any other time in their history; however, as revenues decline, the costs and investments necessary to create the sound recordings have remained the same. Herscovici WRT at 25, SX Trial Ex. 130.

844. By comparison, the SDARS’ contributions, risks, and costs are grossly overstated. Satellites have been around for fifty years, Elbert WRT at 20, SX Trial Ex. 122, and they have been used to deliver audio programming for decades. SDARS Trial Ex. 92 at 251. There were many significant precursor satellite systems that included the important technological elements of the SDARS system before the SDARS existed. Elbert WRT at 24-26, SX Trial Ex. 122. Thus

any alleged risks associated with the use of satellite technology are exaggerated. Moreover, the SDARS by and large broadcast the creative works of others, and thus provide very little – if any – creative contribution.

845. Finally, the SDARS' financial investments are also overstated when compared to that of the record industry. Although the SDARS make upfront investments long-term in order to earn revenues over many years, the record companies make enormous upfront investments each and every year in the creation of copyrighted sound recordings. Herscovici WRT at 26, SX Trial Ex. 130. The risks that record companies face are great and growing, while the risks the SDARS are facing are declining. Moreover, as the evidence of substitution demonstrates, satellite radio itself creates serious risk for the record companies by substituting for other forms of revenues; only a royalty sufficient to more than offset these increased risks can satisfy this and other statutory factors.

1. The Third Factor and Its Sub-factors Are Precisely the Sorts of Considerations Captured by Marketplace Negotiations.

846. An economist would understand the third factor as seeking to measure what each party brings to the table and their relative contribution to the overall value of the joint endeavor. 8/30/07 Tr. 26:14-27:7 (Herscovici). The third factor, and its sub-parts, are precisely the sort of factors that are taken account in a marketplace negotiation and this factor would be best advanced by adoption of a market rate here. Herscovici WRT at 21-22, SX Trial Ex. 130; 8/30/07 Tr. 27:8-18 (Herscovici).

847. As discussed in more detail *supra*, in Dr. Ordovery's opinion, the public policy goals of this objective too are best attained by setting the license fee in a manner that reflects the level of the fees that would be set in the market. Markets properly reward and take account of capital investment, the costs and risks involved in deploying the facilities and infrastructure

necessary to produce a good or service, and each of the other considerations listed in this factor. Ordover WDT at 29, SX Trial Ex. 61.

848. Finally, just as with the first two factors, standing alone the words of the third factor say nothing about the specific level of a rate that satisfies the factor. the Court has no choice but to start with empirical evidence as to what the negotiated rates have been in other contexts. 6/21/07 Tr. 108:21-109:6 (Ordover). As Dr. Herscovici explained, it is the marketplace and the role of negotiations in the marketplace that place value on the parties' relative contribution, their investments, and the risks that they face. 8/30/07 Tr. 27:19-28:9 (Herscovici).

2. Under this Court's Decision in the Webcasting Case and Prior Decisions of the Librarian, the Considerations at Issue in the Third Factor Are Implicitly Accounted for by a Market Rate.

849. This Court has previously considered the objective to be advanced by this factor and found that its considerations are already accounted for in a marketplace rate. The "willing buyer/willing seller" standard governing rates paid by subscription webcasters for the use of sound recordings also requires consideration of factors similar to those set out in § 801(b)(1)(C). *Compare* § 801(b)(1)(C) *with* 17 U.S.C. § 114(f)(2)(B)(ii). In setting forth this "willing buyer/willing seller" standard, § 114(f)(2)(B)(ii) states that the Court should consider "the relative roles of the copyright owner and the transmitting entity in the copyrighted work and the service made available to the public with respect to relative creative contribution, technological contribution, capital investment, cost, and risk." These are precisely the same factors outlined in § 801(b)(1)(C).

850. In analyzing these § 114(f)(2)(B)(ii) factors in the webcasting market, this Court concluded that "[b]ecause we adopt a benchmark approach to determine rates, we agree with

Webcaster I that [these] considerations ‘would have already been factored into the negotiated price’ in the benchmark agreements.” *Webcasting II*, 72 Fed. Reg. at 24092. In light of this, the Court determined that these factors are “implicitly accounted for in the rates that result from negotiations between parties in the benchmark marketplace.” *Id.* “[T]he absence of solid empirical evidence of [a difference in the target and benchmark markets as to the listed factors] obviates the need for . . . further adjustment” of the benchmark market rate to account for these factors. *Id.* The Court’s conclusion in the webcasting proceeding was consistent with the prior holding of the Librarian that these factors are accounted for in a marketplace rate. *Webcasting I*, 63 Fed. Reg. at 25399, 25404. Indeed, the Seventh Circuit has previously suggested that marketplace evidence, standing alone, can address this factor. *Amusement & Music Operators*, 676 F.2d at 1157.

851. The benchmarks on which SoundExchange relies account for all of the considerations of this factor because they involve services with similar risks and rewards, investments and costs. Several of the benchmarks – in particular those involving non-music content on the SDARS and the benchmark based on the Shapley model’s division of surplus SDARS revenues – reflect pricing when the SDARS itself is the buyer. Thus, these benchmarks reflect pricing outcomes where the SDARS’ *own* contributions, risks, costs, and investments are taken into account. Likewise, the satellite television benchmark examines market rates in another satellite-based industry that faced similar risks, technological contributions, investments and costs. *See supra*.

3. The First Sub-factor – Creative Contribution

a. Prior Decisions Have Made Clear that this Subfactor Favors the Creators of Sound Recordings.

852. The Librarian and the CARP in the PSS I Proceeding found that this sub-factor favors the record companies and the artists they employ. 63 Fed. Reg. at 25406. That conclusion remains true today.

853. As the D.C. Circuit and prior tribunals have found, those who broadcast the creative works of others – even if they arrange those works or intersperse DJs with them, provide very little – if any – creative contribution and whatever that contribution, it cannot rival that of the record companies and performers who create the sound recordings. *See National Ass'n of Broadcasters v. Copyright Royalty Tribunal*, 772 F.2d 922, 931 (D.C. Cir. 1985) (finding reasonable the conclusion “that people listen to retransmitted stations for the music, and thus any award for retransmitted radio broadcasters should go to the Music Claimants”, and rejecting the idea that formatting a radio station had any value); *1980 Cable Royalty Distribution Determination*, 48 Fed. Reg. 9552, 9565-66 (Mar. 7, 1983) (reaffirming prior holding that there is “no basis for establishing the value of the broadcast day” nor “any basis for a distribution of royalties to broadcast claimants on this theory”). The Court recognized as much in this proceeding when it noted that “the Tribunal and the CARPs have rejected [the notion] that what broadcasters do is contribute mightily to the value of the broadcast day by virtue of how they organize their programs.” 6/13/07 Tr. 93:16-22 (Woodbury) (question by Roberts, J.).

b. Record Companies and Performers Make Tremendous Creative Contributions.

854. Record companies – through their own creative efforts, their financial investment, and the creative efforts of the artists whom they have signed to contracts – contribute

enormously to the creative output, *i.e.*, the sound recordings, that is enjoyed by consumers and is at the heart of satellite radio. Kushner WDT at 23, Trial Ex. 65; Herscovici WRT at 22-23, SX Trial Ex. 130. Record companies are integral to the creative process, and performers working with record companies provide the creative spark for the sound recordings. Herscovici WRT at 22-23, SX Trial Ex. 130.

855. SoundExchange submitted the testimony of Michael Kushner, Senior Vice President, Business and Legal Affairs for Atlantic Record Corp., which is part of Warner Music Group. Kushner WDT at 1, SX Trial Ex. 65. Atlantic Records has a market share of the overall sound recording market of 5.8%. Kushner WDT at 4, SX Trial Ex. 65. SoundExchange also submitted the testimony of Dan Navarro, a successful independent artist, Navarro WDT at 1, SX Trial Ex. 63, and Ed Chmelewski, President of the independent blues label, Blind Pig Records. Chmelewski WDT at 1, SX Trial Ex. 64. All discussed the significant creative contributions made by both record companies and performers.

856. As Mr. Navarro explains, “[a]t the heart of this proceeding are thousands of artists whose talents and hard work make the music.” Navarro WDT at 9, SX Trial Ex. 63. These artists “provide the intellectual property that draws listeners to satellite radio – without [them], there would be no music on their stations – and [these artists] are entitled to a fair return for [their] work.” Navarro WDT at 9, SX Trial Ex. 63.

857. Music is an art that takes years to develop and perfect; consequently, artists spends years of their lives writing and recording music. 6/21/07 Tr. 29:7-12 (Renshaw). These years of effort and expenditure of both time and resources is what has created the content that forms the bedrock of the SDARS’ business. 6/21/07 Tr. 29:13-22, 30:4-31:7 (Renshaw).

858. Artists, of course, are signed to contracts with record companies as they make this creative contribution, but the record companies, above and beyond the role played by their artists, are essential to the creative process, initially through their A&R (“Artist and Repertoire”) Departments. Kushner WDT at 5, SX Trial Ex. 65. The A&R Department is responsible for identifying new artists, working with artists on the recording process, and creating the sound recording that is released to the public (and used by the SDARS). Kushner WDT at 5, SX Trial Ex. 65.

859. Record companies sign artists to contracts, who then work with record company personnel to create the sound recordings whose copyrights are owned by the record companies and which are enjoyed by consumers of satellite radio. Kushner WDT at 5-6, SX Trial Ex. 65.

860. Record companies not only participate as creative contributors to the creation of the sound recording, but fund the entire process – from identifying talent to hiring producers, engineers, and musicians to leasing equipment and record studios to providing the professional engineering required to create a sound recording for the public. Kushner WDT at 5-6, SX Trial Ex. 65.

i. The Creative Process Begins with Identifying Talent

861. The first step in the creative process is the discovery of talent, which happens in many different ways. Members of record company A&R departments go to clubs and concerns, comb through demonstration recordings, search the Internet, attend festivals, and perform market research to identify talented artists. Kushner WDT at 5-6, SX Trial Ex. 65. A&R personnel at Atlantic Records meet with or listen to thousands of artists each year to determine the very few whom they will sign. 6/26/07 Tr. 91:11-18 (Kushner).

862. Discovering talented artists is different for different genres. For rock musicians, A&R scouts travel the country and scan the Internet, looking for artists that are developing in particular parts of the country, going to meet and develop a relationship with the artist. 6/26/07 Tr. 90:7-18 (Kushner). For Urban and Pop musicians, there is more listening to track and meeting with production companies bringing talent to the label. 6/26/07 Tr. 90:19-91:1 (Kushner).

863. Record companies even fund the creation of demonstration recordings by artists being considering to give the artist and record company a better opportunity to evaluate their commercial potential. 6/26/07 Tr. 91:19-92:13 (Kushner).

864. The A&R function is critical to the creative process, requiring instinct, knowledge of music, and an understanding of trends in the music industry; A&R professionals must sift through many artists to find those who will be compelling to a wider audience. Kushner WDT at 5-6, SX Trial Ex. 65. Record companies compete vigorously for A&R talent who have the ability to spot artists with potential. Kushner WDT at 6, SX Trial Ex. 65. To be a successful A&R person, a person must have the ability to recognize a star, to hear great music, to know what has commercial potential, to be able to work with artists in a way that artists can understand, and ultimately to be able to help in the process of making records, which is an art unto itself. 6/26/07 Tr. 91:2-10 (Kushner).

865. Once a promising artist has been identified, A&R scouts and managers present the artist to senior executives in the A&R Department, and those artists with the greatest potential are presented to the head of the A&R Department. Kushner WDT at 6, SX Trial Ex. 65. The process for selecting artists often includes special showcases set up for the artists to be seen by various record company executives, as well as the production of demonstration recordings to

help develop the artist and show his or her potential. Kushner WDT at 6, SX Trial Ex. 65. After this winnowing process, the ultimate decision on whether to sign an artist is up to the Chairman of the record label. 6/26/07 Tr. 92:15-93:8 (Kushner).

866. Of the many artists whom A&R personnel view, only a very small number are signed. Once a decision is made to offer a contract to an artist, negotiations begin and those can last for days or months depending on competition from other record companies and the complexity of the deal. Kushner WDT at 6, SX Trial Ex. 65.

ii. Creating a Sound Record Is a Creative, Collaborative Process Between Record Company Personnel and Performers.

867. Once the artist is signed, the process of making an album begins. Kushner WDT at 7, SX Trial Ex. 65. Record company personnel work closely with artists on the creation of the sound recordings that make up an album. A&R personnel work with the artist to select and develop the material to be recorded, whether by finding songs to be recorded or working with singer-songwriters on honing their material. Kushner WDT at 7, SX Trial Ex. 65. This process requires patience, focus, and creative skill – all traits possessed by the best A&R personnel. Kushner WDT at 7, SX Trial Ex. 65.

868. A&R personnel work with the artist to select the studio, producers, engineers, and other members of the creative team who are best able to help the artist reach his or her potential. Kushner WDT at 7, SX Trial Ex. 65. For Pop, Hip-Hop, and R&B recordings, this process includes sifting through hundreds or thousands of tracks by various producers to try to find the right material for the artist. Kushner WDT at 7, SX Trial Ex. 65; 6/26/07 Tr. 96:12-97-8 (Kushner). For such albums there will often be multiple producers for multiple different tracks.

6/26/07 Tr. 97-5-8 (Kushner). A&R personnel from the record companies supervise this process. Kushner WDT at 7, SX Trial Ex. 65.

869. In the studio, the A&R staff supervise the entire recording process, acting as executive producers. Knowing how to manage this process and artists requires creativity and skill. Kushner WDT at 7, SX Trial Ex. 65. In addition to helping select the track to be recorded, A&R personnel listen to double or triple the amount of material actually released to select the tracks for the final album from those that are recorded. 6/26/07 Tr. 97:18-98:7 (Kushner). Recording artists, especially in Pop, Hip-Hop, and R&B genres frequently record between 20 and 40 tracks for an album, although only 12-14 will actually be on the album released. 6/26/07 Tr. 99:2-17 (Kushner).

870. Record companies also create bonus tracks – extra recordings that are released, for example, to give people an incentive to buy entire albums or to offer exclusives to retail chains, for example. 6/26/07 Tr. 100:17-101:13 (Kushner).

871. Record companies pay for every single aspect of the record process – studio time, engineers, musicians, producers, mixers, and production costs. 6/26/07 Tr. 97:1-17 (Kushner).

872. Albums take a significant amount of time to create. A typical rock album takes from 3-6 months to record. A typical Pop, R&B, or Hip-Hop album takes anywhere from four months to 2 years to complete. 6/26/07 Tr. 98:12-21 (Kushner).

873. After completion of a sound recording in the studio, there remains much work to be done – all of it supervised by the A&R staff and funded by the record companies. Sound recordings have to be mixed and mastered to adjust sonic qualities and make the sound recording the best it can be. Kushner WDT at 8, SX Trial Ex. 65. Often a single sound recording can be released in multiple “re-mixes” and different producers may be hired to create different versions

for specific markets. Kushner WDT at 8, SX Trial Ex. 65. Multiple versions of each sound recording (shorter and longer versions, clips, versions without explicit lyrics) are created.

Kushner WDT at 8, SX Trial Ex. 65.

874. In addition, the development of digital markets for sound recordings has meant that the A&R staff must also deliver additional ancillary content from the recording studio.

Planning and developing this ancillary content is a creative process. Kushner WDT at 8, SX Trial Ex. 65.

875. In parallel with development of the sound recording, record companies also fund and create other material necessary for the commercial exploitation of the sound recording. The Art Department designs the album art, which is important for physical as well as digital exploitation of sound recordings. Kushner WDT at 8, SX Trial Ex. 65; 6/26/07 Tr. 103:6-194:2 (Kushner). Indeed, the interactive offered by various digital media requires the creation of art work that is interactive through animation or video. Kushner WDT at 8, SX Trial Ex. 65. The Art Department also creates publicity and marketing materials to convey the artist and sound recording to the public. Kushner WDT at 8-9, SX Trial Ex. 65.

876. Record companies also hire consultants and others to work with artists to cultivate their image and the way in which they will be presented to the public. Kushner WDT at 9, SX Trial Ex. 65.

877. This process and the enormous contribution of artist and record company in collaboration is no different for independent record companies, who face even bigger risks than the major record companies. Independent record labels generally enter the process at the very early stages of an album's development, signing artists whose music they would like to release, and then incurring all of the costs and risks associated with each stage of the recording, mixing,

mastering, marketing and promoting processes. Chmelewski WDT at 7-11, SX Trial Ex. 64. This includes costs of scouting trips to discover artists, recording costs (including the cost of studio time, fees for sidemen, costs of hiring musicians, fees for recording engineers, and the costs of a producer, to name just a few), mixing costs and mastering costs, costs to create the album art and text for the album inserts, manufacturing and distribution costs, and marketing and promotional costs. Chmelewski WDT at 7-11, SX Trial Ex. 64; 6/26/07 Tr. 24:8-29:3 (Chmelewski).

878. Like recording artists, independent labels also contribute significant time and resources into creating sound recordings, and likewise take substantial risks related to these endeavors. Independent labels “are responsible for recording, marketing, manufacturing and promoting an album.” Chmelewski WDT at 6, SX Trial Ex. 64. While the labels are the driving force behind the creation of a record, so too are they responsible for the many risks involved in the process, incurring all of the costs “associated with finding artists, signing them, paying to record, manufacture and promote albums, paying royalties, and running a business.” Chmelewski WDT at 6-7, SX Trial Ex. 64.

879. Independent labels, like Blind Pig Records, are also responsible for preserving important art forms, like blues music – a traditional and “uniquely American art form” Chmelewski WDT at 11, SX Trial Ex. 64. Without a fair return for the use of this copyrighted intellectual property, it will become impossible for independent labels to support themselves and to continue to produce the music that they do, and the public may be deprived of this art form. Chmelewski WDT at 11-12, SX Trial Ex. 64.

880. The process is essentially the same for a recording artist who owns his own masters and is both the copyright owner and the performer. Navarro WDT at 2, SX Trial Ex. 63.

As recording artist, performer, and songwriter Dan Navarro explains, “[r]ecording an album requires a lot of hard work and involves considerable costs and risks.” Navarro WDT at 2, SX Trial Ex. 63. The entire process of creating and recording an album takes approximately six months. Navarro WDT at 3, SX Trial Ex. 63; 6/25/07 Tr. 35:15-16 (Navarro).

881. After writing or selecting songs to be recorded, the recording process begins. Mr. Navarro and his partner hire musicians – typically at least three, sometimes as many as nine or ten – to play on the album. Navarro WDT at 3, SX Trial Ex. 63. It then takes “substantial amounts of rehearsal to develop the sound” they desire and “to perfect the performance.” Navarro WDT at 3, SX Trial Ex. 63. And of course, Mr. Navarro and his partner must pay these artists for their contributions to the album. Navarro WDT at 3, SX Trial Ex. 63.

882. Next, after sufficient rehearsal, Mr. Navarro, his partner, and the musicians must record the songs in a commercial studio, a process that takes a substantial amount of time and requires significant payments – studio time can cost thousands of dollars for just a single album. Navarro WDT at 3, SX Trial Ex. 63. Recording an album typically requires three or four weeks of studio time. Navarro WDT at 4, SX Trial Ex. 63; 6/25/07 Tr. 26:5-27:8 (Navarro). Moreover, Mr. Navarro must also pay the producer and the studio engineer for their time and contributions to the recording process. Navarro WDT at 4, SX Trial Ex. 63.

883. After the songs have all been recorded, the next steps are to mix and then master the album. Mixing “is the crucial assembly of all the record’s component parts,” and it “requires listening to all of the tracks that have been recorded, figuring out which ones work best together, and then mixing them together into a unified recording”; it is a “very laborious” process. Navarro WDT at 4, SX Trial Ex. 63; 6/25/07 Tr. 29:15-30:4 (Navarro). This process takes between one and three weeks for each album. Navarro WDT at 4, SX Trial Ex. 63.

884. Mixing requires more expensive studios due to the “vastly upgraded sound processing equipment, including automated mixing boards, special sound processing gear, computers and high end speaker systems,” as well as “someone with specialized skills.” Navarro WDT at 4, SX Trial Ex. 63. Because of the expensive equipment and specialized technicians that mixing requires, mixing studios “are generally three to four times more expensive than basic recording studios.” Navarro WDT at 4, SX Trial Ex. 63. Mastering requires working with a sound engineer who in turn works with expensive technical equipment “to create overall balance and unity for the album as a whole, makes sure that the sound is consistent from song to song, eliminates unwanted noises, adjusts the sounds of various instruments, and sets the sequence of and pauses between songs.” Navarro WDT at 4-5, SX Trial Ex. 63.

885. After the album has been written and recorded, the artists must design the cover and packaging for the CD or the artwork for the digital distribution platform. 6/25/07 Tr. 34:20-35:5 (Navarro).

iii. Marketing Is Also Essential to the Success of a Sound Recording and Part of the Creative Process

886. The marketing of sound recordings is another essential component of the record companies’ contribution to making sound recordings available to the public. Marketing artists and music requires a great deal of creativity because the record company must tailor a unique approach for the artist and his or her music, getting the message to consumers without compromising the artist’s integrity. Kushner WDT at 9, SX Trial Ex. 65.

887. Record companies pay for all of the marketing expenses for sound recordings. 6/26/07 Tr. 106:22-107:2 (Kushner).

888. Marketing new artists requires reaching consumers through the din of many other artists seeking to be heard. Marketing established artists is also a formidable challenge because

the record company and recording artist must reach and expand an existing fan base. Kushner WDT at 9-10, SX Trial Ex. 65.

889. Marketing is quite different for different types of sound recordings. Rock acts often use touring to generate interest – generally trying to build up a fan base even before an album is released. Kushner WDT at 10, SX Trial Ex. 65; 6/26/07 Tr. 105:14-106:8 (Kushner). Rap acts often rely on “street buzz.” Kushner WDT at 10, SX Trial Ex. 65. Pop and Urban music artists tend to be more “radio-driven” or “street-driven”, with marketing including efforts to allow certain tracks to be heard on the Internet before the album is released to create a buzz or placing the artist strategically with other artists to get the artist’s name out into the marketplace. 6/26/07 Tr. 106:8-18 (Kushner).

890. For each album an artist releases, record companies assign a product manager to be in charge of a release from soup to nuts. The product manager creates a detailed marketing plan to develop awareness of the artist and album, including the image the artist will project, what efforts will be made with terrestrial radio broadcasters, the target audience, the kind of publicity materials to be created, the types of interviews to be planned, the types of TV appearances planned, and the ways in which the artist will reach consumers on the Internet through blogs, video streaming sites, and social networking sites. 6/26/07 Tr. 104:3-105:5 (Kushner).

891. Without exception, for an artist and sound recording to emerge and be commercially successful among the thousands of artists requires talent, experience, and the substantial investment of a record label to guide that effort. Kushner WDT at 10, SX Trial Ex. 65.

892. Record company marketing departments have many sub-departments that contribute to the creative process. The artist development department finds touring opportunities and plays an integral role in positioning and branding artists. Kushner WDT at 11, SX Trial Ex. 65. It tries to get the artist seen live by the right number of people, to build a story around the artist, and to figure out how the touring process will develop the artist. 6/26/07 Tr. 107:3-17 (Kushner). Record companies pay for the touring that artists do. 6/26/07 Tr. 107:18-22 (Kushner).

893. The video production department oversees the creation of music videos, including the selection of production companies, directors, scripts and other components of the video. Atlantic Records invested [REDACTED] in music video production in 2006. Kushner WDT at 11, SX Trial Ex. 65.

894. The publicity department works with media outlets to ensure that artists receive the broadest coverage possible through features, interviews, television appearances, and events. Publicity departments and their contractors partner with artists to ensure that media coverage is consistent with the overall efforts to promote and develop the artist. Kushner WDT at 11-12, SX Trial Ex. 65; 6/26/07 Tr. 108:8:17 (Kushner).

895. The new media department is now a major component of the marketing strategy for artists. Kushner WDT at 12, SX Trial Ex. 65; 6/26/07 Tr. 108:18-109:9 (Kushner). The new media department creates artist websites, sends out email “blasts” to fans, works with fan sites, ensures that artists are well represented on blogs, Internet portals, and social networking sites, sets up live Internet concerts, and uses the vast reach of the Internet to gain exposure for artists and sound recordings. Kushner WDT at 12, SX Trial Ex. 65; 6/26/07 Tr. 109:10-110:1 (Kushner). The new media marketing function is constantly evolving as technology allows for

new ways for artists to reach the public. Kushner WDT at 12, SX Trial Ex. 65. A small part of the marketing budget a few years ago, the new media marketing function is growing. In 2006, Atlantic Records spent [REDACTED] on new media marketing with an additional [REDACTED] in overhead expenditures dedicated to new media marketing. *Id.*

896. Atlantic Records spent [REDACTED] in 2006 to market new releases, averaging [REDACTED] per release. In that same year, the overhead for the marketing department was [REDACTED]. Kushner WDT at 10, SX Trial Ex. 65.

897. All the functions described above are undertaken by independent record labels as well, with greater financial difficulty and less upside. Chmelewski WDT at 6-7, SX Trial Ex. 64. Artists who own their own record labels, like Mr. Navarro, perform all of these functions themselves and, like artists signed to other labels, go out and perform the music to market the final product. Navarro WDT at 5, SX Trial Ex. 63. As Mr. Navarro explains, he and his partner “devote a considerable amount of time to organizing the logistics of a tour,” trying to be as economical as possible “because the costs of touring come out of our own pockets.” Navarro WDT at 5-6, SX Trial Ex. 63. In the height of their touring season, artists can perform up to 135 shows in a given year. 6/25/07 Tr. 36:8-9 (Navarro).

c. Dr. Woodbury’s Analysis of the Creative Contribution Is Wrong as a Matter of Law, Fact, and Economics.

898. Dr. Woodbury’s claim that the Services’ creative contribution includes their creation or purchase of non-music programming is both wrong and, in any case, irrelevant. It is difficult to see how the creation of non-music programming contributes to the creative works that are the subject of the statutory license. If anything, the reverse is true – as Dr. Herscovici found, sound recordings are essential to the non-music programming that is offered by the SDARS. Herscovici WRT at 14-17, 23 & App. K, SX Trial Ex. 130.

899. Dr. Woodbury's analysis is also internally inconsistent because he wants to "count" XM and Sirius's investment in non-music programming, even if such investment would be made even if XM and Sirius did not transmit sound recordings and wants to ignore all investment by record companies and recording artists, even if those investments can at least be partially recovered through other outlets for the dissemination of sound recordings. Herscovici WRT at 23, SX Trial Ex. 130.

900. Once again, Dr. Woodbury's analysis of this subfactor depends on his errant conclusion that satellite radio promotes the sales of sound recordings and thereby supposedly increases the SDARS' creative contributions. Because that conclusion about promotion is wrong, *see supra*, Dr. Woodbury's entire analysis is wrong. Herscovici WRT at 23, SX Trial Ex. 130.

901. The creative contribution of record companies and the artists whom they have under contract far outstrips the creative contribution of the Services in arranging the order in which sound recordings are played or in interrupting music with DJ banter. Herscovici WRT at 23-24, SX Trial Ex. 130. Indeed, it is difficult to imagine how the creative contributions of ordering the sound recordings to be played can be compared to the creative contribution of Bruce Springsteen, Norah Jones, and Yo-Yo Ma, and others.

4. The Second Sub-factor – Technological Contribution

902. When it comes to their technical contributions, the SDARS wrongly claim sole credit for more than fifty years of satellite engineering, innovation and design. When SDARS witnesses assert that they had to "create from scratch . . . an entirely new means of providing audio programming," Karmazin WDT at 1-2, Sir. Trial Ex. 1.1, they are ignoring the fact that they are heirs to the longstanding, proven and well-established history of satellite technology.

Herscovici WRT at 24, SX Trial Ex. 130. Although XM and Sirius contend that they introduced unprecedented innovations in satellite technology and built their services from scratch from the ground up, a closer look at their growth and development reveals that they actually built their services upon already-existing technologies and infrastructures. As an internal SDARS document conceded: “[t]he technology to produce a subscription SDARS has been available for about a decade.” SDARS Trial Ex. 92, at 251. Thus, the technical contributions of the SDARS, as well as the risk involved in launching their businesses, are vastly overstated.

a. XM and Sirius’s reliance on the technological contributions of their predecessors

903. Satellites have a long and successful history. In fact, satellites have been in use for over fifty years. Elbert WRT at 20, SX Trial Ex. 122. As early as the 1960’s, Comsat established the “core methodologies” of the satellite industry, including procuring extra satellites and purchasing launch insurance. 8/27/07 Tr. 182:6-183:19 (Elbert). As SoundExchange’s satellite expert Bruce Elbert wrote in a textbook on satellite engineering, “[s]atellites have been used to deliver audio programming for decades.” SDARS Trial Ex. 92, at 251.

904. Western Union was the first domestic company to launch satellites and use them to provide service across the United States. 8/27/07 Tr. 183:20-184:10 (Elbert). Western Union’s satellites were used for a variety of communications, including television, telephone, and radio. 8/27/07 Tr. 183:20-184:10 (Elbert). NPR used Western Union’s Westar satellites to deliver radio content. 8/27/07 Tr. 183:20-184:10 (Elbert).

905. Satellites were used to broadcast live coverage of the 1964 Tokyo Olympics to the United States, and to broadcast the “Thrilla in Manila” match between Muhammad Ali and Joe Frazier in 1975. Elbert WRT at 20, SX Trial Ex. 122. As early as 1983, national cable television

stations, including ESPN, HBO, Nickelodeon and CNN, used satellites to transmit content.

Elbert WRT at 20, SX Trial Ex. 122.

906. DirecTV, which went into service in 1994, established a system that could deliver a large amount of programming – 100 or more channels of high quality video and audio and music – to individual customers. 8/27/07 Tr. 184:11-19 (Elbert).

907. In the early 1990's, DirecTV and later, the Dish Network, by Echostar, established the business model that XM and Sirius would later make use: "putting up satellites and operating them in a reliable way, having redundancy, using ground facilities, distributing low-cost receiving equipment, . . . and . . . supporting a customer base of millions of people." 8/27/07 Tr. 184:20-185:9 (Elbert).

908. In fact, XM and Sirius were not the first companies to use satellite technology to deliver radio service. 8/27/07 Tr. 185:11-14 (Elbert). In the 1980's, radio networks like NPR, CBS, ABC and NBC used satellites to deliver radio programming. 8/27/07 Tr. 185:14-16 (Elbert). Around the same time, another company, Supermarket Radio Network, used satellites to deliver radio programming to various supermarket chains. 8/27/07 Tr. 185:16-186:15 (Elbert).

909. As well, in the 1980's, a variety of companies, including Voice of America, experimented with using satellites to deliver programming directly to the public. 8/27/07 Tr. 186:16-187:7 (Elbert). In the early 1990's, NASA experimented with transmitting via the S band, the same frequency band used by the SDARS. 8/27/07 Tr. 186:16-187:7 (Elbert).

910. A very significant predecessor to XM and Sirius was WorldSpace, which used two satellites to broadcast radio programming to Africa, parts of Europe, and Asia. 8/27/07 Tr. 187:21-188:20 (Elbert). WorldSpace was the first company to introduce satellite radio. SDARS

Trial Ex. 92, at 19, 251. WorldSpace launched its first satellite in October 1998, well before XM or Sirius launched. Elbert WRT at 6, 29, SX Trial Ex. 122.

911. The WorldSpace system used a portable receiver with a “relatively small satellite receiving antenna” (“smaller than a saucer”) and was able to transmit music programming and “to overcome the obstacles of terrain or the lack of infrastructure in different companies.”

8/27/07 Tr. 187:21-188:20 (Elbert).

912. Both XM and Sirius drew on the lessons of WorldSpace. 8/27/07 Tr. 188:21-189:3 (Elbert). In fact, WorldSpace shared much of its knowledge with XM. Elbert WRT at 29-30, SX Trial Ex. 122. WorldSpace and AMRC, the predecessor to XM [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] Elbert WRT at 30, SX

Trial Ex. 122. The WorldSpace chipset had most of the functions of the chipsets later used by

XM and Sirius. Elbert WRT at 29, SX Trial Ex. 122. Indeed, internal XM documents explain

that [REDACTED] Elbert

WRT at 6, SX Trial Ex. 122. [REDACTED]

[REDACTED]

[REDACTED] Elbert WRT at 6, SX Trial Ex. 122. Thus, XM was able to

[REDACTED] Elbert WRT at 6, SX Trial Ex. 122. XM

has in fact acknowledged that its [REDACTED]

[REDACTED] Elbert WRT at 35, SX Trial Ex. 122, and has described its satellite

system as having a [REDACTED]

Elbert WRT at 6, SX Trial Ex. 122.

913. A number of other significant precursor satellite systems included the important technological elements of the SDARS systems, undermining the Services' witnesses claims that they were using "a new untested technology" that "require[d] the development of" a new means of transmitting satellite signals," Karmazin WDT at 10, Sir. Trial Ex. 1.1.

914. For instance, both Iridium and GlobalStar were important precursors to XM and Sirius. Both Iridium and GlobalStar used non-geostationary constellations of moving satellites – much like Sirius later would – to provide two-way mobile communications. Iridium and GlobalStar both delivered working mobile telephone service to individual handheld units slightly larger and heavier than a cellular phone. Elbert WRT at 24, SX Trial Ex. 122.

915. Both the Iridium and GlobalStar systems required the companies that developed them (Motorola and Loral/Qualcomm, respectively), to engineer and integrate all the elements of the systems, an effort that took several years and that was much greater than the effort required of XM and Sirius. Elbert WRT at 25, SX Trial Ex. 122. The GlobalStar satellites employ yaw steering, just like the Sirius satellites. Elbert WRT at 25, SX Trial Ex. 122. The Iridium system also utilized an orbital configuration similar to the Sirius satellites, and utilized their on-board batteries to supplement solar panels at times of low solar illumination, just as Sirius would later do. Elbert WRT at 25, SX Trial EX. 122.

916. XM and Sirius also built on the technology used by companies that broadcast television programs to homes via satellites, such as DirecTV and DISH Network (so-called direct broadcast satellite, or "DBS" companies). Likewise, XM and Sirius were able to utilize the business models established by the DBS companies. Elbert WRT at 27, SX Trial Ex. 122.

917. DirecTV, which primarily provided TV channels, also provided more than 100 audio channels, including stereo sound, via its satellites, ahead of XM and Sirius. To do this,

DirecTV used compression technology much like that XM and Sirius would later use. DirecTV also pioneered forward error correction “FEC”) which XM and Sirius later used. Elbert WRT at 27-28, SX Trial Ex. 122.

918. To establish its service, DirecTV pioneered all the same steps XM and Sirius would later take to establish their systems. XM and Sirius had a much easier job in establishing their services since DirecTV and WorldSpace had preceded them. Elbert WRT at 28, SX Trial Ex. 122.

919. The SDARS learned from satellite television that consumers were willing to pay for satellite entertainment services. 6/5/07 Tr. 42:15-19 (Parsons). XM in particular was able to rely upon DirecTV’s development in “fraud encryption”; DirecTV was “able to help [XM] avoid” problems with fraud. 6/5/07 Tr. 43:5-10 (Parsons). Furthermore, XM learned from both DirecTV and cellular phone services that it needed to develop a direct-to-consumer method of selling subscriptions through retail outlets, such as Best Buy and Circuit City. 6/5/07 Tr. 43:11-44:15 (Parsons). XM benefited from the expertise that DirecTV and Clear Channel, two of the early investors in the XM service, shared on the subjects of billing, programming, and customer service. 6/5/07 Tr. 45:16-46:12 (Parsons).

b. The SDARS did not design or build their own satellites.

920. For the development of their satellites, XM and Sirius contracted with leading satellite manufacturers who already had in production spacecraft busses that could meet the Services’ power requirements. XM purchased the Boeing 702 vehicle, which had already been purchased by PanAmSat for a high capacity satellite to be used to TV and other services. Sirius purchased its satellites from Space Systems/Loral. Elbert WRT at 39, SX Trial Ex. 122.

921. In all, XM has launched a total of four satellites, which the company has given musical names: the first two satellites are called “Rock” and “Roll,” and its third and fourth satellites are called “Rhythm” and “Blues.” Masiello WDT at 11, XM Trial Ex. 7. Just as XM borrowed its satellites’ names from the world of music, XM piggybacked off of others’ works to develop its satellite system. XM was able simply to purchase many of the components of its satellite system easily from other companies.

922. For instance, XM did not design its own satellites, nor did it build its own satellites. 6/6/07 Tr. 231:7-22 (Masiello). In fact, “Hughes (now part of the Boeing Company) constructed the satellites, which includes the basic satellite infrastructure.” Masiello WDT at 10, XM Trial Ex. 7; *see also* 6/5/07 Tr. 50:17-51:1 (Parsons). For its first two satellites, XM used the Hughes 702 satellite, 6/6/07 Tr. 206:14-18 (Masiello) “a basic satellite that Hughes offers.” 6/6/07 Tr. 207:5-9 (Masiello). Hughes had previously designed the 702 satellite for other companies before XM contracted for its first two satellites. 6/6/07 Tr. 233:7-10.

923. XM also did not design its own satellites’ payload. 6/6/07 Tr. 231:17-19 (Masiello); 6/6/07 Tr. 234:9-12 (Masiello). “Alcatel provided the communications payload elements of the satellites” Masiello WDT at 10, XM Trial Ex. 7; 6/6/07 Tr. 234:9-12 (Masiello). Alcatel had previously designed and built the payload for WorldSpace, a company that existed prior to XM and that provided satellite radio service to third-world countries. 6/6/07 Tr. 234:9-235:5. Indeed, WorldSpace was an early investor in XM. 6/6/07 Tr. 239:17-19. Masiello agreed that XM’s “digital wave form technology was based on proven WorldSpace technologies.” 6/6/07 Tr. 238:16-239:15.

924. As XM’s Chairman Gary Parsons explained, when XM developed its technological infrastructure, it received technological assistance and advice from several already-

existing satellite businesses that relied upon similar technology. 6/4/07 Tr. 308:8-310:8 (Parsons). For instance, XM entered into a “technical services agreement” with American Mobile Satellite Corporation, with WorldSpace, and with DirecTV, which “allow[ed] [XM] to access any of their engineers on . . . an hourly basis.” 6/4/07 Tr. 328:21-329:4 (Parsons). In addition, XM was able to build upon the research and development that the Fraunhofer Group had done in creating the algorithms for the chipset for WorldSpace. 6/4/07 Tr. 329:5-11 (Parsons); *see also* 6/5/07 Tr. 49:15-19 (Parsons).

925. XM also built upon the technologies and research of several different contractors and companies. For example, Hughes Network Systems was the “master contractor” responsible for developing the repeater network. 6/4/07 Tr. 320:22-321:10 (Parsons).

926. As well, XM contracted with a company called Sea Launch for the launch of its satellites. Masiello WDT at 10, XM Trial Ex. 7. Although Masiello claimed that Sea Launch had successfully handled only a handful of launches before XM, Masiello WDT at 10, XM Trial Ex. 7; 6/6/07 Tr. 235:13-16 (Masiello), Masiello admitted that XM *could have* chosen a much more experienced launch provider, 6/6/07 Tr. 235:17-236:1 (Masiello). XM also does not operate its own satellites; instead, TeleSat Canada manages the satellites on a day-to-day basis. 6/6/07 Tr. 236:8-20. (Masiello).

927. XM also essentially outsourced its satellite system design by hiring individuals who had worked at RCA Americom, a satellite firm, and who there had developed expertise in satellite systems. Masiello WDT at 5, XM Trial Ex. 7; 6/6/07 Tr. 229:18-231:3 (Masiello). XM also recruited individuals who had previously worked at Motorola. Masiello WDT at 5, XM Trial Ex. 7; 6/6/07 Tr. 240:11-16.

928. As well, rather than develop certain technologies such as audio processing on its own, XM simply licensed those technologies from other companies. For instance, “XM . . . licensed from Neural Audio a processing technology . . . that would deliver a high quality, optimized stereo image to the consumer, while reducing the amount of data XM must transmit per channel.” Masiello WDT at 8, XM Trial Ex. 7.

c. Prior examples of elements of SDARS satellite systems

929. Although the SDARS contend that they “had to surmount formidable technological challenges” in developing the satellite radio business, *see, e.g.*, Parsons WDT ¶ 12, XM Trial Ex. 1, their descriptions of their contributions are grossly overstated as compared to the wealth of existing, proven technology they adopted. Every satellite system builds on previously designed systems, and the SDARS were no different; XM and Sirius created their satellite systems by using existing available technologies and designs taken from numerous satellite ventures that preceded them. Elbert WRT at 10, SX Trial Ex. 122.

930. The SDARS integrated “a number of existing proven technologies” in order to end up with their systems. 8/27/07 Tr. 198:14-20 (Elbert). They chose elements from the existing technology and combined them to provide their service. 8/27/07 Tr. 199:7-22 (Elbert). For instance, XM and Sirius used existing waveforms and compression and other signaling techniques, all of which only had to be fine-tuned to the particulars of the satellite broadcast. 8/27/07 Tr. 214:12-20 (Elbert).

931. *Antennas.* Despite their witnesses’ claims to the contrary, Masiello WDT at 11, XM Trial Ex. 7; Smith WDT at 5, 11-12, Sir. Trial Ex. 32; 6/4/07 Tr. 311 (Parsons); 6/7/07 Tr. 67, 121-124 (Smith), the SDARS’ antennas are not innovative. In fact, XM and Sirius drew significantly on antennas used by previous systems. 8/27/07 Tr. 189:4-8 (Elbert); Elbert WRT at

32, SX Trial Ex. 122. The SDARS' antennas are "based on antenna engineering principles that are well known to engineers in the field, going back in some cases 40 years." 8/27/07 Tr. 189:8-14 (Elbert).

932. The SDARS' antennas are very similar to the antennas used in GPS systems. 8/27/07 Tr. 189:8-14 (Elbert). The GPS system commenced operations in 1985, well ahead of XM and Sirius. Elbert WRT at 32, SX Trial Ex. 122.

933. Omni-directional antennas, which XM and Sirius use and which receive signals from multiple satellites that may be in view at any one time, were described in published engineering literature as early as the 1960s and 1970s. Elbert WRT at 32, SX Trial Ex. 122.

934. Small receiving antennas existed for use in mobile satellite communications for many years before XM or Sirius needed to develop their antennas. Elbert WRT at 32, SX Trial Ex. 122.

935. While at Hughes, SoundExchange's satellite expert Bruce Elbert worked on a system, eventually used in the United Arab Emirates, that used geostationary satellites similar to those used by XM in order to transmit telephone service. 8/27/07 Tr. 155:19-156:3 (Elbert). Elbert described the system as "communicat[ing] with a small handheld device with a very small antenna on it, very similar to the nature of the transmission from an SDARS satellite to a vehicular antenna." 8/27/07 Tr. 156:7-11 (Elbert).

936. *Audio Compression.* The digital audio compression utilized by the SDARS is not innovative. The audio compression techniques XM and Sirius use to broadcast 100 or more channels by satellite have been applied since the 1970s. Elbert WRT at 38, SX Trial Ex. 122. In fact, Masiello, XM's Senior Vice President of Operations, explained that, during his time at CBS Radio Networks from 1988 to 1999, he "developed substantial expertise in the processing of

digital audio signals, and in ‘audio compression’ technology that could reduce the amount of digital information in a broadcast transmission signal yet still produce clear digital sound quality.” Masiello WDT at 3, XM Trial Ex. 7.

937. *Repeaters.* XM’s Masiello admitted that “repeaters and devices that act as repeaters” were “not a new concept” and in fact “have been around for a while.” 6/6/07 Tr. 209:5-8 (Masiello). In fact, in internal documents, XM has described its repeater system as [REDACTED] Elbert WRT at 6, SX Trial Ex. 122.

938. The United States Army employed terrestrial repeaters to extend the range and coverage of radio signals in South Vietnam in the 1960s. The use of repeaters allowed the Army to overcome signal blockage due to jungles and mountain ranges. Elbert WRT at 34, SX Trial Ex. 122. Cellular telephone networks apply the same principles involved in the use of terrestrial repeaters. Elbert WRT at 27, SX Trial Ex. 122.

939. *Mobile reception.* XM and Sirius did not originate the concept of using satellites to broadcast radio signals to moving receivers. In fact, Voice of America, a multimedia broadcasting service, and a company called TRW investigated satellite radio broadcasting in the 1980’s, and in 1992, NASA conducted research into whether programming transmitted via satellite over the S-band (the same frequency used by XM and Sirius) could be received by moving vehicles and portable receivers. Elbert WRT at 26, SX Trial Ex. 122.

940. For their mobile receivers, XM and Sirius drew heavily on the experiences of satellite businesses that provided mobile satellite service (“MSS”) to users in motion in cars and other forms of transportation. Iridium and GlobalStar offered two-way communications to users via handheld and vehicular phones. Elbert WRT at 37, SX Trial Ex. 122.

941. The satellite component of XM and Sirius's vehicular antennas is found in the handset and vehicular antennas used with Iridium and GlobalStar devices. Elbert WRT at 26, SX Trial Ex. 122.

942. The component of XM and Sirius's vehicular antennas that receives signals from the terrestrial repeaters is based on designs for cellular telephones. Elbert WRT at 26, SX Trial Ex. 122.

943. *Diversity.* "Signal diversity," the practice of using multiple signals to overcome barriers such as trees or buildings, is a well-known technique within the satellite industry. As early as 1964, satellite textbooks mentioned diversity. General Electric experimented with satellite signal diversity in the late 1970s. AT&T used diversity in the 1970s as well. Elbert WRT at 30-31, SX Trial Ex. 122. Today, global positioning ("GPS") systems also use multiple satellites to deliver data to users' receivers. Elbert WRT at 27, SX Trial Ex. 122.

944. *Orbits.* XM's and Sirius's witnesses claimed their orbits are unique. Smith WDT at 4, Sir. Trial Ex. 32; Masiello WDT at 11, XM Trial Ex. 7. However, both XM and Sirius use orbits that were first developed by others. Elbert WRT at 35, SX Trial Ex. 122.

945. XM uses a geostationary orbit, a kind of orbit that has been in use since the mid-1960s. Internal XM documents acknowledge that XM uses [REDACTED] [REDACTED] Elbert WRT at 36, SX Trial Ex. 122.

946. Sirius uses a highly elliptical orbit which has long been known within the satellite industry as the "Tundra" orbit. The Soviet Union developed the highly elliptical Molniya orbit in the 1969s. Sirius has acknowledged that its orbits are [REDACTED] [REDACTED] Elbert WRT at 36, SX Trial Ex. 122.

947. Although XM and Sirius's witnesses claim the SDARS possess extensive patents, it is notable that the orbits themselves are not patented, but rather the specific architecture of the systems that happen to *use* the orbits. 8/27/07 Tr. 219:9-220:20 (Elbert).

948. *Risk Management.* Although the SDARS' witnesses make much of the risks involved with utilizing satellite technology, they vastly overstate those risks. Two forms of risk unique to satellite business are the risk of launch failure and the risk of in-orbit failure. Elbert WRT at 13, SX Trial Ex. 122. Not only have the SDARS witnesses overexaggerated the risks associated with satellite launches and in-orbit satellites, the SDARS have been able to overcome those risks by utilizing well-proven methods for mitigating the risks of satellites, that are used routinely and that have been used over the last 40 years. 8/27/07 Tr. 195:14-22 (Elbert).

949. *Launch Failure.* Although Masiello testified that “[l]aunching satellites is inherently a risky endeavor,” Masiello WDT at 10, XM Trial Ex. 7, in fact the commercial satellite industry has a very good track record. The risk of launch failure is approximately five percent, Elbert WRT at 13, SX Trial Ex. 122, a “quantifiable” and “known” risk in the satellite industry, 8/27/07 Tr. 191:3-12 (Elbert).

950. Although Sirius witness Smith testified that Sirius faced “an enormous hurdle in launching [its] satellites successfully,” Smith WDT at 8, Sir. Trial Ex. 32, in fact Sirius and XM both were able to select from a number of companies capable of meeting their launch requirements on a reliable and cost-effective basis. Elbert WRT at 16, SX Trial Ex. 122.

951. For instance, Parsons testified that XM weighed offers from several competing companies for launch of its first satellites, and ultimately selected Sea Launch based on the combination of attributes provided by Sea Launch, including low price. 6/5/07 Tr. 54-55 (Parsons).

952. Karmazin was mistaken when he claimed that “any mistake in trajectory can render a satellite worthless.” Karmazin WDT at 10, Sirius Trial Ex. 1.1. In fact, a launch that is said to have “failed” does not necessarily mean that the satellite launched is inoperable. Elbert WRT at 12, SX Trial Ex. 122; 8/27/07 Tr. 192:7-9 (Elbert). In some circumstances, a launch might be deemed a “failure” but the satellite will still be usable and “can be maneuvered into the correct orbit . . . by ground command.” 8/27/07 Tr. 192:10-193:9 (Elbert). Moreover, neither XM nor Sirius has experienced a launch failure. 8/27/07 Tr. 193:10-19 (Elbert).

953. *In-orbit failure.* The failure rate of satellites in-orbit is even lower than the rate of launch failures: between one percent and one and a half percent. 8/27/07 Tr. 194:21-195:10 (Elbert). Notably, neither of the SDARS has ever had to deal with in-orbit failures. XM and Sirius’s satellites have demonstrated [REDACTED] Elbert WRT at 5, SX Trial Ex. 122. Although Karmazin claims that “satellite ventures are inherently risky,” Karmazin WDT, Sir. Trial Ex. 1.1, at 10, notably, Sirius has not experienced a single launch failure or service outage in its history. In fact, internal Sirius documents tout [REDACTED] [REDACTED]. Elbert WRT at 5, SX Trial Ex. 122. Likewise, internal XM documents indicate that [REDACTED] [REDACTED]. Elbert WRT at 5-6, SX Trial Ex. 122.

954. Contrary to the testimony of the Services’ witnesses that satellites are difficult to repair once they are in orbit, Smith WDT at 7-8, Sir. Trial Ex. 32; Karmazin WDT at 10, Sir. Trial Ex. 1.1, satellite businesses utilize a number of proven strategies for minimizing risk once satellites are in orbit. Elbert WRT at 17, SX Trial Ex. 122. For instance, should a satellite experience problems in orbit, satellite operators have the option to create an in-flight “work-

around” to solve problems that cannot be fixed by a redundant component. Elbert WRT at 19, SX Trial Ex. 122.

955. *Insurance.* One way satellite businesses mitigate risk is by purchasing launch and in-orbit insurance. Elbert WRT at 13, SX Trial Ex. 122. Both XM and Sirius have at times purchased launch insurance and in-orbit insurance. Elbert WRT at 14, SX Trial Ex. 122.

956. Launch insurance provides payments/benefits to the purchaser of the insurance when the satellite is damaged or destroyed during the actual launch, as well as when the satellite is delivered into orbit safely but does not arrive within a specified distance of its target orbit. Elbert WRT at 14, SX Trial Ex. 122.

957. In-orbit insurance, also called satellite “life” insurance, insures a satellite for a value which drops as the satellite depreciates each year. When problems arise in-orbit that disable the satellite or reduce its life, life insurance covers the value of that “lost life.” Elbert WRT at 14, SX Trial Ex. 122. At times, XM and Sirius both have purchased satellite life insurance. Elbert WRT at 15, SX Trial Ex. 122.

958. After the first two XM satellites had a solar concentrator problem, XM recovered from its satellite life insurance \$140 million of the \$400 million insured value, which reflected the fact that the satellites were not a total loss and continue to be useful to XM as in-orbit spares. 8/27/07 Tr. 239:22-240:21 (Elbert). In fact, the solar concentrator problem appears to have been resolved.

959. XM filed a claim on the life insurance for its first two satellites when they suffered a premature loss of power due to a problem with solar panels that reduced the expected life of the satellites. Rock and Roll continued to provide service until XM launched replacement

satellites, and Rock and Roll remain in orbit and can be used as spares if necessary. Elbert WRT at 15, SX Trial Ex. 122.

960. Sirius does not carry life insurance on its satellites. 7/7/07 Tr. 118 (Smith). The decision not to carry satellite life insurance can be a reasonable one. Sirius must have concluded that the risk of loss from an in-orbit failure was so low that it did not justify the cost of life insurance, and Sirius reported to its investors that its satellite expenses decreased when it decided not to renew its satellite insurance policy in August 2004. Elbert WRT at 15, SX Trial Ex. 122.

961. *Spares.* Another way satellite businesses mitigate risk is by purchasing “spare” satellites. Elbert WRT at 13, SX Trial Ex. 122. Satellite businesses often include provisions in their launch contracts that give them priority to launch a spare satellite within a set period if there is a failure in the original launch. XM and Sirius both included ground spares in their original satellite purchase contracts. Elbert WRT at 15, SX Trial Ex. 122. For instance, XM’s contract for its first two satellites, Rock and Roll, specified that [REDACTED]
[REDACTED]
[REDACTED] Elbert WRT at 15, SX Trial Ex. 122.

962. *Redundancy.* As another way of dealing with risk, satellites are built with what is called “redundancy”: “extra parts, spare parts, backup systems, and alternate modes of operation to work around something that might fail.” 8/27/07 Tr. 194:1-20 (Elbert). Satellites typically include redundant components so that if a critical component fails while the satellite is in-orbit, satellite operators can engage the redundant system to allow the satellite to continue operating at full efficiency. Elbert WRT at 18, SX Trial Ex. 122.

963. XM and Sirius both followed industry standard methodologies in the design of their satellites, including redundancy. Elbert WRT at 18, SX Trial Ex. 122. For instance, XM built in redundancy into its satellites, including redundant traveling wave tube amplifiers, redundant receivers, and redundant multiplexers. Masiello WDT at XM-Masiello Ex. 7, XM Trial Ex. 7.

964. *Testing.* Satellite engineers also minimize risk by building on pre-existing satellite designs that are proven to work in space, minimizing the risk of new elements that may fail. Elbert WRT at 18, SX Trial Ex. 122. Furthermore, satellites undergo months of thorough testing after assembly and prior to launch. Elbert WRT at 18, SX Trial Ex. 122.

965. *Benefits.* By using satellites to distribute their programming, XM and Sirius in fact obtain many benefits. Elbert WRT at 4, SX Trial Ex. 122. Indeed, the SDARS' satellite expert Roger Rusch, who attempted to claim that the SDARS had broke new technological ground, and whose testimony the Services ultimately withdrew, often told groups to which he lectured that "told groups to which he lectured that satellite radio broadcasting is "[b]rilliant," "cost effective" and based on a "business model [that] can work." Elbert WRT at 4, SX Trial Ex. 122.

966. Satellites enable the SDARS to broadcast their programming to a market as large as the entire United States. Elbert WRT at 5, SX Trial Ex. 122; 8/27/07 Tr. 196:4-22 (Elbert).

[REDACTED]

[REDACTED]

[REDACTED] Elbert WRT at 5, SX Trial Ex. 122.

967. Satellites also give the SDARS the ability to add unlimited number of subscribers with little to no incremental costs: the SDARS do not incur any additional costs related to their satellites when a new subscriber is added. 8/27/07 Tr. 197:8-20 (Elbert).

968. Broadcast of information via satellite is more efficient than terrestrial transmission using copper wires, fiberoptic cables, or multiple wireless stations. SDARS Trial Ex. 92, at 10. Additionally, the satellites available to the SDARS enabled them to use small, low-cost receivers for consumers. 8/27/07 Tr. 197:2-7 (Elbert).

969. In analyzing technical contribution, it is relevant to consider that the Services' investments in technology are long-term and will be a fraction of the expected revenue from those investments over time. Herscovici WRT at 24, SX Trial Ex. 130. This is worth noting in light of Sirius CEO Karmazin's claim that his company "expects to invest more than \$1 billion in coming years to replace our satellites and build additional terrestrial repeaters." Karmazin WDT at 9, Sir. Trial Ex. 1.1.

970. Satellites have the advantage of being cost-effective because the vast majority of a satellite's lifetime cost is expended before launch. Elbert WRT at 5, SX Trial Ex. 122. Furthermore, once the satellite is launched into place, it has everything it needs to operate for its life, and is almost completely self-sufficient. Elbert WRT at 5, SX Trial Ex. 122. In internal documents, Sirius acknowledged that [REDACTED] [REDACTED] Elbert WRT at 5, SX Trial Ex. 122.

5. The Third Sub-factor – Investment, Costs, and Risks

971. The SDARS argue that the record companies and recording artists make little or no contribution or investment to the SDARS' service and face little risk because distributing

sound recordings via the SDARS has no incremental cost. That is wrong both as a fact and as a matter of law.

972. As the Librarian and the CRT have found previously, in considering the investment, cost, and risks faced by record companies and the SDARS, it is necessary to consider all of the record companies' investment, cost, and risk – not simply some subset that is attributable to satellite radio. *PES I*, 63 Fed. Reg. at 25407 (considering costs, investment, and risks of entire record industry and noting consistently increasing sales and revenues over time for the record companies); *1981 Mechanicals Decision*, 43 Fed. Reg. at 10480-81 (same).

a. Record Companies and Performers Make Greater Investments than the SDARS, Have Higher Costs and Face Greater and Increasing Risks.

973. Whereas in 1996, the PES were in a period of major transition, today it is the record companies, as discussed in Section II.C.1, *supra*, that are facing massive changes in their business model. At this time in history, record companies are facing greater risks than at any time prior, and those risks are dramatically greater than they were at the time of the PES I decision. Indeed, the record companies are undergoing a significant shift in how they are selling their products (a shift that the PES were undergoing in 1996). *Herscovici WRT at 25, SX Trial Ex. 130*. Record companies now facing declining revenues and consistent annual declines in the dollar value of CDs and other products. Moreover, these declines are expected to continue as consumers begin to consume music in new ways, including through satellite radio. *Herscovici WRT at 25, SX Trial Ex. 130*.

974. These facts are never discussed at all in the testimony of Dr. Woodbury; he essentially ignores the economics of the record industry, both by arguing that their costs, investment, and risks are not “incremental” – and therefore, in his view, they are irrelevant – and

by blindly assuming that the record companies exist in a world identical to that of 1996, when the Librarian and the PES I CARP found that the record companies risk was less than that of the PSS because the companies had seen increasing revenues for 15 years. By never considering the record company side of the equation, Dr. Woodbury's analysis is completely skewed and leads to an insupportable conclusion.

i. Record Companies and Performers Make Enormous Investments in Sound Recordings.

975. The record industry makes enormous investments in the sound recordings that are the centerpiece of the SDARS' service. Whereas, according to Mr. Musey, the Services have invested \$3 billion since their inception, Universal Music Group – a single, albeit the largest, record company – exceeds that level of investment in the creation and distribution of sound recordings every [] years. Herscovici WRT at 26, SX Trial Ex. 130. The investment of record companies in sound recordings dwarfs that of the satellite radio industry. Herscovici WRT at 26, SX Trial Ex. 130; SDARS Ex. 35 (WMG 2006 10-K) (showing expenditures of more than \$3 billion in fiscal year 2006).

976. And, like the SDARS, the record companies' investments are made up-front with the hope of recovering costs over time. As Mr. Chmelewski explains, "Blind Pig does not earn a profit on an album until its costs are recouped, and even when that happens, we do not receive that revenue until many months after the costs were incurred." Chmelewski WDT at 7, SX Trial Ex. 64. And if a record is not financially successful, Blind Pig bears the burden for such a loss. Chmelewski WDT at 7, SX Trial Ex. 64.

977. The Services' claims about their investment in satellites and technologies must be seen for what they are – long-term investments that are expected to reap enormous rewards. To put in perspective the \$3 billion investment they have made since their inception, Sirius alone

has predicted that it will earn \$3 billion in revenues in a single year during the license period (2010). Even assuming lower projections from analysts, Sirius will earn at least \$2 billion per year in revenues in 2010, 2011, and 2012, not to mention more in later years. Herscovici WRT at 27, SX Trial Ex. 130.

978. Almost all of the costs incurred by the record companies are necessary for the SDARS to have the sound recordings that they use to attract and retain subscribers. Ciongoli WDT at 2-3, SX Trial Ex. 67. This includes the costs associated with manufacturing physical products in that they provide the revenue necessary for the record companies to finance the production of new sound recordings or the associated marketing needed to create popular music. Ciongoli WDT at 3, SX Trial Ex. 67. And even though physical sales have experienced a precipitous decline over the past several years, these costs have not diminished. SX Trial Ex. 67 at SX Exhibit 106 DR (UMG-US Only Income statement showing years 1999-2005).

979. Of all of UMG's costs, the greatest category of expenses includes those costs associated with A&R – the costs related to acquiring the sound recording in the first place, including the costs of making and finding the talent and ultimately selling and then paying the royalties to the artists. 6/27/07 Tr. 135:8-17 (Ciongoli). These investments are critical to the record company's ability to both create and popularize music recordings which is what forms the content for the broadcasts used by the SDARS and other digital services. In other words, it is this investment that gives the music its ultimate value. 6/27/07 Tr. 136:19-137:21 (Ciongoli). And it is this value that the SDARS exploit to both attract and retain subscribers.

980. UMG's total costs in 2005 were approximately [REDACTED]. Ciongoli WDT at 3, SX Trial Ex. 67. *See also* SX Trial Ex. 67 at SX Exhibit 106 DR (UMG Income statement showing itemized costs for fiscal years 1999 through 2005). This includes marketing and

recording costs, variable costs, and overhead expenses for UMG's operations. Ciongoli WDT at 3, SX Trial Ex. 67.

981. Recording costs are up-front costs that the record companies invest in the creation of the sound recordings. In theory, these multi-million dollar costs are recoupable from royalties otherwise paid to the artists or production companies; however, the majority of recordings are not successful and thus these up-front costs are not ultimately recouped. Ciongoli WDT at 7, SX Trial Ex. 67 Likewise, while most A&R costs are recoupable, some are not, and thus to the extent they are not, such costs are an additional up-front investment that record companies make in the creation of sound recordings that is never actually recouped. Ciongoli WDT at 7, , SX Trial Ex. 67. In 2005, UMG's income statement shows [REDACTED] in non-recoupable costs and write-offs from costs not likely to be recouped, as well as [REDACTED] of capitalized recording costs and advances. Ciongoli WDT at 7, SX Trial Ex. 67; SX Trial Ex. 67 at SX Exhibit 106 DR. These numbers do not fully reflect the total amount invested in finding talent and making sound recordings. In 2006, UMG's gross A&R expenditures were [REDACTED] million (exclusive of overhead). Ciongoli WRT at 6, SX Trial Ex. 118.

982. UMG's income statement for fiscal year 2005 includes [REDACTED] in marketing expenses. Ciongoli WDT at 5, SX Trial Ex. 67; SX Trial Ex. 67 at SX Exhibit 106 DR. These costs are also essential to ensure the availability of new artists and recordings to the marketplace, and are therefore critical for the SDARS business as well. Ciongoli WDT at 5, SX Trial Ex. 67. Marketing costs include all of those expenses necessary to market the artists themselves, to turn songs and albums into hits and artists into stars, including investments in the production of music videos, consumer advertisements, publicity and promotional tours, promotional merchandise, and many other related expenses. Ciongoli WDT at 5, SX Trial Ex.

67. UMG incurred a total of [REDACTED] in gross marketing expenses in 2005, of which video production ([REDACTED]) and consumer advertising ([REDACTED]) comprised the biggest costs. Ciongoli WDT at 5-6, SX Trial Ex. 67; SX Trial Ex. 67 at SX Exhibit 106 DR. UMG's marketing costs also included [REDACTED] in publicity and promotional tours, [REDACTED] on independent services, [REDACTED] in packaging costs, [REDACTED] on promotional merchandising, and [REDACTED] in cooperative advertising. Ciongoli WDT at 6, SX Trial Ex. 67.

983. All of these marketing expenses are directly related to creating the music content and making the sound recordings available to the public. Publicity and promotional tours are critical to creating awareness for an artist or album, and allows the record companies to introduce artists live and in person to key industry figures and fans, and independent marketing services assist UMG's in-house staff with these marketing efforts. Ciongoli WDT at 6, SX Trial Ex. 67. Marketing spend on packaging – which include packaging for physical products as well as images used in conjunction with digital distribution – as well as the merchandising spend all aim to help sell physical and digital products. Ciongoli WDT at 6-7, SX Trial Ex. 67.

984. The record companies' investment in the distribution and marketing of sound recordings creates an awareness among consumers and helps to make music popular. It is this awareness that then builds and interest in and desire for the music, which in turn leads consumers to subscribe to satellite radio. 6/27/07 Tr. 140:22-141:22 (Ciongoli).

985. UMG's variable costs consist of royalties and other contractual payments, manufacturing, and other variable distribution costs. For fiscal year 2005, UMG spent over [REDACTED] on external direct costs of sales, over [REDACTED] of which related to amounts associated with artists and other participants. Ciongoli WDT at 4, SX Trial Ex. 67; SX Trial Ex.

67 at SX Exhibit 106 DR. This includes a growing amount from various forms of digital exploitation, such as [REDACTED] for on-line and [REDACTED] for mobile-related royalties. Ciongoli WDT at 4, SX Trial Ex. 67; SX Trial Ex. 67 at SX Exhibit 106 DR. These costs also include payments to those who contribute to the music making process, including recording artists, producers, music publishers, licensors of sound recordings, various types of production companies, and joint venturers. Ciongoli WDT at 4, SX Trial Ex. 67; SX Trial Ex. 67 at SX Exhibit 106 DR. These costs represent the lifeblood of UMG's business, ensuring that musical creativity continues to flourish by providing economic incentives (and often financial viability) for the creative talent to continue to pursue their craft. Ciongoli WDT at 4, SX Trial Ex. 67; SX Trial Ex. 67 at SX Exhibit 106 DR. These expenses are thus directly related to the record industry's ability to maximize the availability of creative works to the public and directly related to the product being provided to the SDARS and on which the SDARS' service is based. Ciongoli WDT at 4, SX Trial Ex. 67; SX Trial Ex. 67 at SX Exhibit 106 DR.

986. In addition, UMG spent [REDACTED] in manufacturing and related expenses, as well as [REDACTED] in other variable distribution costs, in fiscal year 2005. Ciongoli WDT at 4, , SX Trial Ex. 67; SX Trial Ex. 67 at SX Exhibit 106 DR. UMG had [REDACTED] in funds in their inventories at the end of fiscal year 2005. Ciongoli WDT at 4, , SX Trial Ex. 67. These expenditures are equally essential to the business of selling recorded music. Ciongoli WDT at 4-5, SX Trial Ex. 67. Absent these costs, the production of new music – upon which the SDARS rely for the success of their business – would be seriously disrupted. Ciongoli WDT at 5, SX Trial Ex. 67.

987. Another significant expense incurred by the record companies that is directly related to the creation of sound recordings is overhead. In fiscal year 2005, UMG's total

overhead was [REDACTED]. Ciongoli WDT at 7, SX Trial Ex. 67; SX Trial Ex. 67 at SX Exhibit 106 DR. This figure includes general and administrative overhead ([REDACTED]), which includes costs associated with executive, legal, finance, copyright and royalties, information technology, human resources, corporate development, and administrative departments; marketing overhead ([REDACTED]), which includes the cost of UMG's in-house marketing staff (but does not include the [REDACTED] spent on third-party marketing expenses); A&R overhead ([REDACTED]), which includes the staff responsible for searching for and identifying talent, as well as developing and finding the best possible material for their records and overseeing their recording sessions; and sales and distribution overhead ([REDACTED]), which includes the departments responsible for retail interaction, customer service, credit and collection, and supply chain fulfillment with both physical and digital retailers, as well as departments responsible for the production of inventories and various logistical operations necessary for the business. Ciongoli WDT at 7-9, SX Trial Ex. 67; SX Trial Ex. 67 at SX Exhibit 106 DR.

988. Mr. Ciongoli's testimony concerning the massive investment of UMG in the creation of sound recordings, their marketing, and distribution is but one example in the record of the enormous investment and significant risks faced by record companies. As Mr. Kushner explained in this testimony, his record label (Atlantic) – one of several within WMG with a market share of around 5% – spent, in 2006, [REDACTED] on A&R and an additional [REDACTED] in overhead for the A&R function, [REDACTED] in designing packaging for its new releases, with an additional overhead cost of [REDACTED], [REDACTED] in music video production, [REDACTED] on new media marketing with an additional [REDACTED] in overhead expenditures dedicated to new media marketing, [REDACTED] to market new

releases, averaging [REDACTED] per release, with overhead for the marketing department of [REDACTED]. Kushner WDT at 5-19, SX Trial Ex. 65.

ii. Record Companies and Performers' Costs Have Increased, Not Decreased, at a Time When Revenues Are Declining.

989. As discussed in more detail in Section II.C. *supra*, the investments that record companies must make have not changed or are increasing, at the same time that revenues are declining. Herscovici WRT at 25, SX Trial Ex. 130. Thus, costs are what they always have been or are higher, and returns are lower. Herscovici WRT at 25, SX Trial Ex. 130.

990. It has always been true that only one out of every ten artists succeeds in being commercially viable. Kushner WDT at 14, SX Trial Ex. 65. This becomes more difficult as time goes by and, in any case, the “hits” that drive revenues for record companies and fund their investment in new sound recordings are not what they used to be. Kushner WDT at 14, SX Trial Ex. 65. There is little dispute that the risks that the record industry is facing have increased significantly over the last several years and will continue to do so. Kushner WDT at 13, SX Trial Ex. 65; 6/26/07 Tr. 118:11-119:4 (Kushner); Herscovici WRT at 4, SX Trial Ex. 130; 8/29/07 Tr. 219:5-220:5 (Herscovici).

991. The statistics on declining sales of hit records means that there has been a steep decline in the average profit margin of record companies. To survive, they have no choice but to reduce staff, control A&R costs, and reduce marketing costs. But the decline also means that there is less money to sign new artists and make new sound recordings. Kushner WDT at 15-16, SX Trial Ex. 65. As a result, fewer artists are signed and fewer sound recordings are made. 6/26/07 Tr. 123:1-11 (Kushner).

992. Further evidence of the struggles that the record industry is facing comes from the shortening of artist careers and the sudden failures of artists that have established track records. Whereas artists could once have long careers spanning decades and 10 or more releases, today it is rare for an artist to have more than a few successful releases. Kushner WDT at 17, SX Trial Ex. 65. This adds to the risk of the record companies, who invest in the careers of artists who, once they have “broken” (i.e., gone from unknown to a star) could be relied upon to generate revenues for a long period of time. The shortening of artist careers means that the potential reward to record companies is reduced and the risks of releasing an album even by an established artist is greater. Kushner WDT at 17-18, SX Trial Ex. 65.

993. Today, established stars are no longer a reliable source of future income for record companies. Many artists have a single hit album and then fall into obscurity. Thus, although these established artists expect and receive a larger A&R and marketing spend (based on a track record of success), they can no longer reliably produce commercially successful sound recordings. Kushner WDT at 18, SX Trial Ex. 65. The risk to the record companies is thus larger and, because the expenditures to create and market the sound recordings are larger, the losses from these established artists’ subsequent albums are actually larger than for new artists with more modest budgets and expectations. Kushner WDT at 18, SX Trial Ex. 65.

994. One case study is that of Jewel – an artist who had achieved significant success over the years. Her first album in 1995, titled *Pieces of You*, sold 7.3 million units according to SoundScan. Her second album in 1998, “*Spirit*,” sold 3.7 million units. Her albums in 1999, 2001, and 2003, sold 1.1 million units, 1.6 million units, and 762,000 units respectively. Kushner WDT at 18, SX Trial Ex. 65. The 2006 album, however, sold only between 300,000 and 400,000 units. 6/26/07 Tr. 130:2-17 (Kushner).

995. The Jewel case study shows that the level of investment necessary to create, market, and sell sound recordings remains significant (even when we are cutting costs) and the level of revenues (from all sources including satellite radio) must be significant in order to offset the costs and leave money available for future investment. Kushner WDT at 19, SX Trial Ex. 65.

996. For Jewel's 2003 album, A&R costs were [REDACTED]; for her 2006 album, A&R costs were [REDACTED] – each levels typical of the cost to record an album by an established artist with multiple producers and guest artists. Kushner WDT at 19, SX Trial Ex. 65. In contrast to recording costs, which need to be at a certain level to make a quality sound recording, marketing costs can be, to some extent controlled. For Jewel's 2003 album, marketing costs were [REDACTED]; for the 2006 album, marketing costs were reduced to [REDACTED]. Kushner WDT at 19, SX Trial Ex. 65. The cost of music videos was similarly reduced from [REDACTED] for the 2003 album to [REDACTED] for the 2006 album. Kushner WDT at 20, SX Trial Ex. 65. These levels of marketing and video production costs, while lower, could not be reduced beyond a threshold level to give the album a fair chance at success. Kushner WDT at 20-21, SX Trial Ex. 65.

997. The results, however, of Jewel's 2006 album were far worse than the 2003 album. Whereas the 2003 album earned the record company a profit of [REDACTED], the 2006 album resulted in a loss of [REDACTED]. Kushner WDT at 21, SX Trial Ex. 65.; 6/26/07 Tr. 131:7-133:11 (Kushner).

998. In the PES I Proceeding, the Librarian and the PES I CARP relied heavily on the fact that, at that time, although the record companies faced significant risks, "the record companies have adapted to the vagaries of the music business, and as an industry, have shown

consistent growth in units shipped and dollar value of records, CDs, and music videos from 1982-1996.” PES I Librarian’s Decision, 63 Fed. Reg. at 25407. As the record in this proceeding, that is no longer true. It is now the record companies facing enormous uncertainty as to their future, and the record companies facing the greater risk.

iii. Thee Risks Faced by Record Companies Are Greater Than Ever and Are Increased by Satellite Radio’s Substitutional Effect.

999. The *PES I* Librarian decision relied heavily on the claims that the PES service promotes the sale of sound recordings, thereby reducing the risk faced by the record companies. The record in this case, however, establishes precisely the opposite. Because the satellite radio service is substitutional, its very existence increases the risks faced by the sound recording industry, completely changing analysis of this sub-factor. Herscovici WRT at 24-25, SX Trial Ex. 130.

1000. The reasons why satellite radio threatens other revenue streams are many and discussed above. *See* Section V.E. *supra*. Catalog sales have declined, in great part, because there are outlets such as the SDARS that play catalog music 24 hours a day, 7 days a well. Narrowcasted channels of programming such as that offered by the SDARS substitute for sales of catalog sound recordings. Where a consumer has commercial-free access to their longtime favorite artists on the SDARS, they are less likely to buy catalog sound recordings in any form. Kushner WDT at 17, SX Trial Ex. 65. For example, if a consumer likes to listen to 80’s music, they formerly could only listen to a steady diet of such music by purchasing CDs and playing them in their car; now the consumer can satisfy this desire by listening to 80’s music on an XM or Sirius channel, thereby replacing sales of sound recordings. 6/26/07 Tr. 127:1-128:1 (Kushner); 6/26/07 Tr. 154:1-13 (Kushner).

1001. XM and Sirius have a particularly significant negative impact on the sale of sound recordings because most listening to XM and Sirius is in the car and listening in the car has historically been the place where many consumers listen to purchased music. 6/26/07 Tr. 128:2-13 (Kushner).

1002. Once again, Dr. Woodbury relies on his repeated claim that satellite radio promotes the sales of sound recordings to claim that there is little or no risk to record companies from allowing their property to be used on satellite radio. Again, once that claim is debunked, his entire analysis of this sub-factor falls apart. Herscovici WRT at 26, SX Trial Ex. 130.

1003. Although the SDARS are clearly not the only reason for the decline in revenues, they are one reason, and every new subscriber to the SDARS provides significant additional risk of lost revenue to the record companies and artists. As discussed in Section V.E. *supra*, the evidence of substitution in this case is overwhelming.

b. In Evaluating This Factor, the Court Must Consider All the Investment, Not Simply Incremental Investment, and Must Consider the Likely Return on Investments Over Time.

1004. Dr. Woodbury's analysis of this subfactor is incorrect because he ignores all of the investment and all of the risk that the record companies and artists face, claiming that the lack of "incremental" investment for purposes of satellite radio. Dr. Woodbury essentially ignores the business that record companies and recording artists are in – investing upfront in the hopes of recouping that investment across multiple revenue streams (including satellite radio) so that they earn sufficient funds to invest in new sound recordings in the future. Herscovici WRT at 25-26, SX Trial Ex. 130.

1005. Setting aside, as discussed in SoundExchange's Proposed Conclusions of Law, that Dr. Woodbury's analysis is inconsistent with prior decisions, Dr. Woodbury's claims about

the returns where there is no “incremental” investment is wrong as a matter of economics and empirically wrong based on the Services’ own conduct. As a matter of economics, the value of the contribution of an input does not depend on the fact that the input may also be able to be sold in other places and have its costs recovered elsewhere; this is a concept called economies of scope. 8/30/07 Tr. 28:10-29:13 (Herscovici). The Services themselves spend large amounts of money on non-music content that has already been created and requires no “incremental” investment, such as Sirius’s [REDACTED] agreement to rebroadcast two Fox News channels. Herscovici WRT at 25-26, SX Trial Ex. 130. By Dr. Woodbury’s logic, Sirius should have paid Fox virtually nothing for those channels. Herscovici WRT at 26, SX Trial Ex. 130.

1006. Similarly, XM claims to have invested a great deal in satellites, but those are long-term investments and one need only look at the expected revenue streams to be earned from those investments to understand that the investments are much more modest than they seem. XM invested \$566 million to launch 2 satellites in 2005. The present discounted value of the revenues to be earned from use of those satellites (which have a 15-year live) is \$14.6 billion. Herscovici WRT at 27 & App. L, SX Trial Ex. 130. Thus, investment in satellites is really only about 50 cents per subscriber per month – less than Sirius pays for Howard Stern and less than XM pays for [REDACTED]. Herscovici WRT at 27 & App. L, SX Trial Ex. 130; 8/30/07 Tr. 31:3-20 (Herscovici).

1007. Moreover, XM and Sirius are able to extend the cost of these investments over their useful life through borrowing or sale-leaseback arrangements and even if they ceased to operate they would be able to recoup some of the investment by selling assets, like satellites, to other users. Herscovici WRT at 27-28, SX Trial Ex. 130.

1008. Witnesses for the Services suggest that it is essential that they are able to have net income by the end of the license period, that they need to be able to pay off the accumulated deficit of their investments in this license period, that they be able to retire their debt in the near term, and that the royalty rate should be set to ensure that they can do so. But that makes no sense as a matter of economics and the fact that the Services do not currently have net income and/or will not have paid off their accumulated deficit by the end of the license period says little about the health or prospects of the companies, or the risks that they face. Herscovici WRT at 28, SX Trial Ex. 130.

1009. Many firms have years of losses on their way to great success – that simply reflects investment in future earnings. It is common for businesses, like the SDARS, that have high fixed costs. Amazon, like the Services, had to invest upfront, build infrastructure, build up customers and loyalty, and develop relationships. It spent money investing in those things with the expectation of reaping the benefits of those investments over an extended period of time. 8/29/07 Tr. 226:1-22 (Herscovici).

1010. From the mid-1990s until the fourth quarter of 2001, Amazon did not have a profitable quarter. 8/29/07 Tr. 227:1-7 (Herscovici). From 1997 to 2002, Amazon sustained \$3 billion in accumulated losses (its accumulated deficit), but has earned nearly \$1.2 billion in net income since 2002. Today, Amazon still has an accumulated deficit of \$1.8 billion, but it has a market capitalization of \$30 billion and investors agree that its prospects are exceedingly good. Herscovici WRT at 28, SX Trial Ex. 130. The fact that Amazon had and still has a significant accumulated deficit says little about the future prospects of the company – which in the case of Amazon are very strong according to the general consensus of analysts. 8/29/07 Tr. 227:1–228:13 (Herscovici).

1011. The Services are no different. They are investing now to build their subscriber base, which is the key to their ultimate profitability. As companies with high fixed costs and low variable costs, each new subscriber is highly valuable and contributes very significant margins. Content that attracts subscribers – music – is exceedingly valuable to the SDARS because it is essential to their long-term profitability. As content attracts more subscribers, the risks and investments in satellites and other technology becomes a diminishing part of the business. Herscovici WRT at 28-29, SX Trial Ex. 130.

1012. The Services' business and their prospects today are dramatically different from those of the PES in 1996. In contrast, the Services are well-funded, have growing revenues that dwarf the PES, have strong prospects, and are successful with their subscription businesses – indeed the fastest-growing subscription businesses in history. Herscovici WRT at 29, SX Trial Ex. 130. The PES failed as subscription businesses and could not convince consumers to pay for them. Herscovici WRT at 29, SX Trial Ex. 130.

1013. In the end, both the record companies and satellite radio companies make significant investments and face significant risks. But the paths each are on today differ greatly. The Services are growing and on a path in significant profitability. The record companies are facing more difficult times, retrenching as the shift to digital distribution alters their business. 8/30/07 Tr. 29:14-21:2 (Herscovici). Whereas the Services are growing and facing less risk, the record companies are shrinking and facing greater risks. Herscovici WRT at 28, SX Trial Ex. 130.

1014. Once again, the substitution effect of satellite radio is relevant to this sub-factor. Whereas sound recordings are essential to the survival of satellite radio, the very existence of satellite radio reduces the profitability of the record companies, unless they can receive an

adequate return here. If all consumers were to transfer their music spending to satellite radio and the levels of compensation were what the satellite radio companies propose, record companies could not survive. Even at more modest levels of substitution from the Mantis (and Wind) surveys, record companies would earn less revenue overall from the existence of satellite radio, absent sufficient compensation established by this proceeding. Herscovici WRT at 29-30, SX Trial Ex. 130.

6. The Fourth Subfactor– Opening New Markets

1015. The satellite radio companies stand in very different position than the PES did in 1996. The PES were really the first digital music services of their kind. Today, however, there are a multitude of ways in which people can listen to music in their home, in their car, and on the go – all of which the Services admit are their competition. Herscovici WRT at 30, SX Trial Ex. 130. Rather than opening new markets and expanding the extent to which users can access creative works, the Services are merely displacing music consumption in other markets. Herscovici WRT at 30, SX Trial Ex. 130.

1016. Dr. Herscovici concluded that, upon review of the evidence on the state of both industries today and the risks that they face, there is no reason to depart from a market rate in order to satisfy the objectives of the third factor and its subfactors. Herscovici WRT at 29-30, SX Trial Ex. 130.

D. Fourth Factor (§ 801(b)(1)(D)) – “Minimize Any Disruptive Impact on the Structure of the Industries Involved and on Generally Prevailing Industry Practices.”

1017. The fourth statutory objective seeks to “minimize any disruptive impact on the structure of the industries involved and on generally prevailing industry practices.” 17 U.S.C. § 801(b)(1)(D).

1018. Although this factor is one that parties to a marketplace negotiation would consider (i.e., neither party would be likely to agree to a rate that would have a disruptive impact on their business), *Herscovici WRT* at 42, SX Trial Ex. 130, this is the one statutory objective that “marketplace evidence, standing alone, does not address.” *Amusement & Music Operators*, 676 F.2d at 1157.

1. Prior Panels Have Made Clear that Phasing-in a Market-based Royalty Rate Fully Addresses the Objectives of This Factor.

1019. Prior courts and copyright royalty panels have held that phasing in a royalty rate gradually over time fully addresses the objectives to be advanced by the fourth factor. As the Seventh Circuit noted in the appeal of the jukebox ratesetting decision, a “phasing-in approach to fee increases” “adequately reflect[s] concern for the impact of the change on all parties involved” under the fourth statutory factor. *Amusement and Music Operators*, 676 F.2d at 1148. *See also Juke Box Decision*, 46 Fed. Reg. at 889; *PES I CARP*, Slip Op. at ¶ 186. SoundExchange’s rate proposal adopted precisely this phase-in approach.

2. The Principal Economists in This Case Agree that a Disruptive Impact Is More than Simply an Increase in Cost; Rather, a Royalty Rate Can Have a Disruptive Impact Only If It Undermines the Long-term Viability of Either the SDARS or the Record Companies.

1020. Consistent with prior interpretations of the fourth factor by the courts, a “disruptive impact” is more than simply an increase in costs to the SDARS or a decline in royalties to the record companies. Any royalty rate as a mathematical matter would have such an effect, but that does not mean it will cause “disruption.” *Herscovici WRT* at 31, SX Trial Ex. 130.

1021. This understanding is consistent with the holdings of prior tribunals. “The fact that an increase in the rate will increase costs is not per se an argument against raising the rate”

under § 801(b)(1)(D). *Phonorecords*, 46 Fed. Reg. at 10486. *See also id.* at 10481 (“We reject the contention that any immediate increase in the mechanical royalty payable to copyright owners would be disruptive on the record industry. The record in this proceeding clearly shows that an increase in the compulsory license is necessary to afford copyright owners a fair return.”).

1022. Similarly, a rate that might cause the stock price to go up or down is not disruptive – stock prices go up and down for myriad reasons that do not call into question the long-term viability of companies. *Herscovici WRT* at 31, *SX Trial Ex.* 130; 8/30/07 Tr. 33:14-22 (*Herscovici*). Indeed, XM’s and Sirius’s stock prices have increased and decreased significantly over the years, but those changes have not affected their ability to retain subscribers, their ability to acquire financing at lower rates, or their long-term prospects. 8/30/07 Tr. 34:1-15 (*Herscovici*); *Musey WDT* at 26-27, *XM Trial Ex.* 9.

1023. Thus, from an economic perspective, disruption must be more significant than that associated with normal business risks. This means that alleged changes to the date on which companies might become profitable (on an EBITDA, net income, free cash flow, or other basis) provide little information about disruption. *Herscovici WRT* at 32-33, *SX Trial Ex.* 130.

1024. An analysis of disruptive impact is necessarily forward-looking. Nothing the Court can do will affect past investments or historical losses; those issues are irrelevant to the impact that the rates will have on the industries. Only a forward-looking analysis can address the objectives set forth in the fourth factor. *Herscovici WRT* at 32, *SX Trial Ex.* 130; 8/30/07 Tr. 33:3-13 (*Herscovici*).

3. As a Threshold Matter, the Record Is Undisputed that a Royalty Rate that Starts at Between 5 and 6% of the SDARS Revenues Has No Disruptive Impact.

1025. As a threshold matter, the evidence unequivocally establishes that a royalty rate of between 5 and 6% of the SDARS' revenues would not have a disruptive impact.

1026. Sirius budgeted for a sound recording royalty for 2007 in the range of [REDACTED]. 6/12/07 Tr. 172:1-10; 185:13-19 (Frear). Mr. Vendetti testified that a royalty rate of 4% would not affect XM's business plan at all. 6/06/07 Tr. 37-39 (Vendetti). And although Mr. Vendetti indicated that royalty rates of 8-9% of all revenues would be more difficult and might push profitability out a year, presuming XM did not make reductions in cost or increase subscription rates, 6/05/07 Tr. 345:22-346:22 (Vendetti), he did not claim that such rates would be disruptive to XM's business.

1027. Indeed, as Mr. Musey explained in his testimony, the analysts who made the projections that are the basis of Mr. Musey's testimony, as well as the rebuttal testimony of Mr. Frear and Mr. Vendetti, all assume that XM and Sirius pay royalties for musical works and sound recordings of approximately 7-8%. 6/13/07 Tr. 212:11-13 (Musey). Given that the SDARS claim to pay approximately [REDACTED] for musical works, Woodbury WRT at 38, SDARS Trial Ex. 80, investment analysts – on whose analyses of future profitability the SDARS rely in their rebuttal and whose projections for the SDARS are very positive – presume a royalty rate for sound recordings of approximately [REDACTED]. Indeed, Professor Noll, the SDARS' own economic expert, admits that at a 6% rate, the SDARS would not be any worse off than they currently are. 8/16/07 Tr. 169:21-170:4, 185:15-186:19 (Noll).

1028. Of course, the fact that analysts and the SDARS themselves budget for royalties at these levels says only that rates at these levels cannot possibly be disruptive. Herscovici WRT at

33, SX Trial Ex. 130. Such budgets and analyses, however, do not suggest that higher rates would be disruptive – indeed, the evidence is that higher rates would not at all be disruptive, and the SDARS provide no evidence to the contrary. Herscovici WRT at 33, SX Trial Ex. 130.

1029. Thus, to achieve the fourth statutory objective, the only question to resolve is at what point above [REDACTED] of revenue does a royalty rate have a disruptive impact on the SDARS. As discussed below, a rate that might have a disruptive impact is well above the rates proposed by SoundExchange in its rate proposal (which begin at 8% of revenue). Herscovici WRT at 41, SX Trial Ex. 130.

4. The Evidence Overwhelmingly Supports the Conclusion that the Rate Proposed by SoundExchange Will Not Have a Disruptive Impact on the SDARS.

1030. An economist would understand the fourth factor to be impacted by a rate that on its own threatened the long-term viability of the SDARS or the record companies to operate profitably. Herscovici WRT at 32, SX Trial Ex. 130; 8/30/07 Tr. 31:21-33:2 (Herscovici). This understanding is similar to the principle articulated by Dr. Noll (which he then fails to apply), who stated that “[d]isruption to an industry is best measured by asking whether a proposed rate affects its long-term viability.” Noll WRT at 9, SDARS Trial Ex. 72.

1031. SoundExchange has argued that the SDARS businesses will not be disrupted if the Court were to adopt SoundExchange’s Third Amended Rate Proposal, Butson WRT at 20, SX Trial Ex. 123, and that beyond implementing any rate increase gradually, there is therefore no basis under the fourth statutory factor to set a rate outside the range of rates that would be seen in a hypothetical marketplace transaction that satisfies the first three statutory criteria. Herscovici WRT at 42, SX Trial Ex. 130.

1032. XM and Sirius to the contrary argue that they are struggling in the marketplace, and that the rate proposed by SoundExchange, or any rate substantially above the 5-6% of revenue level projected by analysts, would disrupt their businesses and would be unfair to their investors. *See, e.g.*, Musey WDT at 29-32, XM Trial Ex. 9.

1033. The overwhelming weight of the factual evidence supports SoundExchange's claims and does not support the Services' claims. *See infra*. As discussed below, the conclusion that the rate proposed by SoundExchange is consistent with the objectives to be advanced by the fourth factor, i.e., will not cause any disruptive impact on the SDARS, is amply demonstrated by 1) the financial projections and models produced by all sides, including consensus analyst estimates and Sirius's own internal models (which it did not provide to the Court); 2) Mr. Musey's analysis of stock prices, which finds that a rate of [REDACTED] in 2007-8 will result in the stock prices of XM and Sirius *increasing* by significant percentages within 18 months; and 3) the conduct of the SDARS in paying market rates for non-music content.

a. The Financial Performance of the SDARS Demonstrates that They Are in a Strong Financial Position and Able to Pay Market Rates for Sound Recording Royalties.

1034. The SDARS suggest that they are small struggling companies that cannot afford to pay SoundExchange's proposed royalty. The record does not support the SDARS' claims. *See supra* Part II.D. Moreover, the SDARS' own statements outside the context of this proceeding utterly belie the statements they have made to the Court.

1035. The SDARS are not struggling and they are not small. As discussed in Section II.D.3, *supra*, the satellite radio industry has grown faster than any other telecom or media subscription service. 6/19/07 Tr. 145:15-17 (Butson). In comparison to other digital media services that have developed over the last several years, the SDARS have achieved incredible

success. 6/18/07 Tr. 111:11-112:6 (Eisenberg). Since their launch, they have acquired over 14 million subscribers, compared to the two million that services such as Napster or Yahoo!Music have acquired, and they have earned approximately \$1.5 billion in revenue in 2006, as compared to the other digital services which collectively earned approximately \$200 million. 6/18/07 Tr. 111:11-112:6 (Eisenberg).

1036. That the SDARS today are asset-rich and equity poor is hardly surprising. Just like other companies which invest heavily in the early stages in growing their businesses with the expectation of significant revenues later, the SDARS have made substantial investments in their infrastructure and have incurred losses to date. Both XM and Sirius are now in a “negative equity” position, meaning that their liabilities exceed their assets. However, this accounting phenomenon is without significance in the financial analysis of the industry, because it does not take into account the value of the subscriber base or of future subscriber growth, profitability, and cash flow. Butson WDT at 22, SX Trial Ex. 57.

1037. The SDARS themselves, analysts, and economists fully expect those investments to be recouped – and then some – over time. Indeed, that is precisely the business model of the SDARS. *See, e.g.*, 6/6/07 Tr. 325:22-326:2 (Karmazin), Parsons WDT ¶10, XM Trial Ex. 1. The fact that they have red ink on their balance sheet in the early years of operation is part of their business plan; moreover, it has not stopped them from paying market prices and significant sums for non-music content.

1038. As Dr. Noll acknowledged after a question from the bench:

Most of these high-tech industries, because of the nature of their cost structure, the high-fixed cost, low-marginal cost, do have huge start-up losses initially. I don't know of any examples of important companies that don't have huge losses in the first few years of their operation. So the fact that they're losing a lot of money doesn't give you any real information. At the same time, at some point it ought to turn positive. And so the issue is well, they got started in late 2001, early

2002, something like that, is it that intervening five-year period enough. In most of these industries that's not enough to determine whether this is really a viable company in the long run.

8/16/07 Tr. 89:21-90:15 (Noll). This is consistent with Sirius's CEO Mel Karmazin's statements, who testified that it is reasonable to expect "that there's a bunch of years where you have losses before you make any money." 6/6/07 Tr. 325:22-326:2 (Karmazin).

1039. Indeed, as discussed below, XM and Sirius are simply following in the footsteps of highly successful companies, such as DirecTV and Amazon, that invest in building subscribership to earn revenues once their audience is built. *See infra*; Herscovici WRT at 28, SX Trial Ex. 130.

1040. And despite these early losses, the SDARS, the analysts, and the economists all expect a profitable future for the SDARS. As Mr. Karmazin explained, he is hopeful about Sirius's future, testifying that when he joined the company he "saw a path based on where the company was going that the company would be a profitable company, and maybe be a very profitable company somewhere down the line." 6/6/07 Tr. 325:18-21 (Karmazin).

1041. The past performance and near-term projections for the SDARS are provided in more detail *supra* Section II.D.4 & 5. As that record evidence demonstrates, these companies have experienced extraordinary growth – on every metric.

1042. Sirius's annual revenue has grown on an annual basis to \$.8 million in 2002, \$12.9 million in 2003, \$66.9 million in 2004, \$242.2 million in 2005, and \$637.2 million in 2006. SIR Trial Ex. 61 at SIR Exhibit 27, p. 2. Sirius achieved positive free cash flow for the first time in the fourth quarter of 2006, four years after adding its first subscriber. *Id.* It continues to maintain public guidance that it will reach \$1 billion in revenues and have more than 8 million subscribers by the end of 2007. 6/12/07 Tr. 104:3-9, 136:19-137:9 (Frear). And

[REDACTED]
[REDACTED] 6/12/07 Tr.
94:16-22 (Frear); SX Trial Ex. 43 at 17, 28. According to Sirius, it will achieve \$1 billion in revenue faster than any company in the history of radio. SX Trial Ex. 74 at 2.

1043. Sirius's most recent public statements to investors have all been extraordinarily positive. In May 2007, Sirius reported that demand for Sirius continues to be strong, its financial performance is on track, and its business plan is being executed successfully. SX Trial Ex. 28 at 2. According to CEO Mel Karmazin, Sirius's second quarter 2007 financial and operating results were "once again very solid and continue to demonstrate strong customer demand for our service, as well as excellent execution by our team." SX Trial Ex. 74 at 1. Mr. Karmazin continues, "demand for Sirius continues to be strong, our financial performance is on track, and we are executing very well on our business plan." *Id.* at 2.

1044. In the second quarter of 2007, Sirius reported healthy subscriber growth of approximately 561,000 net additions, topping its first quarter results and leading to a 53% increase in its ending subscriber base from the end of the second quarter of 2006, a result well above consensus estimates. SX Trial Ex. 74 at 1, 3. At the end of the second quarter of 2007, Sirius had 7.14 million subscribers, reflecting an addition of 1.1 million new subscribers in 2007. SX Trial Ex. 74 at 1. All of Sirius's key financial metrics improved in the second quarter of 2007: SAC per gross add, customer service and billing cost per sub, contribution margin, fixed costs as a percentage of revenue, and free cash flow. SX Trial Ex. 74 at 3.

1045. EBITDA excluding subscriber acquisition costs ("SAC") is a measure the SDARS tout and is a useful measure of the progress of the SDARS business, since under accounting requirements subscriber acquisition costs must be expensed when they are incurred, but new

subscribers benefit the business throughout their expected lives. Excluding these costs therefore gives a good sense of how the businesses' costs and revenues relate to each other at a given moment in time. 6/12/07 Tr. 96:3-14 (Frear).

1046. Sirius was pre-SAC EBITDA positive for the second quarter of 2007, SX Trial Ex. 74 at 4, and expects to be pre-SAC EBITDA positive for the entire year in 2007. 6/12/07 Tr. 96:20 (Frear); SX Trial Ex. 43 at 6, 23.

1047. As Sirius has explained, its operating results are scaling. Contribution margin (revenue less customer service and billing, revenue sharing, royalties and cost of equipment) exceeds 70% of revenue. SX Trial Ex. 74 at 4. Thus, the SDARS business model of high fixed costs and high incremental margins is working – as its customer base grows, its profitability increases. SX Trial Ex. 74 at 2.

1048. Not surprisingly, Sirius's internal projections for the future are extremely positive.

[REDACTED]

[REDACTED] SX Trial Ex. 77 at 24. [REDACTED]

[REDACTED] 6/12/07 Tr. 92:19-93-15 (Frear). [REDACTED]

[REDACTED] SX Trial Ex. 77 at 3. In May 2007, when asked to comment on previous longer term public company guidance that Sirius would have \$3 billion of revenue and \$1 billion of free cash flow by 2010, Mel Karmazin stated that his "viewpoint is that nothing has changed in my outlook on how I see the Company longer term." SX Trial Ex. 28 at 9.

1049. XM's financial performance tells the same story. XM is one of the fastest growing consumer products in history, having reached five million subscribers faster than new technologies such as cable television, Internet, cell phones, and MP3 players. XM Trial Ex. 10

at Vendetti Ex. 1, p. 1. XM grew from 3.2 million subscribers in 2004 to 5.9 million subscribers in 2005 to 7.6 million subscribers in 2006. *Id.*

1050. XM too relies for business planning purposes on future projections, which show that it will become an increasingly profitable company over time. *Infra.* [REDACTED]
[REDACTED] SX Trial Ex. 77 at 16.

1051. XM projects that it will have between 9.0 and 9.2 million subscribers by the end of 2007, 6/5/07 Tr. at 314:3-5 (Vendetti); Vendetti WRT at 5, XM Trial Ex. 10, growing to the “high teens” by 2010. 6/6/07 Tr. at 24:15-21 (Vendetti); XM Trial Ex. 10 at Vendetti Ex. 3, p. 6. Analysts covering XM – analysts on whom XM relies – agree that XM’s subscribers will grow to over 9 million in 2007, and predict that XM’s subscriber base will increase to over 17 million in 2012. Vendetti WRT at 10 & Ex. 3at Performance vs. Guidance and Consensus Average Section 1, XM Trial Ex. 10.

1052. XM’s public guidance is that it expects to generate approximately \$1 billion in revenue in 2007. Butson WRT App. B, SX Trial Ex. 123. [REDACTED]
[REDACTED]
[REDACTED]

[REDACTED] SX Trial Ex. 77 at 3. Analysts covering XM predict that XM’s total revenue will grow to over \$2 billion in 2010, and to over \$2.5 billion in 2012. Vendetti WRT at 10, XM Trial Ex. 10.

1053. Considering that revenues are projected to increase at a rate much faster than costs, XM projects over [REDACTED] in free cash flow by 2010. SX Trial Ex. 77 at 16. This demonstrates that XM’s business model of high fixed costs and high incremental margins is working for XM just as it is for Sirius. *Supra* Section II.D.

1054. In sum, the SDARS are successful companies growing profitably, and growing at a record-breaking pace.

b. The Models Presented By All Parties Are Roughly Consistent and Demonstrate that the SDARS are Successful Growing Companies.

1055. All parties introduced financial models during the rebuttal phase of the trial which track the SDARS' success on which they base their claims relating to the future financial status of the SDARS. Mr. Butson provided a model similar to the one that he and other investment analysts routinely use to evaluate companies. Butson WRT, SX Trial Ex. 123. Mr. Butson also provided the Court with a model populated with Sirius's own internal data – which Sirius itself failed to provide the Court – which it uses for its own internal planning purposes. Butson WRT, SX Trial Ex. 123. Finally, Mr. Frear and Mr. Vendetti each provided the Court with consensus analyst evaluations of the SDARS, which include projections by multiple investment analysts. Frear WRT, Sirius Trial Ex. 61; Vendetti WRT, XM Trial Ex. 10.

1056. The most salient thing about all of these models is that they are all roughly consistent with each other. They all show that the SDARS are likely to have continued dramatic increases in subscribership and revenue, that the SDARS' future depends primarily on their ability to attract subscribers, and that not only will the SDARS be profitable, but they will be highly profitable over time on a free cash flow, EBIDTA, and net income basis.

1057. Moreover, all of these projections compel the conclusion that SoundExchange's rate proposal will not have a disruptive impact in the SDARS' business. Under any scenario presented by any party as realistic, if the Court adopts SoundExchange's rate proposal, XM and Sirius will remain highly profitable over time on any metric. That different royalty rates may

result in XM and Sirius becoming profitable on one of the above-mentioned metrics a year earlier or a year later says nothing about the long-term viability of the companies.

i. Mr. Butson's Consensus Models

1058. The models that Mr. Butson developed are based upon and are similar to the models he used when he was an analyst at Legg Mason. 6/19/07 Tr. 153:3-5 (Butson); 8/27/07 Tr. 279:11-281:1 (Butson) (August rebuttal models follow same form as models in direct case). The models are also similar to the models currently used by analysts covering XM and Sirius. 6/19/07 Tr. 154:2-8 (Butson). When Mr. Butson was at Legg Mason he received feedback on these models not only from his clients, but also from XM and Sirius themselves, and they told him that his models were particularly detailed and well-constructed. 6/19/07 Tr. 153:8-19 (Butson).

1059. The input data in the Butson models comes from various sources, including company filings, press releases, conference calls and presentations, and other analysts' reports. 6/19/07 Tr. 154:11-17 (Butson); 8/27/07 Tr. 280:14-281:11 (Butson).

1060. Mr. Butson's SDARS models extend to the year 2020, because he believes it is important to extend out a model until a time at which the modeled company is mature and growing at a terminal growth rate typical of a mature company, which for the SDARS he estimates would be 2020. Extending the model to that point allows the analyst to check to assure that growth and other model assumptions are reasonable ones, and allows for a more realistic discounted cash flow analysis. 6/19/07 Tr. 162:1-163:12 (Butson).

1061. Mr. Butson's most up-to-date models are the models he submitted with his rebuttal testimony on July 24, 2007. One set of these models, included as appendices A and B to his rebuttal testimony, are based on a consensus of projections by Wall Street analysts. He

developed the consensus models to track closely the latest Wall Street analyst averages for the key metrics of subscribers, revenue, and EBITDA, as described in detail in App. C to his rebuttal testimony. Indeed, Mr. Butson matched free cash flow exactly to the consensus reached in the analysts' reports until 2010, where there are many published reports on which to calculate a reliable consensus. The calculation of those consensus figures is set out in App. D to Mr. Butson's rebuttal testimony. Mr. Butson then extrapolated the figures for subsequent years from the 2010 figures using reasonable growth rates, and a terminal growth rate of 4% after 2020. Butson WRT at 7, Apps. A, B, C, D, SX Trial Ex. 123; 8/27/07 Tr. 280:20-282:13 (Butson).

1062. The principal differences between the consensus analysts' raw data and Mr. Butson's consensus analysts' model are first, that Mr. Butson's models incorporate SoundExchange's Second Amended Rate Proposal royalty figures,⁵² while the analysts' do not; second, that Mr. Butson took account of the new debt that the SDARS had taken on very recently, while the analysts' reports typically predated this event; and third, that Mr. Butson assumed that all debt would be refinanced at 10%, while many analysts made more aggressive assumptions regarding the debt. 8/27/07 Tr. 282:16-283:8 (Butson).

1063. Dr. Herscovici separately reviewed the projections of investment analysts and compared them to Mr. Butson's analysis. He confirmed that Mr. Butson's analysis of the impact of SoundExchange's rate proposal on XM and Sirius is correct, i.e., that it would not have a disruptive impact or threaten their long-term viability and that the Services would be able to

⁵² SoundExchange's Second Amended rate proposal is identical to its Third Amended rate proposal in relevant respects; the more recent proposal, submitted after Mr. Butson's rebuttal testimony, includes an option to pay the royalty on a per broadcast per customer basis, thus giving the SDARS the opportunity to purchase more or less music. If they purchase the same amount of music as they currently are using, the royalty payments would be no different under either option offered in the Third Amended proposal. *Compare* SoundExchange's Second Amended Rate Proposal *with* SoundExchange's Third Amended Rate Proposal.

operate without significant change. Herscovici WRT at 40, SX Trial Ex. 130; 8/30/07 Tr. 37:5-39:1 (Herscovici). Indeed, Mr. Butson's analysis was less optimistic, i.e., more conservative, than those of the investment analysts. 8/30/07 Tr. 38:16-39:1 (Herscovici).

ii. The Sirius and XM Internal Models

1064. In addition to his updated models based on analysts' consensus, in the rebuttal phase Mr. Butson also presented models based on the SDARS' own internal data used for their business purposes. Butson WRT at 8, Apps. F, G & SX Exhibit 239-248 RR, SX Trial Ex. 123; 8/27/07 Tr. 284:4-286:6 (Butson).

1065. Mr. Butson presented to the Court data from something which Sirius calls "The Model" – a series of linked Excel spreadsheets that are created and maintained by Sirius's finance department. "The Model" reflects a sophisticated set of financial models that in many respects resembles the model Butson created using the analyst consensus, though populated with significantly more data. Butson WRT at 8, SX Trial Ex. 123. Sirius relies on the data and projections contained in "The Model" for its own internal purposes, including forecasting, business planning, and providing guidance to investors. 6/12/07 Tr. 142:12-19 (Frear). "The Model" is based on extensive information that is not made available to the public. For example, in the public data the SDARS provide no breakdown between retail SAC versus auto SAC, a detail that is found in the SDARS internal models. 8/27/07 Tr. 287:7-19 (Butson).

1066. According to Mr. Frear, Sirius's internal model is in many respects a more accurate predictor of the future than the analysts' models. The SDARS have a better sense than the analysts of how subscribers will behave, since "we simply don't give the analysts an awful lot of information." 8/15/07 Tr. 156:12-16 (Frear). Nor, suggested Mr. Frear, do analysts have as good a sense of the costs incurred by the SDARS, *id.* at 157:3-9. Sirius has the ability to look

at more granular information than the analysts do, and Sirius has access that is not disclosed to the public. As a result, in Mr. Frear's view, a model using Sirius's internal data has a higher likelihood of producing accurate results. 8/15/07 Tr. 216:19- 217:6 (Frear).

1067. The Sirius internal model was not updated for publicly reported 1Q07 results or the company's recent \$250 million term loan. As a result, Mr. Butson made the proper adjustments reflecting this new data when creating the model. Butson WRT at 8, SX Trial Ex. 123; 8/27/07 Tr. 275:1-21 (Butson). He also changed the data to reflect SoundExchange's Second Amended Rate Proposal. 8/27/07 Tr. 275:22-276:4 (Butson).

1068. In addition, Mr. Butson presented a model based on documents produced in discovery by XM and reflecting recent XM financial projections. Butson WRT at App. G, SX Trial Ex. 123. In discovery XM did not produce financial data similar to that provided by Sirius. Mr. Butson therefore relied upon a draft financial forecast from 2006 that contained relevant projections, along with public guidance issued by XM. The projections Mr. Butson was able to locate are consistent with the critical current guidance that XM will have "high-teen millions" of subscribers in 2010. This guidance was reiterated as recently as April of this year on the company's 1Q07 earnings conference call. Butson WRT at 9, SX Trial Ex. 123.

1069. The SDARS' internal data is overall more optimistic and in some cases much more optimistic than the consensus data. Butson WRT at 8, SX Trial Ex. 123; 8/27/07 Tr. 286:11-18 (Butson). For example, subscriber revenue, EBITDA, and free cash flow were all more optimistic in the company internal data than in the data from the analysts. *Id.* 286:21-287:3.

iii. Mr. Frear's Model

1070. In the rebuttal phase of the case, Sirius provided a model representing future projections of its business based on consensus analysts' projections. Although Sirius has internal models which it relies on for its business purposes, it declined to provide such models to the Court or to rely on them for the conclusions reached in Mr. Frear's rebuttal testimony. Instead, it relied on a model created solely for purposes of this litigation. 8/15/07 Tr. 150:17-151:4 (Frear). And in the model it chose to submit to the Court, it presented a less optimistic picture than the model that it uses both for internal business purposes and for providing information to investors.

1071. The model that Mr. Frear, the CFO of Sirius, presented with his rebuttal testimony is a mixture of consensus analysts' views and Sirius's internal projections. Frear WRT at 5 & SIR Exhibit 59, SIR Trial Ex. 61. For some metrics, Sirius used consensus analysts' projections provided by a third party vendor named InSynch. Frear WRT at 4, SIR Trial Ex. 61. For other metrics, Mr. Frear substituted Sirius internal data. 8/15/07 Tr. 151:12-20 (Frear). For example, it relied on analyst consensus projections for data about subscriber growth, while relying on Sirius's internal modeling for subscriber churn. Frear WRT at 5, SIR Trial Ex. 61; 8/27/07 Tr. 294:6-17 (Butson).

1072. Despite the cherry-picking of data, Mr. Frear's model presents an outlook that is substantially similar to that in Sirius's own internal models and in Mr. Butson's consensus model, Butson WRT, App. F, SX Trial Ex. 123, although the subscriber growth and advertising revenue numbers are somewhat lower in the model Mr. Frear created specially for this proceeding than they are in the Sirius data provided in discovery to SoundExchange. 8/27/07 Tr. 295:5-13 (Butson); *supra* (charts comparing data).

a) Although Generally Consistent with Mr. Butson's Models, Mr. Frear's Model Uses Unrealistically Low Projections of Revenue Because He Assumes the Retail Price of the SDARS' Service Will Decline in Real Dollars in Future Years.

1073. The most significant difference between the Sirius modeling provided by Mr. Frear and Mr. Butson's consensus model concern ARPU, or average revenue per user. The reason for this difference is that Mr. Frear assumed that the price of the SDARS service would decline, in real dollars, throughout the rate term, 8/15/07 Tr. 182:3-7 (Frear), while Mr. Butson assumed that retail rates would increase at the rate of inflation. Frear WRT at 6, SIR Trial Ex. 61; 6/19/07 Tr. 166:21-167:2 (Butson). However, Mr. Frear provided no empirical or economic support for his claim that Sirius would not increase rates at least to keep pace with inflation throughout the rate term. 8/15/07 Tr. 184:10-18 (Frear).

1074. The impact of Mr. Frear's choice is important. Because ARPU has such a significant effect on revenue, most of the metrics upon which Mr. Frear relies in his model are affected by his decision to model a reduced subscription rate in real terms in every year from 2008 to 2012. For example, the analysts upon whom Mr. Frear otherwise relies (but who assume rates will increase with inflation), predict Sirius will generate positive free cash flow in 2008. SX Trial Ex. 73 at 1. Mr. Frear's projections do not show positive free cash flow until [REDACTED]. SIR Trial Ex. 61 at SIR Exhibit 58, p. 2.

1075. Specifically, the analysts' consensus upon which Mr. Frear relied for other purposes predict average revenue per user per month in 2007 of \$10.85 rising to \$13.17 in 2012. SX Trial Ex. 73 at 2. However, because Mr. Frear assumed that retail rates would decline in real terms over the course of the rate term, the ARPU figure upon which he relied in his analysis was lower than the consensus data. Compare SIR Trial Ex. 61 at SIR Exhibit 58, p. 2

([REDACTED]/user/month in 2007 rising only to [REDACTED]/user/month in 2012), *with* SX Trial Ex. 73 at 2. In contrast, based upon historical practice and the high customer satisfaction associated with satellite radio (*i.e.*, self-pay churn under 2% per month) and the duopoly industry structure, Mr. Butson agrees with virtually all other analysts that the SDARS will gradually increase their prices over time (at least in line with inflation), much as pay television does today. Accordingly, analysts including Mr. Butson expect the subscription ARPU to grow from the current level of about \$10.31 to the mid-teens by 2020. Butson WDT at 27-28, SX Trial Ex. 57.

1076. Moreover, Mr. Frear's estimates of ARPU are also inconsistent with Sirius's own internal projections, which show both subscription prices and ARPU increasing over time. As a result, although Sirius internally projects that it will be cash flow positive in [REDACTED], 6/12/07 Tr. 92:19-93-15 (Frear), Mr. Frear's model suggests that Sirius will not be cash-flow positive until [REDACTED]. SIR Trial Ex. 61 at SIR Exhibit 58, p. 2.

1077. Mr. Frear provided no credible explanation for his decision to rely on consensus analysts' projections for some data in his model, including subscriber growth data, but not for other data in his model, including in particular ARPU data. Indeed, he professed to be unaware as to whether Sirius's internal models had been updated to include subscriber growth data. 8/15/07 Tr. 149:7-151:1 (Frear).

1078. Moreover, Mr. Frear also gave wholly inconsistent testimony when attempting to explain the choices made in creating his model. While at times he testified that the Sirius internal model has a higher likelihood of producing accurate results than the consensus models because Sirius has the ability to look at more granular information than the analysts do, and because Sirius has access to data that is not disclosed to the public, 8/15/07 Tr. 216:19- 217:6 (Frear), at other times he justified his use of analyst data by claiming "analysts had as good a

guess as anybody about the demand for satellite radio in the future.” 8/15/07 Tr. 152:17-153:1 (Frear). When asked by the Court why analysts are more qualified than the company in their knowledge of growth of subscribers, he answered “it’s a great question, honestly” and that Sirius’s executives “have a narrower view of the world than the analysts do.” 8/15/07 Tr. 154:17-18; 156:4-5 (Frear).

b) Mr. Frear’s Model of Declining Real Prices Is Inconsistent with Sirius’s Internal Projections, Public Statements, and Analyst Consensus.

1079. Mr. Frear’s decision to model Sirius’s finances based on the assumption that retail rates would not even keep pace with inflation throughout the rate period is unrealistic, 8/27/07 Tr. 297:3-20 (Butson), and is not supported by the weight of the evidence in the record. Indeed, this assumption is inconsistent with Sirius’s own internal projections, public statements, and the consensus of analysts.

1080. [REDACTED]
[REDACTED]
[REDACTED].

6/12/07 Tr. 84:19-22 (Frear); SX Trial Ex. 43 at 17. [REDACTED]
[REDACTED] 6/12/07 Tr. 87:8-10 (Frear).

1081. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] 6/12/07 Tr. 107-108 (Frear). [REDACTED]
[REDACTED]

[REDACTED]
[REDACTED] 6/12/07 Tr. 107-108
(Frear).

1082. While Sirius chose not to raise prices in 2007, it continues to make public statements that it believes its content justifies a higher price. Nevertheless, it claims to have made a business decision to keep prices steady to attract a greater number of customers. SX Trial Ex. 28 at 5. [REDACTED]
[REDACTED]. 6/12/07 Tr. 106:8-11 (Frear).

Rather, [REDACTED]
[REDACTED]. 6/12/07 Tr.
104:3-9 (Frear); SX Trial Ex. 43 at 17.

1083. In assuming that retail rates would decline in real terms throughout the rate period, Mr. Frear's model is at odds not only with Mr. Butson's model, but also with 18 out of 19 of the analysts upon which Frear relied for the other parts of his analysis, 8/27/07 Tr. 295:14-18 (Butson), and [REDACTED]
[REDACTED]. 8/27/07 Tr. 297:17-20 (Butson).

1084. Another difference between Mr. Butson's consensus model and Mr. Frear's model is that Mr. Frear assumed that when they expired, existing Sirius convertible notes would be exchanged for stock. 8/15/07 Tr. 109:5-22 (Frear). Mr. Butson made the more conservative assumption that the notes would be refinanced at a rate of 10%. 8/27/07 Tr. 276:11-277:12 (Butson).

c) The Sole Criticism's of Mr. Butson's Model Was Mr. Butson's Reliance on Sirius's Own Projections.

1085. While Mr. Frear in his written rebuttal testimony criticized Mr. Butson's earlier October 2006 Sirius model as "vastly overoptimistic and unrealistic," Frear WRT at 2, SIR Trial Ex. 61, in his oral testimony he subsequently acknowledged that the differences between Mr. Butson's October 2006 projections and Mr. Frear's August 2007 projections were the result principally of slower than expected growth in the retail channel after October 2006, and were not the result of any defect in Mr. Butson's October modeling. 8/15/07 Tr. 161:19-163:11 (Frear).

1086. Notwithstanding the criticism Mr. Frear leveled at Mr. Butson in his written rebuttal testimony, at trial he acknowledged that "there is nothing inherently wrong with Mr. Butson's projections as of October 2006." 8/15/07 Tr. 172:15-16 (Frear). Frear stated that his written testimony was not "intended to impugn Mr. Butson's work in any way shape or form." 8/15/07 Tr. 173:1-3 (Frear). Instead, "the point we're making . . . is that we believe that the demand for satellite radio has changed dramatically in the course of the last year and that we think it is appropriate to reflect that in any models that are used for the consideration of an appropriate rate in this case." 8/15/07 Tr. 163:4-11 (Frear).

1087. Specifically, Sirius suffered a slowdown in demand for satellite radio, particularly on the retail side, starting in the fourth quarter of 2006. This slowdown was not predicted by Sirius or by the analysts in 2006. Frear WRT at 3, SIR Trial Ex. 61; 8/27/07 Tr. at 271:4-9 (Butson).

1088. Although he acknowledged that there was nothing wrong with Mr. Butson's October 2006 projections, Mr. Frear did state that the most "significant issue I have with the October projections from Mr. Butson" was that Butson's October 2006 estimates for subscriber

growth were “optimistic at the time relative to our own forecasts.” 8/15/07 Tr. 84:21-22 (Frear). That statement is false. Mr. Butson’s October 2006 model predicted 6.3 million subscribers by the end of 2007, SX Trial Ex. 58, p. 3, line 5, which was exactly the same as the public guidance offered by Sirius at that time. *Id.* p. 1, line 48; 8/15/07 Tr. 166:1-3 (Frear) (Sirius did not lower 6.3 million guidance until December 2006).

1089. While Mr. Frear in his written rebuttal testimony disparaged Mr. Butson’s October 2006 revenue estimates as “fundamentally unreliable and misleading,” in fact those estimates were based on Sirius’s own public guidance in place at that time. Thus, Sirius at that time was stating that it expected to have \$1 billion in revenue in 2007, and \$3 billion in 2010. SX Trial Ex. 58, p. 1, line 47; 8/15/07 Tr. 173:7-8 (Frear). Mr. Butson’s October models projected \$1.07 billion in 2007, and a more conservative \$2.4 billion in 2010. SX Trial Ex. 58, p. 1, line 9. 6/19/07 Tr. 168:6-13; 169:3-17 (Butson).

iv. Vendetti Model

1090. In the rebuttal phase of the case, XM and SoundExchange each provided models representing future projections of XM’s business based on consensus analysts’ projections. Specifically, XM provided modeling based on consensus analysts’ projections, Vendetti WRT at 8-9, XM Trial Ex. 10; 8/27/07 Tr. 292:1-19 (Butson).

1091. XM provided the Court a model of its future profits and losses through 2012 based on a consensus of analysts’ reports collected and analyzed by its vendor InSynch. Mr. Vendetti testified that XM’s most recent current views are relatively consistent with the analysts’ consensus. 8/15/07 Tr. 34:19-35:19 (Vendetti); 8/27/07 Tr. 292:7-18 (Butson).

1092. The consensus analysts’ data relied upon by XM and SoundExchange in their respective August 2007 reports did not rely on exactly the same group of analysts. 8/27/07 Tr.

292:16-293:6 (Butson). However, the average figures that were derived respectively by Mr. Butson and Mr. Vendetti were in most respects very similar. *Id.* Tr. 293:7-13. Generally speaking, the InSynch analysis upon which Mr. Vendetti relied produced somewhat more optimistic results than the analysis Mr. Butson performed. *Id.* Tr. 293:9-19.

v. The Results of All of the Models Show Significantly Increased Revenues and Subscribership and Similar Costs Into the Future.

1093. As discussed above, all of the financial models are similar in their projections for subscribership, revenues, and cost. Indeed, the consensus models that Mr. Butson provided in the rebuttal phase are more conservative than the consensus figure used by Mr. Frear. 8/15/07 Tr. 164:3-8 (Frear).

1094. Below are a series of charts that compare key metrics in Mr. Butson's analyst consensus model (Butson WRT App. A, SX Trial Ex. 123), Mr. Butson's model using Sirius internal data (Butson WRT App. F, SX Trial Ex. 123), the consensus data collected by Mr. Frear (SX Trial Ex. 73), and the projections offered by Mr. Frear in his rebuttal testimony (SIR Trial Ex. 61 at SIR Exhibit 58):

Figure 36. Ending Subscribers By Year (in thousands)

Model	2007	2008	2009	2010	2011	2012
Butson Consensus Model	7,944	9,663	11,644	13,379	14,847	16,210
Butson Sirius Model	8,111	10,463	12,322	14,240	15,711	—
Frear WRT	8,192	10,232	11,926	13,878	15,676	17,266
Frear Sirius Consensus	8,139	9,991	11,728	13,279	14,812	15,961

Figure 37. Total Revenue (in millions of dollars)

Model	2007	2008	2009	2010	2011	2012
Butson Consensus Model	946	1,241	1,577	1,928	2,251	2,555
Butson Sirius Model	943	1,318	1,738	2,130	2,420	—
Frear WRT	960	1,242	1,535	1,888	2,184	2,492
Frear Sirius Consensus	944	1,277	1,594	1,928	2,201	2,477

Figure 38. Subscriber Acquisition Costs (in millions of dollars)

Model	2007	2008	2009	2010	2011	2012
Butson Consensus Model	347	358	382	378	359	343
Butson Sirius Model	389	375	370	364	352	—
Frear WRT	383	363	361	361	365	372
Frear Sirius Consensus	384	382	390	395	414	417

1095. As the data in these charts reveal, there is a rough consensus among the parties as to Sirius's likely prospects. Moreover, to the extent there are differences, the data in the consensus model that Mr. Butson provided with his rebuttal testimony is in most years and in most respects more conservative than the data upon which Mr. Frear relies. The principal exceptions are the total revenue figures, which, as explained above, are effected by the fact that Mr. Frear assumed that Sirius's subscription price would not increase at all during the rate term, not even to keep pace with inflation. *See supra.*

1096. Below are a series of charts that compare key metrics in Mr. Butson's analyst consensus XM model (Butson WRT App. B, SX Trial Ex. 123), Mr. Butson's XM model (Butson WRT App. G, SX Trial Ex. 123), and the consensus data collected by Mr. Vendetti (XM Trial Ex. 10 at Vendetti Ex. 4):

Figure 39. Ending Subscribers (in thousands)

Model	2007	2008	2009	2010	2011	2012
Butson Consensus Model	8,994	10,609	12,121	13,565	14,866	16,070
Butson XM Model	9,246	11,856	14,781	17,977	20,940	—
Vendetti Consensus Model	9,084	10,764	12,543	14,279	16,146	17,400

Figure 40. Total Revenue (in millions of dollars)

Model	2007	2008	2009	2010	2011	2012
Butson Consensus Model	1,122	1,373	1,666	1,972	2,272	2,556
Butson XM Model	1,179	1,654	2,188	2,920	3,676	—
Vendetti Consensus Model	1,131	1,406	1,698	2,020	2,318	2,583

Figure 41. Marketing Expenses (in millions of dollars)⁵³

Model	2007	2008	2009	2010	2011	2012
Butson Consensus Model	434	529	560	580	584	625
Butson XM Model	508	616	656	682	706	—
Vendetti Consensus Model	466	521	556	596	629	683

1097. As these charts reveal, the results of Mr. Butson's XM consensus analysts' model are substantially similar to the results contained in XM's consensus analysts' model presented by Mr. Vendetti.

c. Review of the Relevant Metrics Under Any of These Models Establishes That the SDARS' Businesses Will Not Be Disrupted by SoundExchange's Proposed Rates.

1098. Although the SDARS witnesses did not analyze them, there are several metrics in the companies' income statements and in the models that provide useful empirical information relevant to whether a rate is disruptive. Butson WRT at 13, SX Trial Ex. 123. Analysis of these metrics establish that SoundExchange's rate proposal poses absolutely no risk of disrupting the SDARS' businesses.

1099. For a company to remain liquid and provide a return to its investors, it is essential that the company generate free cash flow over the longer term. Free cash flow ultimately rewards investors for their investment in the business, and it is what makes possible the return on

⁵³ Marketing Expenses, which includes subscriber acquisition costs, are XM's largest expense item, as categorized in Vendetti WRT at Ex. 4, XM Trial Ex. 10. The comparable expenses in the Butson models are broken out as subsidies and distribution, advertising and marketing, and retention and support, which are therefore summed to provide the data in the above table. *Compare*, Butson WRT App. B & G, SX Trial Ex. 123 *with* Vendetti WRT at Ex. 4, XM Trial Ex. 10 (comparing expense categories).

equity built into the company's stock price. A company's increased expenses, unless they are offset by decreased expenses elsewhere or increases in revenues, directly reduce its free cash flow. Therefore, all else being equal, an increase in royalty above the current level will decrease free cash flow. A royalty that decreased free cash flow to the point where there was never projected positive free cash flow in the future would be disruptive to the SDARS' business. Butson WRT at 14, SX Trial Ex. 123.

1100. At the same time, in evaluating present and projected free cash flows of the SDARS, it is important to observe that the SDARS businesses (as opposed to their stock prices) have grown and prospered even though the SDARS have not yet become consistently cash flow positive (Sirius achieved positive free cash flow for the first time in 4Q06; XM has yet to reach this milestone). That is not surprising or unusual. As described above, the SDARS are businesses characterized by high initial capital expenditures, high fixed costs and high incremental margins. Such businesses are expected to produce negative free cash flow in the early years until they have achieved a sustainable scale, at which point they will generate increasingly positive free cash flow. Butson WRT at 14, SX Trial Ex. 123.

1101. Therefore, the relevant question is not whether the proposed royalty will result in the SDARS becoming immediately free cash flow positive. No royalty rate of any size would have that effect. It is not their *current* state of negative free cash flow, but their projected *future* state of positive and increasingly large free cash flows that signifies that the companies are robust and healthy businesses. Similarly, the question is not whether SoundExchange's proposed royalty rate will delay the time when the SDARS become free cash flow positive as compared to a lower royalty rate. It will have that effect, by definition, just as any increased expense will have that effect. Rather, the question is whether SoundExchange's proposed royalty rate would

eliminate future projected positive free cash flows or would delay the time at which the SDARS are projected to become free cash flow positive so much that it puts these projections in question. Butson WRT at 14-15, SX Trial Ex. 123.

1102. Each of the financial models produced in the rebuttal phase of the case, whether based on Wall Street analyst consensus as calculated by XM or Sirius or Mr. Butson, or based on the companies' own internal projections as calculated by Mr. Butson – establishes that if the Court adopts SoundExchange's amended royalty rate, the new royalty would *not* have any of these relevant negative consequences associated with the SDARS' free cash flows. Based on current analyst projections, adoption of SoundExchange's rate would delay the time the SDARS become free cash flow positive by approximately one year. But once the companies become free cash flow positive, the models show that under SoundExchange's rate proposal they will continue to produce positive and increasingly large free cash flows consistently from there on. In sum, the free cash flow analysis establishes that with SoundExchange's rate proposal the SDARS would remain successful companies with bright futures. Butson WRT at 15, SX Trial Ex. 123.

1103. Beyond free cash flow, analysts and investors typically look to EBITDA, and to EBITDA margins, in evaluating a company's soundness and its ability to generate positive free cash flow in the future. EBITDA is a measure of the company's revenues less its cash operating expenses, excluding expenses associated with interest, taxes, depreciation and amortization, and stock based compensation. It essentially reflects the fundamentals of a company's operations and excludes how those operations were financed. The EBITDA margin is EBITDA divided by total revenue. Butson WRT at 15-16, SX Trial Ex. 123.

1104. Because the royalty is a cost, increases in the royalty necessarily will lower EBITDA and the EBITDA margin. Therefore, just as with the analysis of free cash flow, the relevant question as to EBITDA is whether SoundExchange's proposed royalty rate will prevent the SDARS from ever becoming EBITDA positive, will delay that time so significantly as to put it into doubt, or will lower the EBITDA margins to a point at which the success of the companies becomes questionable. The answer to these questions is no. Butson WRT at 16, SX Trial Ex.

123. SoundExchange's rate, as compared to the rate assumed by analysts, or the rate assumed by Sirius, would delay by approximately one year the time at which the SDARS become EBITDA positive, from 2009 to 2010. After that time, EBITDA continues to increase. These changes to EBITDA metrics caused by the SoundExchange rate proposal would not be disruptive to the SDARS' business practices. Butson WRT at 16, SX Trial Ex. 123.

1105. Finally, in considering disruption to the SDARS' business operations, it is relevant to consider if the proposed royalty expense would make the SDARS unable to rely on the capital markets for additional liquidity. Under SoundExchange's second amended rate proposal and the SDARS' financial condition today, the SDARS would be fully funded. That is, to remain liquid, the SDARS would have only to refinance existing debt as it comes due and, in XM's case, renew lines of credit as they expire, which is customary. They would not have to access the credit markets for additional debt or raise funds by issuing new stock. Given the manageable amount of debt currently on their books, and their ability to digest the increase in their variable costs that the proposed royalty rate would impose, there is no reasonable concern that SoundExchange's royalty rate would create a risk of illiquidity. Butson WRT at 16-17, SX Trial Ex. 123. Moreover, even if the SDARS needed to borrow additional funds, for any reason,

the record demonstrates that they are almost certain to be able to do so. Herscovici WDT at 39, SX Trial Ex. 130.

1106. Though Mr. Frear asserts that Mr. Butson has failed to account for a \$100 million liquidity “cushion” a company of Sirius’s size requires, he did not claim that Sirius would be unable to borrow that amount. 8/15/07 Tr. 214:3-13 (Frear).

1107. As part of Mr. Butson’s analysis on this point, he conservatively assumed that all maturing SDARS bonds will be refinanced at 10%, which is above the current coupon rate of the bonds. He also conservatively assumed that all maturing bonds will be refinanced, even though both Sirius and XM have some convertible bonds which may be converted into equity rather than refinanced. Butson WRT at 17, SX Trial Ex. 123; 8/27/07 Tr. 276:10-277:12, 341:15-19 (Butson).

1108. In considering free cash flow, EBITDA, and liquidity, Mr. Butson ran a sensitivity on the consensus models, which supports the claims that the SoundExchange rate poses no risk of disruption to the SDARS’ businesses. *See* Butson WRT, App. E, SX Trial Ex. 123; 8/27/07 Tr. 298:10-299:14 (Butson). If he had run these sensitivities using the SDARS’ own financial projections, the results would be even better, showing even more ample margins of safety if the SDARS projections fall short, and even less impact from the SoundExchange rate. Butson WRT at 18, SX Trial Ex. 123.

1109. The sensitivities show the effect of varying royalty rates on the three key metrics of free cash flow, EBITDA, and liquidity. In particular, Mr. Butson uses as the baseline scenario the 4% royalty that XM uses. He next set out SoundExchange’s rate proposal as well as several variations, representing steps in between a 4% rate and SoundExchange’s rate proposal. He then showed how adopting any of these rates would affect the companies’ expected results on the

three key metrics. These results show that while increased royalties, like any increased expense, necessarily impact the companies' financial performance, by no stretch do they undermine these companies' prospects for growth or disrupt their prevailing business practices. Butson WRT at 18-19, SX Trial Ex. 123.

1110. As they apply to Sirius, the sensitivities demonstrate that under the 4% royalty, Sirius achieves positive free cash flow (barely) in 2009, becomes EBITDA positive in 2009, and never dips below \$200 million in liquid assets. A royalty that starts at 5% and climbs a percentage point each year, ending at 10%, hardly effects these metrics: Sirius would achieve positive free cash flow in 2010, become EBITDA positive early in 2010, and would always have a liquidity cushion of at least \$135 million. At the full royalty sought by SoundExchange, Sirius still would achieve positive free cash flow in 2010, become EBITDA positive in 2010, and would have a minimum liquidity cushion of over \$40 million. In sum, even at the maximum rate proposed by SoundExchange, the effect of the royalty would be to push back the date at which Sirius becomes cash flow positive and EBITDA positive by a year, and to have liquidity drop to under \$ 100 million in the years 2009 and 2010, only to rebound robustly in 2011 to an amount in excess of \$200 million. Butson WRT at 18-19, SX Trial Ex. 123.

1111. As concerns XM, the sensitivities demonstrate that under the 4% royalty, XM achieves positive free cash flow in 2010, becomes EBITDA positive in 2009, and always has a substantial cash cushion. A royalty that starts at 5% and climbs a percentage point each year, ending at 10%, hardly effects these metrics: XM still would achieve positive free cash flow in 2010, still would become EBITDA positive in 2009, and would always have a liquidity cushion of at least \$250 million. At the full royalty sought by SoundExchange, XM's achievement of positive free cash flow would be delayed until early 2011, it would become EBITDA positive in

2010, and would have a minimum liquidity cushion of just under \$100 million at its lowest point in 2010. In sum, just as with Sirius, even at the maximum rate proposed by SoundExchange, the effect of the royalty would be to push back the date at which Sirius becomes cash flow positive and EBITDA positive by a year, and to have liquidity drop to under \$ 100 million in the years 2009 and 2010. Butson WRT, App. E, SX Trial Ex. 123.

1112. Thus, the sole impact of SoundExchange's rate proposal might be to delay the SDARS' achieving certain milestones by a year or two – something that in no way suggests that the proposed royalty rate is disruptive. Herscovici WRT at 40, SX Trial Ex. 130.

1113. Notably, not only do the modeled royalty rate increases cause only about a one-year delay in achieving the measured milestones, the increases in the royalty have no effect on the direction the metrics are moving: free cash flow, EBITDA and liquidity improve on an annual basis under all of the scenarios tested in Mr. Butson's sensitivities (one exception being that for Sirius in one scenario free cash flow declines from 2010 to 2011 as a result of capital expenditures associated with the purchase of new satellites – a paper decline caused by the purchase of a long-lived asset that suggests nothing about the company's financial progress. 8/27/07 Tr. 301:8-302:19 (Butson). While Mr. Butson's model assumes that the SDARS would pay cash for their new satellites, in reality it is very likely that for such a long-lived asset the SDARS would in fact raise capital through a combination of debt and equity. 6/19/07 Tr. 179:15-20 (Butson)).

1114. Investors like to see that after a particular metric becomes positive that it stays positive and continues to grow. That is exactly what happens with XM and Sirius assuming SoundExchange's rate proposal is accepted. 8/27/07 Tr. 301:12-15, 305:3-8 (Butson).

1115. The SDARS' unsubstantiated claims that these modest changes in their overall financial picture would have a disruptive effect on their business – never mind the extraordinary effects claimed in their witnesses' oral testimony – is no more than hyperbole, not supported by any analysis or empirical data.

1116. The factors that pose the most substantial risks to prevailing industry practices are those that might undermine the SDARS' projected customer growth. For example, competition from potential new modalities such as mobile Internet are risks that analysts consider when evaluating the SDARS' long-term prospects. If the SDARS grow as they project, they will be successful even if the SoundExchange rate is adopted. If they fail to grow at all, they will fail as businesses even if the royalty rate were set at zero. And, if they grow to the size they project, but more slowly, SoundExchange's rate increases in tandem and gradually, and will not be disruptive to the SDARS. Because of this feature of SoundExchange's rate proposal, the actual years in the income statement in the models are less important than the relationship between the various metrics within each year. In other words, if Sirius, for example, achieves 13 million subscribers in 2011 rather than in 2010 as projected, then SoundExchange's rate will not increase from 12% to 14% until sometime in 2011, instead of 2010. That delay will have little effect on the long-term prospects of Sirius's business, so long as the subscriber count continues to rise. Butson WRT at 19-20, SX Trial Ex. 123.

d. The SDARS' Own Expert Testified that a Royalty Rate of the Sort SoundExchange Proposes Would Result in an Increase in the Stock Price of XM and of Sirius, Resulting in Significant Gains for Investors.

1117. The SDARS' primary expert witness concerning the impact of increases in royalties on their business was J. Armand Musey, an investment analyst. Mr. Musey provided

testimony primarily on the impact of an increase in royalty rates on the target stock price for XM and Sirius.

1118. The “target” stock price is the price analysts predict a stock will achieve in the future, typically over the following 12-18 months. Analysts’ target stock prices in particular are based on analysts’ assumptions about the earnings (revenues minus costs) and cash flow the company will achieve in the future. 6/13/07 Tr. 153:2-10 (Musey). If a company’s future costs are materially higher than predicted by analysts, all else being equal, the stock will not achieve its target price, because an increase in costs will reduce a company’s future cash flows. 6/13/07 219:13-220:13 (Musey). If analysts come to believe that a company’s future costs will be materially higher than they predicted, all else being equal they will lower their target price of the company’s stock. *Id.*

1119. Currently, analysts do not know the precise amount of the sound recording royalty. Musey WDT at 24-25, XM Trial Ex. 9. Nonetheless, analysts assume that sound recording and musical works royalties collectively amount to approximately 7-8% of the SDARS’ revenue annually. 6/13/07 Tr. 212:11-13 (Musey). It is this estimate of royalties that underlies the projections made by analysts, including the consensus estimates that are presented by XM and Sirius, both in Mr. Musey’s testimony and in the rebuttal testimony of Mr. Frear and Mr. Vendetti.

1120. The musical works royalties collectively are approximately []% of revenue. Woodbury WRT at 38, SDARS Trial Ex. 80. Accordingly, under the analysts’ assumptions of a 7-8% royalty for both sound recordings and musical works, a sound recording royalty rate in the range of []% would result in total royalty expenses that were in line with analysts’ expectations.

1121. Mr. Musey performed a calculation that allowed him to determine how much the target price of the SDARS' stocks were likely to change if the sound recording royalty was above or below the [REDACTED]% range assumed by analysts. For example, Mr. Musey calculated how much the target stock price would change if the royalty rate were 5 percentage points higher than the [REDACTED]% rate assumed by analysts, resulting in a hypothetical sound recording royalty rate of [REDACTED]%. Musey WDT at 29, XM Trial Ex. 9. 6/13/07 177:5-14 (Musey).

1122. According to Mr. Musey, if the court were to set a sound recording royalty rate above the [REDACTED] range, the "target" stock price would necessarily go down. But, under Mr. Musey's analysis, the target stock price would still be significantly higher than the stock price at the time of Mr. Musey's analysis. For example, a royalty rate of [REDACTED] would not cause XM's or Sirius's stock price to decline at all from current levels. Rather, Mr. Musey predicts in that case that the stock price would actually go up over 18 months. Musey WDT at 29, XM Trial Ex. 9.

1123. Specifically, according to Mr. Musey, if the Court were to set a royalty rate in the range of [REDACTED], Sirius's stock price would increase from \$3.83 to \$4.78 over the next 18 months. Musey WDT at 29, XM Trial Ex. 9, while XM's stock price would increase from \$11.96 to \$13.15. Musey WDT at 29, XM Trial Ex. 9. With the royalties expected by analysts, the stocks would rise even further, to \$6.20 and \$17.80, respectively. *Id.*

1124. Mr. Musey's testimony thus demonstrates that, in the view of investment analysts and the SDARS' own expert witness, a royalty rate of [REDACTED] in 2007-08 would not in any way be disruptive – indeed, the companies would continue to gain in value, according to investors, reaping a significant return for those who purchased shares at the time of Mr. Musey's original testimony. *Id.*

1125. Mr. Musey's only response is that, in his view, stockholders would be disappointed in the 10-25% increase in stock price over the next 12-18 months that would result from the Court's setting a rate in the range of [REDACTED], because they were hoping for profits in the range of 50-60%. But he provides no empirical supports for the claim that such stockholder disappointment would have any effect on the underlying business. Nor is there any basis in the statute or in economics for finding that stockholders earning a significant return, but not as much as they had hoped for, is a basis for finding a disruptive impact. 6/13/07 197:14-198:1 (Musey); Musey WDT at 29, XM Trial Ex. 9. 8/27/07 Tr. at 268:16-269:5 (Butson).

e. The SDARS Routinely Have Spent Substantial Sums on Programming at a Time When That Spending Increased their Accumulated Deficits, Because They Correctly Understood That Such Spending Was Not Disruptive to Their Longer Term Financial Goals.

1126. In a setting, as here, where XM and Sirius routinely pay market price for non-music content and have paid substantial sums for such content, there is no reason to believe that a market rate for sound recordings will cause a disruptive impact. Herscovici WRT at 31-32, SX Trial Ex. 130. If the Services are willing to pay a given amount for non-music content that will attract subscribers, they clearly have determined that such a cost of attracting a certain number of subscribers is not disruptive. The analogous investment for music content cannot be considered disruptive either. Herscovici WRT at 31-32, SX Trial Ex. 130.

1127. The SDARS concede that one of the reasons that they did not grow to be profitable as quickly as anticipated and that their accumulated deficit is as large as it is was that they spent more on non-music content than they budgeted for at that time. 6/12/07 Tr. 141:5-17 (Frear). The SDARS repeatedly spent significant sums on such content, especially when they were able to track the extent to which that content attracts or retains customers. 6/12/07 Tr.

47:12-19 (Frear). The fact that increased spending on non-music content led to increased losses over the short term does not mean that the increased spending was unwise. 6/12/07 Tr. 141:18-21 (Frear).

1128. In fact, at a time long before the SDARS ever earned a profit, long before they were cash flow positive and long before they were EBIDTA positive, they willingly, voluntarily, and eagerly entered into agreements for non-music content, committing hundreds of millions of dollars to various non-content providers, including committing:

- [REDACTED] million for Howard Stern, SX Trial Ex. 27
- [REDACTED] million (or [REDACTED] million) for MLB, SX Trial Ex. 70 at SX Exhibit 133 DR
- [REDACTED] million for NFL, SX Trial Ex. 36
- [REDACTED] million for NASCAR, SX Trial Ex. 23
- [REDACTED] million for Fox News, SX Trial Ex. 22 and SX Trial Ex. 70 at SX Exhibit 134 DR
- [REDACTED] million for NHL, SX Trial Ex. 70 at SX Exhibit 135 DR
- [REDACTED] million for Oprah, SX Trial Ex. 20
- [REDACTED] million for NBA, SX Trial Ex. 26
- [REDACTED] million for Martha Stewart, SX Trial Ex. 32

1129. They entered these deals – even though they were not yet profitable – because they viewed such content as valuable to the service over the longer term. Just as these deals were not viewed as disruptive of the industry, paying music a commensurate royalty for the tremendous value it provides to the service is likewise not disruptive.

1130. More specifically, in 2004 – before it was profitably, cash flow positive, or EBIDTA positive, Sirius entered a five-year deal with Howard Stern, committing [REDACTED] million dollars, plus [REDACTED]. See SX Trial Ex. 27. Also in

2004, Sirius signed a deal with the NFL pursuant to which it agree to pay the NFL [REDACTED] over the license term, in addition to providing the NFL with [REDACTED] [REDACTED] – and it did so at a time when Sirius was losing money and was not yet profitable. SX Trial Ex. 36 at SIR00040089, 97; Sirius Trial Ex. 62 at Sirius Exhibit 43, p. 15-16. And in 2005, Sirius signed a multi-year, multi-million dollar deal with Martha Stewart, committing a total of [REDACTED] million in rights fees, in addition to paying [REDACTED] [REDACTED]. SX Trial Ex. 32 at A-3. Thus, when programming is important to Sirius, it is willing to expend hundreds of millions of dollars to acquire that programming content, despite the fact that it is not yet profitable.

1131. Similarly, in October 2004 – before XM had realized any profit, had become cash flow positive, or achieved EBIDTA positive – XM entered into a multi-year, multi-million dollar deal with Major League Baseball pursuant to which it agreed to pay [REDACTED] million ([REDACTED] million if the deal were extended an additional three years). SX Trial Ex. 70 at SX Exhibit 133 DR. And in January 2006, XM entered into a deal with Oprah in which it committed [REDACTED] million dollars in rights fees, in addition to [REDACTED] [REDACTED] to Ms. Winfrey. SX Trial Ex. 20.

1132. Gary Parsons readily admits that XM was losing money when it signed its multi-million dollar agreement with Oprah Winfrey in 2006, as well as when it signed its multi-million dollar agreement with Major League Baseball in 2004. 6/5/07 Tr. 57:15-58:12 (Parsons). Yet despite losing money, XM was willing to pay market rates for this content. 6/5/07 Tr. 58:13-18 (Parsons). *See also* Parsons WDT ¶ 22, XM Trial Ex. 1.

1133. Indeed, the SDARS spent substantial sums on necessary expenses unrelated to content even though those expenditures increased their accumulated deficit. For example, before they were profitable, the SDARS entered into multiple long-term multi-million dollar deals with automotive partners. 6/7/07 Tr. 190:5-191:6 (Wilsterman) (explaining that in 2006 Sirius spent approximately [REDACTED] [REDACTED]). *See also* Wilsterman WDT ¶¶ 10, 13, 16, 18, SIR Trial Ex. 33. And before it was profitable, Sirius entered into deals with retail market partners, providing them with substantial subsidies and other financial incentives. Law WDT ¶¶ 3, 7, 9, SIR Trial Ex. 42. And even though it was not yet profitable, Sirius was willing to “pay[] them because [it] ha[s] to get the business. [Sirius] literally would not have a company unless [it] had these deals.” 6/7/07 Tr. 192:7-193:1 (Wilsterman); *id.* 6/7/07 Tr. 159:10-14 (“they’re vitally important to our company”). Given the option, OEMs would not partner with the SDARS absent these significant subsidies. Wilsterman WDT ¶ 9, SIR Trial Ex. 33.

1134. Sirius also “has devoted significant resources in both time and money to developing systems and procedures for attracting customers as well as establishing and fostering long-term relationships with subscribers,” and thus “devotes significant time and resources to customer care.” Moore WDT ¶¶ 4, 5, SIR Trial Ex. 38. Sirius contends that its customer care efforts “play a significant role in subscriber acquisition and retention” and it therefore is willing to “devote[] significant time and money” to such efforts. Moore WDT ¶ 18, SIR Trial Ex. 38.

1135. The same argument applies to music. Music content is “vitally important” to the SDARS and plays a significant role in subscriber acquisition and retention. Sirius should not be viewed as “disrupted” if it pays a comparable rate for music content.

1136. Dr. Noll argues to the contrary that because the SDARS currently are unprofitable, and because the future is uncertain, the Court should set a “near-zero” rate. 8/16/07 Tr. 87:15-18 (Noll) (“as long as these companies are suffering losses, the rates should be low. And then when they start making profits, we can start considering all these other issues”). But Dr. Noll never explains why the music industry alone, as opposed to all of the SDARS’ other content providers, should suffer this fate. Nor, for that matter, does he describe why that rule advances any of the four statutory factors. The one thing that is certain, as the Court’s questions to Dr. Noll revealed, *see, e.g.*, 8/16/07 Tr. 83:5-92:6 (Noll), is that if the Court takes that approach, it will be in the same position in 2011 as it is in today. The SDARS will not save up a bundle of money to pay the music industry in 2012 if the Court sets a near-zero rate in 2007. Instead, the SDARS will do exactly what they did in years past, which is invest that money in other valuable content, which they must go into the market and purchase. In 2011 there will once again be nothing left to pay the sound recording royalty.

1137. All of these investments show that the SDARS have proven that they can pay what the market will bear – and pay substantial sums – in order to attract subscribers, recognizing that subscriber growth is the key to their success and content is the key to subscriber growth. That principle applies equally to music content, and royalty rates consistent with the kinds of amounts that the SDARS willingly pay for non-music programming cannot possibly be disruptive. Herscovici WRT at 31-32, SX Trial Ex. 130.

f. In Any Event, SoundExchange’s Proposed Rate Begins at a Below-market Rate and Increases Only as the SDARS Increase Their Subscribership, Thereby Mitigating Any Possible Disruption.

1138. As discussed above, a rate that slopes upward overtime fully addresses concerns about disruption. *Amusement and Music Operators*, 676 F.2d at 1148.

1139. As Dr. Herscovici explained, in addressing any possible concern about disruption, it may be relevant to consider that the Services will have an improving financial picture throughout the license period as they attract more subscribers to offset their fixed costs. A higher rate later in the license period is less likely to be disruptive, and, relatedly, the Services will have an increasing ability to pay as time goes on. Herscovici WRT at 33, SX Trial Ex. 130. Thus, a rate that increased over time (as a percent of revenue or targeted to a percent of revenue) would both be consistent with the changes that will occur in the industry over time and would avoid disruption by allowing each side to adjust their business plans on a going forward basis. Herscovici WRT at 33-34, SX Trial Ex. 130.

1140. SoundExchange's Proposed Rate, in particular, addresses any concern about disruptive impact because it increases only if and when the SDARS increase their subscribership (and therefore their revenues) so that higher rates kick in only when the SDARS' ability to pay has increased significantly. *See* SoundExchange's Third Amended Rate Proposal.

1141. Thus, SoundExchange's rate proposal begins at 8% – only slightly above the [■] [■] that analysts currently use to estimate sound recording royalties. The proposed rate only increases with increases in subscribership, ensuring that the SDARS will not pay a rate above 8% unless and until they grow their subscribership and increase their cash flow. *See* SoundExchange's Third Amended Rate Proposal.

5. The SDARS Arguments Based on The Past and Current Financial Performance of the SDARS Lack Merit.

1142. Notwithstanding the record evidence establishing the contrary, several SDARS fact and expert witnesses argue that the SDARS are performing poorly and are not able to compete in the marketplace without the benefit of a zero or near zero sound recording royalty. These witnesses principally argue that 1) a royalty rate higher than that predicted by investment

analysts would result in a reduced target stock price for the SDARS stock, and for that reason would be disruptive of investors' expectations in violation of the fourth statutory factor, Musey WDT at 29, XM Trial Ex. 9; 2) the Court should look backward to the expectations of investors in the SDARS (since 1992) and set a rate that would ensure that the accumulated deficit on the SDARS' balance sheet is paid off as soon as possible; or 3) a royalty rate above [REDACTED] will cause the SDARS to have difficulty borrowing money, if needed.

1143. These claims lack merit as a matter of law and fact.

a. As a Threshold Matter, All of the Arguments Made by the SDARS on Disruption Suffer from the Same Threshold Flaw – Failure to Consider the Long-Term Prospects of the Business.

1144. As a threshold matter, virtually all of the witnesses for the SDARS focus on past performance or current financial metrics, or make the argument that the Court should set a rate at a level that ensures profitability (on some metric) within the period of this license. Those claims all ignore the SDARS' own business plan and the long-term fundamentals of the business, which are strong today and would remain strong if SoundExchange's rate proposal were adopted.

i. The SDARS' Financial Metrics from the Past, Present, and Throughout this License Period Will Show No or Little Profitability Because the SDARS Are Continuing to Invest – Not Because of Sound Recording Royalties and Not Because of Any Weakness in Their Business.

1145. The reason why the SDARS are not showing positive EBITDA and net income today is not because of sound recording royalty rates or any weakness in their businesses. Rather, the SDARS' current and projected EBITDA and net income are negative precisely because the companies are investing in the future, spending money today (even though it makes their EBITDA and net income more negative and reduces free cash flow) because they expect those investments to reap revenues in the future.

1146. The SDARS acknowledge that the business model upon which their services are built is one that requires significant upfront costs and investments before any revenue is possible. *See. e.g.* Parsons WDT ¶ 10, XM Trial Ex. 1. And since the inception of the satellite radio services, the SDARS' ability to reach profitability has been repeatedly pushed out over the years for reasons wholly unrelated to the sound recording royalty rates the SDARS pay. As Mr. Parsons explained, "any new venture that requires spending over one billion before you get the first dollar of revenue, obviously understands that there are going to be losses during that period. The real key to success in that venture is to be able to fairly rapidly reach that positive cash flow situation which unfortunately has been pushed out a number of times as we have developed the service." 6/5/07 Tr. 56:9-18 (Parsons).

1147. As described *supra* at Section VI.D.5, the SDARS and the analysts covering the SDARS uniformly agree that notwithstanding current losses they will become increasingly profitable companies, and that their average monthly revenue per subscriber is increasing. Herscovici WRT at 35 & App. Q, SX Trial Ex. 130. The combination of falling costs to acquire subscribers and increased revenue per subscriber means that XM and Sirius will be able to capitalize on the expenditures they have made to date. Currently, on average, a new subscriber pays for itself and contributes to gross margin in about a year. Herscovici WRT at 35, SX Trial Ex. 130.

1148. Indeed, if the Services were not actively seeking to grow their businesses, they would actually be EBITDA-positive today. The Services tout a measure called "pre-marketing EBITDA" which measures the success of the business if it were to cease seeking new customers and instead sought only to retain service for existing customers. 8/29/07 Tr. 222:13-223:20

(Herscovici). Both XM and Sirius are pre-marketing EBIDTA-positive in 2006 – \$253 million for XM and \$129 million for Sirius. Herscovici WRT at 36, SX Trial Ex. 130.

1149. XM’s CFO has explained that pre-marketing EBIDTA is “a key indicator of our ability to generate positive cash and self-sustainability.” Herscovici WRT at 36, SX Trial Ex. 130 (quoting XM’s CFO). Of course the fact that XM and Sirius continue to invest in seeking new subscribers – and thus are not EBIDTA-positive overall – does not reflect a problem with the business; it merely reflects a good investment, just as paying royalties to have access to sound recordings is a good investment. Herscovici WRT at 36, SX Trial Ex. 130. Thus, the companies themselves recognize that current financial metrics are not a useful basis on which to evaluate their prospects.

1150. Nor is there any royalty rate that the Court could set that would: i) make the SDARS profitable now; ii) erase the accumulated deficit of the companies during this license period; or iii) ensure that the SDARS will be profitable in the future. Professor Noll concedes that a compulsory license fee for copyrighted works “should not guarantee the profitability of users.” Noll WRT at 29, SDARS Trial Ex. 72. By holding these various metrics up as a measure of disruption, the SDARS are essentially trying to draw the Court’s attention away from the long-term fundamentals of their businesses – which are unchanged by SoundExchange’s rate proposal, if adopted – and persuade the Court to focus on red ink that is currently on the books. But that red ink says nothing about the prospects of these companies or whether SoundExchange’s rate proposal would have a disruptive impact.

ii. The SDARS Have Strong Long-term Prospects – Something They Tout Outside the Context of This Proceeding.

1151. Marketplace evidence shows that XM and Sirius have strong long-term prospects. They have developed relationships with major companies, such as auto manufacturers, to ensure that their radios will be in more and more new cars. Herscovici WRT at 37, SX Trial Ex. 130. They have had great success in attracting funding from media companies and private equity firms. Herscovici WRT at 37, SX Trial Ex. 130. And they also have had no trouble borrowing money when it was needed to invest in content, technology or future growth. Herscovici WRT at 37, SX Trial Ex. 130.

1152. Looking to the future instead of to the past, Sirius believes that it has a very solid business model and that it is executing on it almost flawlessly. SX Trial Ex. 28 at 6. The potential for satellite radio is huge today, 6/12/07 Tr. 59:12-16 (Frear), SX Trial Ex. 41 at 7, and the SDARS are positioned for good long-term growth. 6/12/07 Tr. 60: 1-2 (Frear).

1153. The SDARS' own projections for the future are discussed in more detail *supra*, and those projections all show dramatically increased revenues, very large annual cash flows, and significant profitability – once they attain a sufficient number of subscribers.

iii. The SDARS' Success or Failure Will Depend on Attracting Subscribers and Growing Audience – Not on the Royalty Cost Set Here – and Sound Recordings Are Essential to their Success.

1154. As Mr. Parsons explained, it is the uncertainty as to whether the service can sustain sufficient numbers of subscribers over time to cover ongoing operations and obligations that may ultimately prove disruptive to the satellite radio service. Parsons WDT ¶ 38, XM Trial Ex. 1. It is the increased competition in the audio entertainment market that is putting pressure on the SDARS business and impacting XM's and Sirius's ability to attract and retain subscribers.

Parsons WDT ¶ 39, XM Trial Ex. 1. *See also* SX Trial Ex. 5 at 15 (“Market for audio entertainment has evolved dramatically with expanding competitive options”); *id.* at 18.

Blaming an increased royalty rate for potential future disruption in the industry is an accusation that is as unfounded as it is misplaced.

1155. As Professor Noll recognizes, the SDARS’ alleged inability to afford SoundExchange’s proposed rates is in actuality a claim that the forward-looking rate will not allow the SDARS to recover their sunk costs. Noll WRT at 26-27, SDARS Trial Ex. 72. The disruption that the SDARS quantify concerns the effect of “prevent[ing] satellite radio from recovering its investments,” not the effect going forward. Noll WRT at 72, SDARS Trial Ex. 72.

1156. The SDARS operate in an industry in which technological capabilities are doubling “every 18 months.” 8/16/07 Tr. 67:7-10 (Noll). Thus, as both the Judges and the SDARS’ own economic expert aptly recognized, the royalty rate that is set in this proceeding is hardly the factor upon which the future of the SDARS hinges. 8/16/07 Tr. 77:20-83:4, 88:8-91:10 (Noll). Rather, “the future could be dark for satellite radio for a long list of reasons.” 8/16/07 Tr. 78:9-11 (Noll). And the royalty rate is just one of these many different factors affecting the future of the SDARS – and an “insignificant” one at that. 8/16/07 Tr. 81:21-82:3 (Noll). Considering the explosion of new media services entering the market – the very audio entertainment market within which the SDARS compete, *see* SX Trial Ex. 106 at 35, 37 – the SDARS’ business model in fact “[m]ay not be viable” regardless of the rate set in these proceedings. 8/16/07 Tr. 91:1-3 (Noll).

1157. The SDARS’ focus on current financial metrics has also led them to focus excessively on the fourth quarter of 2006, when the SDARS did not perform as well as they or the analysts predicted. In particular, retail sales were below the expected levels. However, both

in October 2006 (at the time of the direct case presentations), and in the summer of 2007 (at the time of the live direct testimony and the rebuttal presentations), the companies continued to predict – over the longer term – rising free cash flows, rising net incomes, and continued liquidity. Therefore, the second half 2006 declines did not change the fundamental outlook for the SDARS over the rate period. 6/19/07 Tr. 186:21-187:16 (Butson).

b. Claims Based on the Target Price of the SDARS Stock and Investor Expectations.

1158. Mr. Musey analyzed, on behalf of the SDARS, the “target stock price” for XM and Sirius based on different royalty rates. His conclusion from that analysis is that a royalty rate that exceeds investors’ expectations is disruptive because such a rate will result in the reduction of the “target” stock price of XM and Sirius.

1159. As discussed above, *supra* at VI.D.4.d, Mr. Musey’s analysis actually demonstrates that a royalty rate at or near the levels proposed by SoundExchange will not in any way be disruptive – indeed, it will result in investors’ remaining bullish that XM and Sirius stock will increase in value over the next 18 months. *Infra*. In any event, Mr. Musey’s reliance on possible reductions in the “target” stock price as a measure of disruption has no basis in law or economics.

i. Ensuring the Maintenance of a Target Stock Price – Which Is Equivalent to Maintaining Royalties at the Amounts Currently Predicted by Investors – Is Not a Consideration Mandated By the Statute.

1160. As a threshold matter, Mr. Musey’s view that the Court cannot set a rate above that which investment analysts currently project has no connection to the objectives to be advanced by the fourth factor. Mr. Musey’s suggestion that the fourth factor requires the Court to ensure that investors are not disappointed, 6/13/07 215:16-216:12 (Musey), has no basis in the

statute and appears to be based on his belief that the statute requires the Court to assure investors a fair income, and that a fair amount to compensate someone for his investment would be the expected return the investor hoped to gain on the investment when he purchased the investment. 6/13/07 221:6-12 (Musey).

1161. Mr. Musey acknowledged that he knows nothing about the standard the Court will apply in this case, and has never seen it written out, although he was of the mistaken opinion that fairness to investors was a part of that standard. 6/13/07 192:8-193:22 (Musey).

1162. If the fourth factor of § 801(b) means that the Court is supposed to attempt to minimize any change in the increase in the SDARS stock prices predicted by analysts, then the Court's job in addressing the fourth statutory factor concerning "disruption" would be simply to identify the analysts' predictions about the future royalty rate, and set the rate at that level. Butson WRT at 10, SX Trial Ex. 123. Nothing in the statute, prior case law, or economics suggests that this is the objective to be advanced by the fourth factor. Indeed, courts have made clear that the fourth factor does not require maintenance of costs at current or predicted levels. *Phonorecords*, 46 Fed. Reg. at 10486. *See also id.* at 10481.

1163. It would also be bad economics for the Court to try to maintain the SDARS stock price at some current or projected level. "[A] method for determining fair return . . . which looks solely to a pegging of the market price of the company's stock price . . . is manifestly unacceptable." *Williams v. WMATC*, 415 F.2d 922, 970 (D.C. Cir. 1968). Such an approach is unacceptable because even if a royalty rate increase "would reflect adversely on [a company] in the eyes of the financial community and thus affect the market price of its stock, it does not follow inexorably that [a company] would be precluded from securing needed equity capital." *Id.* at 971.

1164. Investors expect a rate of return on their investments commensurate with the risk associated with the investment. However, investors also understand that the more risky an investment, the greater the likelihood that their expectations will be frustrated. Investors are in no sense entitled to a return that corresponds to the risk they take in investing in a particular stock. 6/13/07 209:4-21 (Musey).

1165. Indeed, the stock prices of XM and Sirius have gone up and down dramatically in recent years, but none of those changes in the stock price have been “unfair” to investors, nor have they had a disruptive impact on the satellite radio industry. Herscovici WRT at 31, SX Trial Ex. 130; 8/30/07 Tr. 34:1-15 (Herscovici); Musey WDT at 35-36, XM Trial Ex. 9.

ii. Stock Prices Fluctuate Often and Those Fluctuations Have Little to Do With the Long-term Viability of a Company.

1166. As numerous witnesses have testified, stock prices go up and down for a host of reasons. Herscovici WRT at 31, SX Trial Ex. 130; 8/30/07 Tr. 33:14-22 (Herscovici). In particular, the stock prices of XM and Sirius have moved up and down by significant amounts over the last several years – having nothing to do with the royalty rate for sound recordings. Musey WDT at 26-27, XM Trial Ex. 9. Those changes in the stock price have said nothing about the long-term viability of companies. Indeed, XM’s and Sirius’s stock prices have increased and decreased significantly over the years, but those changes have not affected their ability to retain subscribers, their ability to acquire financing at lower rates, or their long-term prospects. 8/30/07 Tr. 34:1-15 (Herscovici).

1167. XM and Sirius have repeatedly invested in non-music content and made other investments that increased their costs and necessarily delayed their profitability by some amount of time. *See supra*. Doing so, however, may have been a prudent investment – even if it resulted

in a lowering of the target stock price. As Mr. Frear testified (contrary to the views of Mr. Musey), stock price is *not* useful in determining how to price contracts or how to make decisions about investing in programming, because there is a distinction between stock valuation and operational decision-making. 6/12/07 Tr. 208:19-209:7 (Frear).

iii. Mr. Musey's Argument Is Nothing More than a Statement that Investors Would Rather Have Lower Costs.

1168. As discussed above, under Mr. Musey's analysis, a royalty rate of between [REDACTED] [REDACTED] would lead to a target stock price well in excess of the current stock prices of XM and Sirius. Nonetheless, Mr. Musey claims that this significant increase in stock price would be "disruptive" to the expectations of the SDARS shareholders because they expected to earn even greater returns in the next 18 months. 6/13/07 197:14-198:1 (Musey); Musey WDT at 29, XM Trial Ex. 9. *See also* 8/27/07 Tr. at 268:16-269:5 (Butson).

1169. As Mr. Musey concedes, the impact of any increased cost on the target stock price is simply mathematical – if costs increase (all else being equal), the target stock price decreases. 6/13/07 219:13-220:13 (Musey); Musey WDT at 25, XM Trial Ex. 9.

1170. At bottom, Mr. Musey's argument is that, from an investor's point of view, investors do better if the costs of any input, including royalty costs, are lower rather than higher. For that reason, SDARS investors will always benefit from a lower royalty rate, and will always be harmed by a higher royalty rate. 6/13/07 196:4-17 (Musey). Investors would like to cut their costs where they can. *Id.* 210:20-21. That desire has nothing to do with any of the statutory factors.

iv. Mr. Musey's Claim about the Risks Faced by Past Investors Says Nothing about the Current and Future Prospects of the SDARS under Any Royalty Rate.

1171. Mr. Musey makes the further claim that any rate that has the effect of decreasing the size of the expected increase in the stock price would be especially unfair to investors because the SDARS stock has performed poorly in the past, given the risks taken by investors who invested in the SDARS' stocks. Since any royalty rate would potentially decrease the growth potential of the SDARS stock as compared to a lower royalty rate, this argument carried to its extreme would suggest that the proper royalty should be zero. *Infra*.

1172. To make his argument about past investors, Mr. Musey relies on the weighted average cost of capital (WACC) as a measure of the average interest rate that a company has to pay in order to attract investors. 6/13/07 Tr. 147:3-11 (Musey). Mr. Musey uses WACC to determine what he believes to be a "fair" return the Court should reward to investors by setting the level of the sound recording royalty rate. Musey WDT at 9-13, XM Trial Ex. 9.

1173. According to Mr. Musey, investments in the SDARS historically have been risky investments relative to investments in, for example, treasury bills. 6/13/07 Tr. 149:14-22 (Musey). In particular, according to Mr. Musey's analysis of investment analysts, in the period between 1998 and 2002, the weighted average cost of capital of the SDARS varied on average between 20% and 25%. Musey WDT at 11, XM Trial Ex. 9.

1174. The evidence is crystal clear, however, that the riskiness of investment in the SDARS has declined dramatically over the last several years. As measured by their WACCs calculated by investment analysts, the SDARS are a substantially less risky investment than they had been in the past, with an average WACC of approximately 11%. Musey WDT at 11, XM Trial Ex. 9.

1175. Nonetheless, Mr. Musey argues that the Court should set a rate to justify the investments of all prior investors at the high WACCs Musey claims existed in earlier years. According to Mr. Musey, the hypothetical historical investor who purchased SDARS' stock on every occasion at which it was issued by the SDARS since the SDARS first went public would not have received a return commensurate with the risk inherent in those investments, as measured by average WACCs developed by analysts. Musey WDT at 12-13, XM Trial Ex. 9. In Mr. Musey's view, SDARS investors on average since 1992 have not received an appropriate risk-adjusted rate of return on their SDARS' investments, Musey WDT at 41, XM Trial Ex. 9; to the contrary, the return they have received "has been very unattractive." 6/13/07 135:19-21 (Musey).

1176. Consequently, in Mr. Musey's view, any royalty rate that had the effect of lowering the target stock price below what it was when Mr. Musey issued his report would for that reason deny a fair return to investors, since their opportunity to make up for past losses would be necessarily delayed even further. Musey WDT at 41, XM Trial Ex. 9.

1177. Ultimately, Mr. Musey's analysis of hypothetical investors who bought at each public offering of the SDARS is a meaningless exercise if the point is to consider whether the companies' financial prospects rest on a solid footing during the rate period. Further, Mr. Musey's concept of an "average" investor is illusory – many SDARS investors have lost money and many achieved substantial profits via their SDARS stocks, depending upon when they bought and sold the stock. Butson WRT at 12-13, SX Trial Ex. 123. There is nothing that the Court can do to make every investor in the past whole. Only a forward-looking analysis can address the objectives raised by the fourth factor. Herscovici WRT at 32, SX Trial Ex. 130; 8/30/07 Tr. 33:3-13 (Herscovici).

1178. Mr. Musey's argument is completely rejected by the SDARS' own witnesses. Although Mr. Musey makes this argument about investor expectations based on his view of the SDARS' weighted average cost of capital, in the view of Mr. Frear – Sirius's Chief Financial Officer – that analysis is not relevant to the way that Sirius makes business decisions. 6/12/07 Tr. 155:10-13; 156:10-157:21 (Frear).

1179. Indeed, contrary to the views expressed by Mr. Musey, according to Mr. Frear, while the anticipated future stock price of Sirius is important to investors, it is not relevant to the operation of Sirius's business. 6/12/07 Tr. 205:14- 209:7 (Frear). Similarly, Mr. Butson shares Mr. Frear's view that whether the stock goes up or down is not relevant to the consumer. 6/19/07 Tr. 185:1-12 (Butson). And, in contrast to Mr. Musey, Mr. Frear does not believe that the WACC calculation is of any relevance in the operation of Sirius's business. 6/12/07 Tr. 155:10-13; 156:10-157:21 (Frear).

1180. In sum, Mr. Musey's analysis relates entirely to the potential impact of the new royalty rate on the stock prices of XM and Sirius, and as such it provides no support for the SDARS' claim that SoundExchange's rate proposal will have a disruptive impact. 8/27/07 Tr. at 267:14-19 (Butson). The fact that investors on average have not done well with their SDARS' investments in the past is no reason for the Court to set a low royalty rate here. It has nothing to do with the four statutory factors.

c. Accumulated Losses Are Not a Relevant Metric When Considering the Long-Term Finances of the SDARS, and so Are Not a Relevant Metric When Considering Whether a Royalty Rate Will Be Disruptive to the SDARS' Businesses

1181. The SDARS' witnesses also focus on the accumulated deficits of XM and Sirius and argue that, because XM and Sirius have billions in their balance sheet in accumulated deficits, a royalty rate above what they have budgeted would be disruptive. The record,

however, demonstrates that the “accumulated deficit” provides no useful information about the prospects of the company or about the impact of any royalty rate on the companies.

i. The SDARS’ Business Model Is Premised on Large Deficits In the Early Years.

1182. For companies like XM and Sirius, looking at financial results over the most recent year or two is not indicative of their futures. 6/12/07 Tr. 51:18-20 (Frear). To the contrary, for companies that operate on the business model of incurring high fixed costs but also high incremental margins, start-up losses are expected, and are not a sign that the company is doing poorly. They arise from the fact that to build and launch a satellite network requires a significant amount of capital expenditure which will not be recovered until the business develops a sufficient customer base. 6/19/07 Tr. 148:6-14 (Butson).

1183. As a result, and over time, once fixed costs are covered, the SDARS will generate substantial free cash flow, and fixed costs will be accounted for by an increasingly small part of the SDARS revenue. Currently, fixed costs will be accounted for by 45% of revenue, but in the longer term they will be accounted for by only 15-20% of revenue. Butson WRT at 3, SX Trial Ex. 123.

1184. It was always part of the SDARS’ business plan that they would accumulate losses at the beginning. 6/12/07 Tr. 55:13-16 (Frear); SX Trial Ex. 41 at 8. These losses are inherent in XM and Sirius’s business model. Butson WRT at 2, SX Trial Ex. 123.

1185. Going forward, on every metric, the Services will have improving financial prospects over the term of the license. The cost to attract subscribers is declining rapidly for both XM and Sirius. Herscovici WRT at 34-35 & App. O, P, SX Trial Ex. 130. As that cost declines, each subscriber becomes more and more profitable. Thus, the SDARS will have an improving financial picture throughout the license period as they attract more subscribers to

offset their fixed costs – a fact that addresses concerns about disruption as the Services’ ability to pay will continue to improve. Herscovici WRT at 33, SX Trial Ex. 130. Thus, a rate that increased over time – such as that proposed by SoundExchange – is consistent with the SDARS industry trend of improving financial conditions and would thus avoid disruption by allowing each side to adjust their business plans during the rate period. Herscovici WRT at 33-34, SX Trial Ex. 130.

ii. A Company’s Accumulated Deficit Says Nothing About Its Future Prospects or the Future Impact of a Royalty Rate on the Company.

1186. The SDARS’ witnesses, including Dr. Noll, rely on the SDARS’ accumulated deficit to establish that they cannot afford a market-based royalty payment.

1187. But the SDARS’ accumulated deficit is a measure of the SDARS’ start-up losses. It is a backward measure of the companies’ losses over their entire history. 6/12/07 Tr. 55:6-8 (Frear); 6/06/07 Tr. 21:11-13 (Vendetti). The accumulated deficit does not reflect how current investors will fare in the future. *Id.* Tr. 22:204 (Vendetti). Nor does it reflect how specific individual investors have fared in the past. *Id.* Tr. 21:1-3.

1188. Even Dr. Noll, following a question from the bench, acknowledged that the entire issue of the accumulated deficit is, at best question-begging, and, at worst, completely a red herring:

Most of these high-tech industries, because of the nature of their cost structure, the high-fixed cost, low-marginal cost, do have huge start-up losses initially. I don’t know of any examples of important companies that don’t have huge losses in the first few years of their operation. So the fact that they’re losing a lot of money doesn’t give you any real information. At the same time, at some point it ought to turn positive. And so the issue is well, they got started in late 2001, early 2002, something like that, is it that intervening five-year period enough. In most of these industries that’s not enough to determine whether this is really a viable company in the long run.

8/16/07 Tr. 89:21-90:15 (Noll).

1189. The accumulated deficit is not money owed to anyone. 8/27/07 Tr. 263:11-14 (Butson). Instead in large part it represents investment in infrastructure and operations that have not yet borne fruit. Butson WRT at 4, SX Trial Ex. 123.

1190. Because the accumulated deficit indicates only what has happened historically, it is not a significant metric: it does not have any impact on a going-forward basis, 6/19/07 Tr. 183:11-22 (Butson), and says nothing about the future whatsoever. 8/27/07 Tr. at 265:12-13 (Butson). Accumulated deficit is not even a measure of the liquidation value of the company. 8/27/07 Tr. at 265:14-18 (Butson). In all of his years as a financial analyst and as a banker, Mr. Butson has never used the metric of accumulated deficit for any financial analysis. Nor has he ever had a client or a company ask him about that metric for any company. 8/27/07 Tr. 263:21-264:4 (Butson).

1191. Mr. Butson was at many different meetings and on many different telephone calls with Mr. Frear during the time he covered Sirius. He never heard Mr. Frear once even mention Sirius's accumulated deficit, nor did anyone ever ask Mr. Frear about Sirius's accumulated deficit. 8/27/07 Tr. at 266:11-22 (Butson). Likewise, over the years Mr. Butson never heard any representative of XM ever mention the company's accumulated deficit. 8/27/07 Tr. at 267:2-7 (Butson).

1192. Similarly, Dr. Herscovici testified that, as a matter of economics, there is no reason why the SDARS must pay off their accumulated deficit during this license period, nor does the fact of an accumulated deficit in the billions of dollars say anything about the health of the companies. That the Services do not currently have net income and/or will not have paid off

their accumulated deficit by the end of the license period says little about the health or prospects of the companies, or the risks that they face. Herscovici WRT at 28, SX Trial Ex. 130.

1193. Indeed, even if the Court were to set the royalty rate at zero, the accumulated deficit for each of the SDARS would continue to grow during the early years of the next rate period. 8/27/07 Tr. 264:5-15 (Butson). As Dr. Noll explained, “[t]he SDARS operators are not likely to obtain a competitive return on their investments in any year that is covered by the license at issue in these proceedings, *regardless of the rate for the sound recording performance license.*” Noll WRT at 37, SDARS Trial Ex. 72 (emphasis added). Thus, the alleged economic hardships that the SDARS purportedly suffer have everything to do with their business models and their business choices and have *nothing to do with the sound recording royalty rate.*

1194. Mr. Vendetti agrees that XM expects its cumulative net losses to grow independent of the decision in this case as it makes payments under various contracts, incurs marketing and subscriber acquisition costs, and makes interest payments on its debt. XM Trial Ex. 10 at Vendetti Ex. 1, p. 18. Sirius too agrees that its cumulative net losses will grow independent of the decision in this case as it makes similar payments and incurs the same types of costs as XM. SIR Trial Ex. 61 at SIR Exhibit 47, p. 19.

1195. Professor Noll acknowledges that his claim that the SDARS cannot afford SoundExchange’s proposed rates is in actuality a claim that the forward-looking rate will not allow the SDARS to fully pay off their accumulated deficit by 2012. 8/16/07 Tr. at 66:4-11 (Noll); Noll WRT at 26-27, SDARS Trial Ex. 72. The disruption that the SDARS are concerned about is the effect of “prevent[ing] satellite radio from recovering its investments,” not the effect business going forward. Noll WRT at 72, SDARS Trial Ex. 72.

1196. Dr. Noll’s reasoning is that the SDARS are unable to make reliable forecasts past the end-term of the next SoundExchange license, so they must be able to recover losses accumulated over the rate period by that date. 8/16/07 Tr. 66:8-12 (Noll). That is not a credible proposition. If that were the standard, the SDARS would not have entered into any content deals, since all of them expired long before the accumulated deficit will be retired. Indeed, the SDARS would long ago have shut down if they were operating under a rule that their accumulated deficit could not extend past a time which they could safely predict their future finances. Upon questioning from the Court, Dr. Noll himself admits that “the economists’ correct answer to [the Court’s] question” –as opposed to the answer Dr. Noll previously provided – is that “the industry is viable so long as the satellite radio industry believes that in the long run the revenues will exceed the costs.” 8/16/07 Tr. 84:2-6 (Noll).

1197. Dr. Noll’s argument also highlights the fact he, along with other SDARS witnesses, is using the terms of the SoundExchange license as a lever to “fix” the SDARS’ accumulated deficit, even though the record companies had virtually nothing to do with the creation of the deficit, and even though nothing in any of the four statutory objectives plausibly implies that the royalty rate should be used in this way to “correct” whatever alleged financial imbalances are on the SDARS’ balance sheets. In response to a question on just this point from Judge Wisniewski, Dr. Noll “agree[d] that there’s a problem here” with his own analysis, 8/16/07 Tr. 88:16-17 (Noll), threw up his hands and said he “didn’t know how to go about [solving] that problem,” *id.* 89:9-10, that the Court “ultimately face[d] that issue,” and that how it faced it “is up to [the Court] to decide.” *Id.* 889:20. In sum, on what Judge Wisniewski identified as “the ultimate issue that we face here in term of trying to determine what is a quote

fair rate or an excessive rate,” *id.* 89:15-17, Dr. Noll acknowledged that he had nothing useful to say.

1198. On other occasions, Dr. Noll more reasonably acknowledges that a compulsory license fee for copyrighted works “should not guarantee the profitability of users.” Noll WRT at 29, SDARS Trial Ex. 72.

1199. In the end, Dr. Noll himself is forced to acknowledge that the fact the SDARS cannot recover their start-up costs (and so retire their accumulative deficit) over the rate term at most could be disruptive “to future technologies whose rates are set under §801(b)” – a null set – and could not possibly be disruptive “with respect to this particular product,” i.e., the SDARS themselves, for the obvious reason that the accumulated deficit represents sunk costs that have no bearing whatsoever on the future prospects of the SDARS. 8/16/07 Tr. 76:13-77:5 (Noll).

iii. Companies Routinely Have Significant Accumulated Deficits But Strong Future Prospects Because For Companies Such as the SDARS, the Accumulated Deficit Is a Reflection of an Investment in Future Earnings.

1200. As Dr. Noll acknowledged, 8/16/07 Tr. 89:21-90:15, there are many companies, especially in high technology areas, that have high, fixed start-up costs and high accumulated deficits. Other companies with similar business models incurred substantial losses in their early years and then turned profitable, including DirectTV, Nextel, and Sprint PCS. 6/19/07 Tr. 148:15-22; 184:6-10 (Butson).

1201. For example, DirectTV got its first customer in 1994, and in 2007 it continues to have an accumulated deficit of \$2.9 billion. In fact, DirecTV did not turn profitable and start reducing that deficit until 2005 – 11 years after it added its first subscriber. Butson WRT at 4, SX Trial Ex. 123.

1202. Similarly, Dr. Herscovici explained that many firms have years of losses on their way to great success – that simply reflects investment in future earnings. It is common for businesses, like the SDARS, that have high fixed costs. Amazon, like the Services, had to invest upfront, build infrastructure, build up customers and loyalty, and develop relationships. It spent money investing in those things with the expectation of reaping the benefits of those investments over an extended period of time. 8/29/07 Tr. 226:1-22 (Herscovici).

1203. From the mid-1990s until the fourth quarter of 2001, Amazon did not have a profitable quarter. 8/29/07 Tr. 227:1-7 (Herscovici). From 1997 to 2002, Amazon sustained \$3 billion in accumulated losses (its accumulated deficit), but has earned nearly \$1.2 billion in net income since 2002. Today, Amazon still has an accumulated deficit of \$1.8 billion, but it has a market capitalization of \$30 billion and investors agree that its prospects are exceedingly good. Herscovici WRT at 28, SX Trial Ex. 130. The fact that Amazon had and still has a significant accumulated deficit says little about the future prospects of the company – which in the case of Amazon are very strong according to the general consensus of analysts. 8/29/07 Tr. 227:1-228:13 (Herscovici).

d. The Occasional Claims of SDARS' Witnesses that They Cannot "Afford" to Pay SoundExchange's Proposed Rate Has No Evidentiary Support.

1204. SDARS witnesses at times assert that in light of past performance, royalty rates at the level proposed by SoundExchange would disrupt the SDARS' businesses on a forward-looking basis because, although articulated in different ways, the SDARS cannot afford the rates proposed. But the SDARS have not provided factual evidence to support these claims, and the record belies them.

1205. While Mr. Musey claimed that the SoundExchange proposal would make it “very difficult for the companies to stay in existence” and “would be devastatingly disruptive to the companies,” 6/13/07 Tr. 140:14-18 (Musey), none of the SDARS’ witnesses provided any evidence to support this claim. The SDARS’ witnesses instead equate the *ability* of XM and Sirius to pay a higher royalty rate with the *desirability* of a higher royalty rate from the perspective of the SDARS’ shareholders. Mr. Musey’s oral testimony confirms this. Whereas Musey’s written direct testimony stated that an increase in the current royalty payment structure could “have significant adverse effects on the satellite radio industry,” Musey WDT at 3, XM Trial Ex. 9, at trial, he testified only that investors would *prefer* a lower royalty rate to a higher one. He testified that the dynamic he was describing in his written testimony was that the SDARS’ failure to achieve a state of positive cash flow as soon as predicted could lead the SDARS’ investors to sell their stock, and thus put downward pressure on the stock price. But he did not make any claims about what a delay in achieving a state of positive cash flow would do to the underlying business. 6/13/07 Tr. 206:15-19 (Musey).

1206. Mr. Musey’s testimony thus was strictly based on an investor point of view and reflected merely a statement of what the SDARS’ *current* investors’ desire – not what potential investors would think of the SDARS and not whether the SDARS could afford to pay SoundExchange’s proposed rate. In fact, Mr. Musey summarized his written testimony more accurately in his oral testimony by stating that “[i]nvestors would like to cut their costs where they can,” 6/13/07 Tr. 210:20-21 (Musey). Butson WRT at 11-12, SX Trial Ex. 123.

1207. Mr. Musey asserted that an increase in rates “could . . . have a disruptive impact on [the SDARS’] ability to compete with other audio services, maintain and improve their services and potentially even to survive.” Musey WDT at 40, XM Trial Ex. 9. However, as he

admitted at trial, Mr. Musey provided no empirical support or analysis for this statement in his written testimony. 6/13/07 Tr. 198-201 (Musey). Although their written testimony contained no relevant forward-looking statements, at trial, witnesses Karmazin, Vendetti and Frear made statements similar to Mr. Musey's, asserting that XM and Sirius could not "afford" to pay the royalty proposed by SoundExchange. See 6/6/07 Tr. 310:20-22 (Karmazin); 6/5/07 Tr. 361: 3-10 (Vendetti); 6/12/07 Tr. 30:6-17 (Frear). These conclusory statements are not supported by any quantitative analysis, and neither are they supported by the Wall Street analyst consensus or by the most recent financial data provided by the SDARS themselves. Butson WRT at 13, SX Trial Ex. 123.

1208. Sirius claims that adoption of SoundExchange's rate proposal would defer the time at which it can get to free cash flow positive and achieve profitability, and would transfer wealth from Sirius's stockholders to artists and record companies. 6/12/07 Tr. 30:11-17 (Frear). Yet this would be true of any royalty above zero. *Id.* 37:7-11; 37:12-39:6.

1209. Alternately, Sirius states that if SoundExchange's rate proposal were adopted, and if Sirius stayed "cash neutral" and preserved all shareholder value, it would be required to raise rates. This again is simply a mathematical point. Sirius does not state that it would in fact respond in this manner to a rate increase. 6/12/07 Tr. 32:2-5 (Frear).

1210. Sirius believes that the fact that Congress chose to subsidize broadcast radio by allowing it to use sound recordings for free necessarily requires the Court to set a near-zero rate in this case to level the playing field. 6/12/07 Tr. 41:4-44:4 (Frear). According to Sirius, a fair royalty rate would be zero, since that is the amount paid by terrestrial radio. 6/12/07 Tr. 28:3-5 (Frear). However, Sirius provides no empirical data to support its claim that it is unable to compete successfully with terrestrial radio while paying royalties and other costs that exceed

those paid by terrestrial radio, and likewise provides no evidence that Congress intended them to pay the same or similar rate as terrestrial radio. Indeed, the spectrum by the government permits them to provide content that radio stations cannot – many channels of narrowcasted music – and functionality that radio stations cannot – nationwide coverage – without having to sell advertisements on music channels. That the SDARS can compete with terrestrial radio is demonstrated by the rapid growth and strong prospects of the industry already.

1211. Furthermore, in their FCC filings, both Sirius and XM claim that they compete vigorously with more than just terrestrial radio. SX Trial Ex. 106 at 35, 37. In those filing, they maintain that they compete in a broader audio entertainment market that contains iPods, MP3s, interactive portable and non-portable internet services, and cellular services, *see id.*, and all of these services pay fair market rates to the record companies and artists for the content that they provide to consumers.

1212. While Mr. Vendetti testified that if XM's royalty costs go up, XM would either have to increase revenues, cut other costs, or suffer a decrease in profits, once again that is simply a mathematical point; it would be true of any increase in costs. 6/6/07 Tr. at 8:2-10 (Vendetti); *id.* Tr. 27:3-15. When Mr. Vendetti states that any royalty higher than .88% of revenue would put XM at a greater risk than a rate of .88%, Vendetti WDT at 3, XM Trial Ex. 4, that too is only a mathematical point: XM would benefit from and prefer lower costs to higher costs. He makes no claim that .88% is an optimal rate, or that XM could or could not afford a rate higher than .88%. 6/6/07 Tr. at 27:1-15 (Vendetti).

1213. Although Mr. Vendetti asserted in his written statement that a rate higher than .88% "could put XM at greater financial risk," Vendetti WDT at 19, XM Trial Ex. 4, Mr. Vendetti makes no effort to quantify the risk to XM at any rate level, provides no data that would

aid in quantifying that risk, and provides no analysis relating to the question of whether a higher rate would limit XM's access to the credit markets. 6/6/07 Tr. at 30:20-3:9 (Vendetti).

1214. Mr. Vendetti draws a distinction between increased payments for non-music content, and increased payments for music content, on the basis that subscribers would be impacted from the loss of non-music content. But this distinction is based on an assumption that music will always be present on XM, so that the level of music royalties would not affect the way customers interact with XM. In contrast, Mr. Vendetti assumes that payments for non-music content will result in more or less of that content on XM's network. 6/6/07 Tr. at 33:7-20 (Vendetti). Mr. Vendetti never looked at or analyzed what XM would look like if it decided not to carry music. *Id.* at 34:20-35:9.

1215. While Dr. Noll testified that any rate above approximately 6% would lead to the SDARS' shutting down, he acknowledged that this would only be the case if a rule were put in place that the SDARS could never recover past losses in a future rate. 8/16/07 Tr. 169:10-170:4 (Noll). He was assuming that the rate setting process here determines not only the rate but a process for setting rates forever into the future, that process being a rate set by Dr. Pelcovits's Shapley division of surplus as surplus was determined by Dr. Pelcovits. *Id.* 171:1-12. *See also id.* 172:14-21 ("Q: You're not making a claim that any particular rate standing by itself will necessarily drive the SDARS out of business? A: I agree that the argument I'm giving is a combination of a rate and a method."). But that is not what this rate proceeding is about.

e. The Record Amply Demonstrates that Claims That SoundExchange's Royalty Rate Would Deter Future Investment in the SDARS or Restrict the SDARS' Borrowing Are Without Basis.

1216. The SDARS' witnesses also speculate that if SoundExchange's rate proposal were adopted the SDARS would be less attractive to investors or lenders, resulting in difficulty in

refinancing their existing debt or increased borrowing costs. Despite making such claims, none of the SDARS' witnesses provide any analysis or documentation to support such claims. 8/15/07 Tr. at 55:7-11 (Vendetti); 6/13/07 201:3-8 (Musey). Nor can such claims be squared with the record.

i. The SDARS Have Presented No Evidence to Support Intimations that They Will Have Difficulty Borrowing Money, if Needed, if the SoundExchange Rate Proposal Is Adopted.

1217. Mr. Vendetti suggested that XM might have difficulty refinancing its existing debt if SoundExchange's rate proposal were adopted, but he failed to provide any evidence, or even any conjecture, as to what level of royalty rate below the maximum rate proposed by SoundExchange would in his opinion make it possible for XM to access the debt market to refinance its existing debt. 8/15/07 Tr. at 55:7-11 (Vendetti).

1218. Mr. Musey expressed the opinion that a higher royalty rate might increase the SDARS' cost of borrowing. He also provided no analysis about the extent to which borrowing costs would increase, 6/13/07 201:3-8 (Musey), and provided no empirical support for the claim that the rate would have any effect on borrowing costs at all.

ii. The Record Demonstrates that the SDARS Have a Long History of Borrowing Money, Even When They Were in Less Positive Financial Positions, at Ever-Declining Rates and More Extended Maturity Dates.

1219. The record evidence does not support Mr. Vendetti's and Mr. Musey's speculation. Both SDARS have consistently accessed the debt markets, and the markets have rewarded them with lower interest rates and extended maturity dates.

1220. XM and Sirius were able to borrow money when they had far fewer subscribers, far less revenue, and were much farther away from profitability. Borrowing is not a sign of

weakness of a company – it is a sign of increasing confidence from the markets. 8/30/07 Tr. 36:11-37:4 (Herscovici). More often it is a sign that the company is investing in a future that it believes will yield returns and that investors and bankers believe in that future as well and are willing to lend capital to support it. Herscovici WRT at 33-4, SX Trial Ex. 130; Herscovici WRT at 38-40, SX Trial Ex. 130. The decision of banks to lend at these decreasing rates shows their belief that XM and Sirius have established solid foundations on which to operate their businesses. Herscovici WRT at 38-40, SX Trial Ex. 130.

1221. Specifically, Sirius consistently has had access to the credit market on favorable terms. In addition to notes convertible to stock, in August 2005 it issued \$500,000 in debt notes due in 2013 and obtained a rate of 9 5/8% on that debt. SIR Trial Ex. 61 at SIR Exhibit 57, p. 14. In June 2006 Sirius entered into a credit agreement with Loral for a loan of \$250 million associated with a new satellite on favorable terms of LIBOR plus 4.75%,. *Id.* p. 15; 8/15/07 Tr. 134:6 (Frear). In the first quarter of 2007 Sirius obtained an even more favorable loan of \$250 million for a 5.5 year term at LIBOR plus 2.25% – an exceedingly favorable rate equal to 7.625% . SX Trial Ex. 74 at 4. That rate was far below rates that Sirius obtained in prior years, showing that the marketplace has great confidence in the companies. Herscovici WRT at 39, SX Trial Ex. 130. At that time, Sirius commented in its press release that “the issue was very well received in the marketplace with strong demand and attractive pricing.” *Id.* (citing “SIRIUS Completes \$250 Million Loan,” *M2 Presswire*, June 22, 2007).

1222. Indeed, history shows that there is no basis for the SDARS to now claim that they could not access the debt markets if, as a result of SoundExchange’s rate proposal, their costs go up or profitability is delayed by a short time. Sirius has had access to the credit markets during

periods in which it never had a positive net income, and in which the EBITDA to interest expense coverage ratio never got above .5 to 1. 8/15/07 Tr. 211:2-19 (Frear).

1223. The same holds true for XM. XM also has accessed the debt market on attractive terms. In 2006, it obtained \$600 million at rate of 9.75% for a bond that matures in May 2014. XM Trial Ex. 4 at Vendetti Ex. 3. Moreover, just prior to the time that Mr. Musey offered his expert opinion, XM entered into a leaseback arrangement for one of its satellites for approximately \$289 million at a rate of approximately 10%. 6/5/07 Tr. at 307:15, 308:10 (Vendetti). *See also* XM Trial Ex. 10 at Vendetti at Ex. 1, p. 51-52, F24-F29 & Ex. 2, p. 15. Sirius's bonds are currently trading at par, according to Bob Peck at Bear Stearns, and according to Mr. Vendetti, "during 2006, XM replaced its existing debt structure, moving from higher-rate secured debt to lower-rate unsecured debt." Vendetti WDT at 14, XM Trial Ex. 4. In particular, XM significantly lowered the cost of its debt by replacing 12% and 14% notes with 9.75% notes. These are the practices of companies on sound financial footing. Butson WRT at 17-18, SX Trial Ex. 123; Herscovici WRT at 38, SX Trial Ex. 130.

1224. In any event, the SDARS *are* fully funded and under SoundExchange's rate proposal they *will* generate free cash flow over the longer term. Butson WRT at 11, SX Trial Ex. 123. Even if that were not so, that the SDARS may have to borrow to pay for sound recording royalties says nothing about whether the rate set has a disruptive impact. Herscovici WRT at 33, SX Trial Ex. 130.

1225. Nor is the debt load of these two companies unreasonable, given their business model. The companies' combined long term debt load of \$2.4 billion is very manageable for three reasons. First, the combined interest expense of \$178 million is only 11% of 2006 expected revenues, and this percentage should decline significantly over the next several years as

subscribers and revenues grow. Second, of the total long-term debt figure, all but \$126 million comes due in 2009 or later. By approximately that time, both companies will be producing positive free cash flow, meaning they will be able to finance their business and debt payments with internally generated cash flow. Third, \$2.2 billion of the long term debt is fixed rate, with only \$200 million subject to the risks of floating interest rates, meaning that the vast majority of debt costs are fixed. Butson WDT at 22-23, SX Trial Ex. 57.

1226. The cost of capital for both XM and Sirius has declined considerably over time, from 25% in 1998 to just over 10% in 2006. Herscovici WRT at 37-38, SX Trial Ex. 130. This trend is a clear indication from the market that the risks that the Services are facing are declining as they grow and leverage their subscriber bases. Herscovici WRT at 37-38, SX Trial Ex. 130.

1227. In fact, even at the time of the oral rebuttal hearings in August 2007, when the debt markets were in turmoil as a result of problems in the subprime mortgage lending area, XM and Sirius senior secured bonds with coupons in the 9% range were trading at around 11%. 8/27/07 Tr. 277:17-278:7 (Butson).

iii. There Is No Reason to Believe that XM and Sirius Will Have Difficulty Borrowing Money in the Future If They Need to.

1228. Given this financial picture, even while they are asserting that adopting the SoundExchange rate proposal “could” be “devastating,” the SDARS do not suggest in their written testimony that their ability to borrow would be affected by the increased expenses associated with the SoundExchange royalty, and do not provide any empirical evidence or analysis to support the contrary claims they make only in their oral testimony. Those oral claims are not credible. Absent materially negative unforeseen circumstances, companies with billions of dollars of annual revenue, projected double digit EBITDA margins, and significant expected

free cash flow will be able to access the credit markets to refinance their debt. Butson WRT at 18, SX Trial Ex. 123.

1229. As shown by the testimony of Mr. Butson, if SoundExchange's rate proposal is adopted, XM and Sirius would need only to refinance existing bonds. Moreover, as Dr. Herscovici explains, even if they needed additional financing, with the SDARS' increasing revenues and subscribers, they should not have difficulty obtaining it. Herscovici WRT at 39, SX Trial Ex. 130.

1230. In light of their credit history, it is clear that if XM and Sirius elected to borrow money to pay for sound recording royalty rates, they would have no trouble doing so. Herscovici WRT at 38 & App. R, S, SX Trial Ex. 130; 8/30/07 Tr. 34:16-35:14 (Herscovici). The view of bankers is echoed by investment analysts, who have made clear that XM and Sirius will have no trouble attracting financing if they need it. Herscovici WRT at 39, SX Trial Ex. 130.

1231. Because XM and Sirius will have more and more subscribers, which means more and more revenues and cash flow, these companies will be "cash cows" and will have no problem obtaining financing if they need it or desire it. 8/30/07 Tr. 35:15-36:10 (Herscovici). Most of the SDARS bonds mature in 2009, at which time the SDARS will only be about 1 year away from obtaining positive free cash flow, assuming SoundExchange's proposed royalty rate. Accordingly, it is reasonable to assume that the companies will not have a difficult time refinancing their outstanding bonds or attracting needed additional capital, assuming reasonably stable credit markets. Butson WRT at 17, SX Trial Ex. 123; Herscovici WRT at 39, SX Trial Ex. 130. The SDARS originally incurred these debts at a time when such positive results were anticipated far further off into the future, and were far more speculative.

1232. Finally, even if one assumed, conservatively, that the increased costs resulting from SoundExchange's rate proposal drove the bond price higher still, for example, to 12%, that would result in approximately an additional \$10 million in interest charges annually from the charges set out in Mr. Butson's models. These are relatively insignificant cost increases for companies the size of XM and Sirius and would not materially effect Mr. Butson's conclusions. 8/27/07 Tr. 278:8-279:10 (Butson).

6. The Anticipated XM-Sirius Merger Effectively Takes Disruption Off the Table as an Issue Because XM and Sirius Have Provided No Basis for the Court to Conclude that SoundExchange's Proposed Rates Would Have a Disruptive Impact on the Merged Entity.

1233. Whether or not the SDARS merge in the future, the undisputed evidence is that the individual SDARS are growing successful companies able to compete in the entertainment marketplace without the need for any subsidized sound recording royalty rate.

1234. All estimates of the SDARS' future financial development project that the dramatic year-to-year improvements they have accomplished in the past will continue for years to come, and in particular will continue throughout the next royalty rate period of 2007-2012. The record reflects that the SDARS will grow and will become a healthy, profitable company (or remain two healthy, profitable companies), regardless of which rate proposal the Court accepts. *Infra*.

1235. However, it is relevant, and should be accounted for in the rates ultimately adopted, that XM and Sirius themselves are proposing to disrupt the industry structure by merging into a single entity. In the event that XM and Sirius do merge, all of the claims of poverty and negative financial metrics on which the SDARS rely (and which are flawed for the many reasons detailed *supra*) will simply no longer be relevant.

1236. There is no dispute that if, as the SDARS expect, the Companies merge, growth will be faster, profitability will come sooner, and not even the SDARS suggest that a royalty rate at any imaginable level would have a disruptive effect on their merged business. Indeed, XM and Sirius have made no factual claims that the merged company would be disrupted by SoundExchange's proposed rate. Sirius has done no post-merger analysis relating to the effect of the SoundExchange royalty on the merged entity. 8/15/07 Tr. 206:8-12 (Frear).

1237. The record contains evidence of the proposed merger of XM and Sirius and its impact on the operations of those businesses. On February 19, 2007, Sirius and XM agreed to merge their companies. SIR Trial Ex. 61 at SIR Exhibit 47, p. 3.

1238. Sirius is confident that it will successfully complete the merger transaction by the end of 2007. SX Trial Ex. 28 at 6. *See also* 8/15/07 Tr. 188:18-189:2 (Frear) (better than 50% chance of approval); SX Trial Ex. 74 at 5. (Karmazin continues to expect merger will close by the end of the year).

1239. Therefore, in addressing the likely future financial developments of the SDARS, the undisputed evidence in the case is that the most likely scenario is that the SDARS will merge by the end of 2007, and that the finances the Court must consider are the finances of the merged company.

1240. Sirius expects that the merged company will achieve substantial cost savings as a result of the merger. 8/15/07 Tr. 193:3-8 (Frear). Both Sirius's management and independent analysts have concluded that there will be hundreds of millions of dollars annually of efficiencies as a result of the merger. SX Trial Ex. 76 at 1-2. Mr. Karmazin testified that Sirius and XM expect substantial cost-savings to be realized should their merger be approved. 6/6/07 Tr. 349:9-

12 (Karmazin). Indeed, he testified that he expected some of the cost-savings to be realized in the first year after the merger. 6/6/07 Tr. 350:7-13 (Karmazin).

1241. If the merger is approved, in the future the SDARS will realize accelerated and enhanced cash flows and “significant, realizable cost synergies” that will benefit both consumers and investors. SX Trial Ex. 5 at 5, 8. In fact, the merger will lead to estimated capitalized cost saving of approximately \$3 to \$7 billion. SX Trial Ex. 5 at 9. *See also* 6/5/07 Tr. 91:13-92:11 (Parsons).

1242. Specifically, as a result of the merger there will be a decrease in fixed and variable costs for: satellite and broadcast operations, terrestrial network operations, programming and content, customer service and billing, sales and marketing, subscriber acquisition, general and administrative, retail and OEM product development, depreciation costs and interest expenses. SX Trial Ex. 76 at 2-3; SX Trial Ex. 77 at 8.

1243. For example, as to satellite operations, the merged entity will eliminate two of the four satellite control sites, and over the longer term will experience substantial efficiencies relating to satellite network replacement. Redundant studio operating costs and network operating costs will be eliminated. SX Trial Ex. 76 at 3. Terrestrial repeaters will be eliminated. The companies will eliminate duplication in the overhead and production costs associated with content. SX Trial Ex. 76 at 4.

1244. In addition, XM and Sirius expect the merger will result in increased revenues overall as well. 8/15/07 Tr. 199:21-200:13; 206:8-12 (Frear). As a result of the merger, while costs will decline in virtually every category, there will also be an improvement in all revenue categories, including subscription revenue, advertising revenue, and equipment revenue. SX Trial Ex. 76 at 3; 8/15/07 Tr. 193:9-13 (Frear).

1245. With increased revenues and decreased costs, Sirius expects that the merged company will result in a more financially viable entity than absent a merger, all else being equal. 8/15/07 Tr. 193:14-194:2 (Frear). Sirius points to and relies upon third party claims that as a result of the merger there will be billions of dollars of long-term merger synergies, which translate into hundreds of millions of dollars of estimated efficiencies annually. SX Trial Ex. 74 at 4. Specifically, third party analysts, having the benefit of reviewing both Sirius and XM's finances, estimate total synergies (excluding revenue synergies) to be in the range of \$3.4-\$9.0 billion. SX Trial Ex. 77 at 10.

1246. In sum, there is no evidence on the record that SoundExchange's rate, if adopted, would disrupt the new structure of the industry or the prevailing practices of the merged company. To the contrary, the record evidence is clear that the financial results of the combined company on almost every line item of their financial statements would be better than the models of the individual companies provided by Mr. Butson. 8/27/07 Tr. 274:3-6 (Butson). If the SDARS as individual companies will not be disrupted as a result of the adopting of SoundExchange's rate, *a fortiori* the merged entity will not be disrupted. *Supra*. As the record demonstrates, if the merger is consummated, all of the SDARS' arguments in this proceeding about their poverty will have been rendered irrelevant. The rate the Court ultimately sets should account for this by ensuring that, in the event of a merger, adequate provision is made for increased royalties.

7. A Rate Set Too Low Will Significantly Harm The Record Companies And Could Be Disruptive.

1247. A review of the impact that the royalty rate will have on the record industry is also relevant to any analysis of disruption under the fourth statutory objective.

1248. While the evidence demonstrates that the Services can and do pay market rates for content and that SoundExchange's proposed rate will not disrupt the structure of the SDARS' industry, *see supra* [cite], it also reveals that the record companies are in far worse shape than they have been in recent history. Herscovici WRT at 42, SX Trial Ex. 130. Thus, the record establishes that this statutory objective does not favor the SDARS as it favored the PSS in 1996. Herscovici WRT at 42, SX Trial Ex. 130. Rather, unlike the situation of the PSS in the first PSS proceeding, the financial situation of the record industry is far worse and accordingly, every revenue source – including the royalties set in this proceeding – is increasingly critical. Herscovici WRT at 41, SX Trial Ex. 130.

1249. The record companies are currently in the worst financial shape they have ever been in. 6/21/07 Tr. 33:8-11 (Renshaw); Chmelewski WDT at 3, SX Trial Ex. 64. The recording industry has principally relied on the sale of physical products, such as albums, cassettes, and CDs, to earn money. Eisenberg WDT at 4, SX Trial Ex. 53. Over the past several years, the record industry has experienced a continual decline in the sale of these physical products, with CD and cassette sales at their lowest level in recent history. *Compare* SDARS Trial Ex. 62 (showing UMG's total CD and cassette sales for 2006) *with* SDARS Trial Ex. 60 (showing UMG's total CD and cassette sales for 1999 through 2005). With the consolidation of the retail market and the disappearance of independent record stores, record companies – including independent record labels – are struggling with ways to sell physical products. Chmelewski WDT at 3-4, SX Trial Ex. 64; 6/26/07 Tr. 19:1-22 (Chmelewski). Consequently, today, record sales are maybe 50% of what they were ten years ago, leaving record companies with significantly fewer resources with which to invest in new artists. 6/21/07 Tr. 33:16-20 (Renshaw).

1250. The music industry is rapidly transforming from a physical into a digital business, and in fact, the business of selling music via physical platforms is rapidly disappearing. 6/20/07 Tr. 6:13-7:9 (Bronfman). However, while digital sales have increased over the past few years as a result of this transformation, these sales have not made up for the losses in physical sales, as total product sales in 2006 were the lowest they have been in any year between 1999 and 2006. Compare SDARS Trial Ex. 62 (showing UMG's total product sales for 2006) with SDARS Trial Ex. 60 (showing UMG's total product sales for 1999 through 2005). See also 6/18/07 Tr. 109:22-110:8 (Eisenberg). Digital revenues have only made up for approximately one-half of the loss in physical sales, and it is unlikely that digital revenues will ever fully make up the difference. *Id.* Tr. 110:3-8.

1251. The industry-wide decline in physical sales and record company revenues has had a notable impact on record companies' ability to create and distribute music. As the revenues have declined, the number of new tracks and albums from new artists that record companies can product and distribute has shrunk. 6/18/07 Tr. 110:9-111:3 (Eisenberg). Moreover, as a result of these revenue declines, "40 to 50 percent of the artists that were signed to record companies 5 or 6 years ago are no longer signed." 6/20/07 Tr. 26:9-13 (Bronfman). In fact, since 2000, "the industry lost about 40 percent of its sales, about 50 percent of its workforce, about 50 percent of its artists as a result of the decline in CD sales as the world moved to a digital platform." 6/20/07 Tr. 7:2-9 (Bronfman). As this evidence illustrates, a low royalty rate in this proceeding will result in the creation of fewer new sound recordings – in violation of the first statutory objective. Herscovici WRT at 41, SX Trial Ex. 130.

1252. This trend toward digital media and away from physical products is likely to continue throughout the rate period; thus, it is essential for the record companies to earn fair

value from all uses of their copyrighted product – sound recordings – as their business model increasingly depends on these new digital revenue streams. Bronfman WDT at 3, SX Trial Ex. 59. Though the record companies are currently profitable, the rate set in this proceeding will have a significant impact on their future viability and their ability to earn a fair income for their sound recordings from digital services, both directly by impacting one stream of revenue, and also indirectly by setting a benchmark that can be used by other services. Bronfman WDT at 2, SX Trial Ex. 59.

1253. As this transformation from physical to digital continues, it is imperative that the record companies “monetize the use of [their] sound recordings on digital platforms.” 6/20/07 Tr. 25:15-22 (Bronfman). This is especially so because these performances and listens via digital media are substituting for physical sales of music. 6/18/07 Tr. 112:17-113:1 (Eisenberg). To the extent that consumers are attracted by satellite radio away from other forms of digital music distribution in which the record companies receive market rates, a low royalty rate here will warp the competitive structure of the industries and will have the effect of the record companies’ losing money as a result of satellite radio. Herscovici WRT at 41, SX Trial Ex. 130.

1254. More specifically, in light of the evidence of substitution, *see supra* Section V.E, as long as the royalty fee is below \$1.29 per subscriber per month, the record companies are losing money with every new subscription to the SDARS. This threatens the record companies’ finances, especially considering the continuing decline in overall sales of recorded music and their need to find new sources of revenue to fund the creation of new sound recordings. Pelcovits WRT at 36-37, SX Trial Ex. 124. With the continued – and accelerated – transition to digital media, the future of the recording industry will be made or lost based on the digital exploitation of music. Eisenberg WDT at 5, SX Trial Ex. 53.

1255. The rate set in this proceeding may also impact pricing in other distribution deals: if set too low, such a rate may exert downward pressure in the marketplace thereby eroding the record companies' ability to earn a fair return in all these new digital distribution streams. Bronfman WDT at 11-12, SX Trial Ex. 59; 6/20/07 Tr. 35:3-6, 10-15 (Bronfman). And there is no doubt that the record companies could not survive if the royalty rate proposed by the Services (around 1% of revenue) were applied to all platforms, products, and services. Herscovici WRT at 41, SX Trial Ex. 130.

1256. As an economic matter, the Services have every incentive to propose a low royalty – the lower the better. Herscovici WRT at 42, SX Trial Ex. 130. In contrast, the record companies have more balanced incentives – they would like the royalty to be high enough that they earn the necessary return, but not so high that they disrupt the operations of the Services. Thus, SoundExchange's rate proposal necessarily balances and internalizes these interests; the SDARS' does not. Herscovici WRT at 42, SX Trial Ex. 130. A market rate or rate that ramps up to a market rate is consistent with the evidence in this case and the objectives advanced by this factor. Herscovici WRT at 42, SX Trial Ex. 130. A rate set too low will actually cause the record companies to lose money because of satellite radio and to have less money available to fund the creation of new sound recordings in the future. Herscovici WRT at 41, SX Trial Ex. 130.

1257. In light of all of the record evidence, the ultimate conclusion with respect to the fourth factor is that royalties in this proceeding are of increasing importance to the record companies, and that the rates proposed by SoundExchange will not have a disruptive impact on the satellite radio companies. Herscovici WRT at 41, SX Trial Ex. 130.

VII. THE SDARS BENCHMARKS ARE UNSOUND AND NOT SUPPORTED BY THE EMPIRICAL EVIDENCE.

1258. In contrast to the multiple benchmarks submitted by SoundExchange that provide numerous mutually reinforcing data points on which to set a rate in this proceeding, the SDARS have provided only two, each presented by Dr. Woodbury: 1) the rate paid by the pre-existing subscription services (“PSS”) that was originally set in 1998 and modified slightly in 2003; and 2) the musical works rate – a benchmark this Court has previously rejected as a useful basis for measuring the value of sound recordings. Each of these benchmarks is fundamentally flawed for multiple reasons and must be rejected.

A. The PSS Rate Does Not Provide a Reasonable Benchmark for the SDARS’ Services.

1. Introduction and Summary

1259. The rate paid by the pre-existing subscription services (PSS) to SoundExchange is not a useful or appropriate benchmark for setting rates to be paid by the SDARS. There is no sound basis upon which to conclude that the PSS rate reflects the § 801(b) criteria as they would apply to the development of the appropriate rate in this case. Attempts to defend the PSS benchmark, as articulated by Dr. Woodbury in his testimony, should be rejected as a matter of economics, Ordover WRT at 2, SX Trial Ex. 119, and as a matter of law.

1260. The PSS rate benchmark should be rejected because the PSS rate is uninformative, and because the PSS service and the SDARS service have almost nothing in common apart from the fact that they both use music as an input.

1261. The rate is neither a market rate nor an “801 rate.” It was negotiated in the shadow of a future section 801 proceeding that never took place, nothing is known about the negotiations, and so nothing is known about why the parties reached the agreement that they did.

The rate does not necessarily reflect market dynamics, and it certainly does not reflect a court's assessment of the section 801(b) factors. Without knowing *what* it reflects, the 7.25% settlement figure is simply a black box.

1262. In any event, even if the PSS rate reflected market dynamics or a judicial assessment of the four factors as they applied to the PSS, it still would be of virtually no use in setting an appropriate rate for the SDARS. That is because, as we indicated at the outset, this case is ultimately about the value of music to consumers. And one thing that is known about the PSS service is that consumers find it to be almost without value – it could not be sold as a stand-alone retail service because nobody would buy it; an analogous service is given away (by XM and Sirius, as it happens) to the satellite television companies virtually for free; and Music Choice sells its service to the cable television companies for a meager [REDACTED] per customer per month. In stark contrast, consumers pay \$12.95 per month for the SDARS services. Thus, even if it were possible to understand the dynamics of the wholesale pricing of this [REDACTED] service, it would provide no useful information about the \$12.95 service that is the subject of this proceeding. In fact it is difficult to imagine a more useless benchmark.

1263. In what follows we show: That the PSS rate is neither a market rate nor a section 801 rate, but a black box, and for that reason it is an unacceptable benchmark (Point 1, *infra*); if one assumes that the PSS rate is actually a rate set pursuant to section 801, it is for that reason an unacceptable benchmark (Point 2, *infra*); if one assumes that the PSS rate is actually simply a carry-forward of the 1998 PSS rate, that rate was based on the musical works rate, and for that reason is an unacceptable benchmark (Point 3, *infra*); and if one assumes the PSS rate is actually a market rate, it is an unacceptable benchmark, because consumers value the SDARS service (and virtually every other music service) greatly more than they value the PSS service, and Dr.

Woodbury neither can nor does make any adjustment for this fundamental difference in the benchmark and target markets (Point 4, *infra*).

2. The PSS Rate Is Not a Marketplace Rate and Indeed It Is Impossible to Know What the PSS Rate Is or How to Adjust It Consistent with the § 801(b) Factors Applicable to the SDARS in 2007 and Beyond.

1264. The PSS benchmark proposed by Dr. Woodbury is flawed first because it is the product of a negotiation that took place in the shadow of a previous regulatory determination and under the specter of further regulatory intervention. As such, it does not necessarily reflect the marketplace dynamics embedded in the first three statutory criteria. While Dr. Ordovery acknowledged that the PSS rate could, in theory, reflect a “market rate,” Dr. Woodbury has not demonstrated that it does. Ordovery WRT at 4-5, SX Trial Ex. 119.

1265. It is difficult to know *what* the PSS rate represents. Dr. Woodbury himself is unsure whether the rate reflects a market rate, or the application of the § 801(b) factors, or something in between. 6/12/07 Tr. 245:7-246:8 (Woodbury). All that is known for sure is that the PSS rate resulted from an agreement negotiated by SoundExchange and the PSS in 2003, and that the 2003 negotiated rate is slightly higher (7.25% of revenues compared to 6.5% of revenues) than the 1998 PSS rate set by the CARP and the Librarian. Woodbury WDT at 5, 12-13, XM Trial Ex. 8.

1266. In the opinion of Dr. Pelcovits, the 2003 PSS rate probably represents a carry forward of the 1998 Librarian rate (with a small upward adjustment), reflecting the parties’ concerns about the high costs of litigation relative to the small amount of commerce in the whole PSS industry, and the parties’ predictions of how the Court might have applied the § 801(b) factors to the PSS in 2003. It is therefore, in the opinion of Dr. Pelcovits, probably not a market rate. Pelcovits WRT at 9-10, SX Trial Ex. 124.

1267. But as Dr. Ordover testified, neither is the rate a pure reflection of § 801. All that can be known is that it was negotiated in the backdrop of a potential proceeding under § 801(b). 8/23/07 Tr. 282:22-283:5 (Ordover) (“Dr. Woodbury would interpret it as an 801(b) rate. I have a slightly different interpretation.”); *id.* at 286:3-8 (“I would make a distinction as between the rate that will come out from a regulatory proceeding in which your Honors set the rate [that] may be appealed,” as opposed to a rate that was the result of a negotiation among the parties).

1268. There is no way to know whether the 2003 PSS rate is a true market rate in the sense that the parties would have reached the result they did even if they were not negotiating under the backdrop of § 801(b). 8/23/07 Tr. 288:21-289:14 (Ordover). Nor is there any way to determine, if the 2003 PSS rate reflects the application of the § 801(b) factors, how those factors were applied.

1269. Dr. Woodbury opined that the § 801(b) factors would have played a role in the final outcome of the 2003 PSS negotiation. But he could not explain how those factors might have affected the rate, and admitted it was only his assumption that they did. 6/12//07 Tr. 245:7-246:8 (Woodbury) (stating that “its natural to presume” that the § 801(b) factors affected the negotiations); Woodbury WDT at 13, XM Trial Ex. 8 (stating that the negotiated rate “presumably” reflects the § 801(b) factors). Indeed, no witness claimed to possess any actual knowledge of how the 2003 rate was negotiated and what considerations led the parties to the final outcome. *See, e.g.*, 6/12//07 Tr. 245:7-246:8 (Woodbury); 8/28/07 Tr. 129:10-130:2 (Pelcovits).

1270. Even if it is assumed that the 2003 PSS rate represents an attempt by the parties to mimic how a CARP would have applied the § 801(b) factors in 2003, based on how the CARP and Librarian assessed those factors in 1998, the PSS rate still would be a poor benchmark. The

fact that the parties to the 2003 PSS negotiations might have considered the § 801(b) factors does not mean that the negotiations produced a rate reflecting the § 801(b) factors as applied by a CARP or the Librarian – it only means that it produced a rate reflecting the parties’ attempts to predict how a court would apply those factors. 8/28/07 Tr. 132:5-14, 133:11:134:7 (Pelcovits); Pelcovits WRT at 10, SX Trial Ex. 124.

1271. It is not possible reasonably to rely for benchmarking purposes on rates negotiated under the shadow of a § 801(b) proceeding at a different time and for a different service, because it is not possible to deconstruct the reasons that led the parties to accept the rate at that time. It is not possible to know, for example, if there was some assessment of one or more of the statutory factors that is irrelevant to the current case that led to the rate being set as it was. 6/21/07 Tr. 215:16-216:11 (Ordover). Indeed, it is not possible to know what the parties were thinking while they were negotiating the rate. 8/23/07 Tr. 279:6-17 (Ordover). Without having that information, relying on that rate could lead to a very substantial error. 6/21/07 Tr. 215:16-216:11 (Ordover). *See generally id.* 219:14- 221:6.

1272. As a negotiated rate, the PSS rate does not offer any indication as to how the four statutory criteria influenced the negotiation. Thus, the observed rate could very well reflect an aggregate adjustment for the four factors that is entirely unsuitable for the current proceeding. Ordover WRT at 5; Herscovici WRT at 13, SX Trial Ex. 130.

1273. Conversely, suppose the PSS rate represents a purely market-driven agreement by the parties in 2003, not based on or decisively influenced by the 1998 PSS rate. As the Court pointed out, it is perfectly logical to think that the parties reached a negotiated settlement in 2003 precisely because they did not want to apply the § 801(b) factors or were uncertain of how a CARP would apply them. 8/23/07 Tr. 55:10-57:19 (Woodbury). If that is the case, then one of

the primary reasons why Dr. Woodbury resorted to the PSS rate as a benchmark disappears. See 6/12/07 Tr. 240:20-241-3 (Woodbury) (testifying that the PSS benchmark commended itself to Dr. Woodbury because it satisfied the § 801(b) factors); 6/12/07 Tr. 243:3-11 (Woodbury) (same); 8/23/07 Tr. 49:15-50:2 (Woodbury) (same).

1274. Other facts further complicate any attempt to apply the PSS rate to other markets. For example, three record labels are part owners of Music Choice. SX Trial Ex. 119 at Tr. 200:13-16 (Chipty); Woodbury WDT at 12 n. 23, XM Trial Ex. 8. Dr. Woodbury acknowledged that record labels have an ownership interest in Music Choice and agreed that they would have an interest in bolstering Music Choice financially and seeing that Music Choice remains a viable service. 8/23/07 Tr. 100:16-101:18 (Woodbury). How the 2003 negotiations were affected by the fact that certain record companies effectively stood on both sides of the transaction is unknown.

1275. Finally, all parties agree that the potential litigation costs likely would have played a role in the negotiation of the 2003 PSS rate, particularly in light of the fact that the amount of royalties at stake were extremely low and the license being negotiated was for only 2 years.⁵⁴ Again, how this affected the negotiations is unknown. All the economists agree, however, that litigation costs, especially where such costs would have dwarfed the potential royalties, would have played a role in the negotiations. 8/23/07 Tr. 51:16-22 (Woodbury); Pelcovits WRT at 9-10, SX Trial Ex. 124; Ordoover WRT at 5, SX Trial Ex. 119.

1276. In negotiating the PSS rate in 2003, the parties understood that a failure to come to agreement would result in costly litigation and ultimate resolution by a copyright royalty

⁵⁴ According to Dr. Chipty, the largest PSS, Music Choice, had revenues for 2005, including all revenues from cable television, video on-demand sales on the Internet, and mobile revenues, of only [REDACTED] million. SX Trial Ex. 119 at SX Exhibit 209 RP; Tr. 148:16-149:13 (Chipty).

panel. At that time, the CARP system was still in place and, under the statute in effect at that time, the PSS license was for only 2 years. The CARP’s potential finding was inherently uncertain. Consequently, it is plausible (indeed likely) that the parties would, in their negotiations, factor in *their expectations* about how the CARP might have applied the § 801(b) factors to arrive at a licensing rate. Or in the end, the negotiated rate might in fact mimic a market-based rate, but absent a deep understanding of the considerations of each party during the negotiations, one cannot reliably conclude how closely, if at all, the observed rate conforms to a market-based outcome free of regulatory oversight.

3. The PSS Rate Should Be Rejected As A Benchmark Because It Is Not A Market Rate.

1277. Even if one assumes that the PSS rate is a § 801(b) rate, it is for that reason an unacceptable benchmark. As shown in what follows, the proper place to begin the analysis under § 801(b) is not a rate already adjusted for the § 801(b) factors as applied to a wholly different service at a different time with entirely different supply and demand characteristics.

1278. As discussed in more detail in SoundExchange’s Proposed Conclusions of Law, prior panels applying the § 801(b) factors have started with what they concluded to be a marketplace rate in a closely related market, and then made adjustments to that rate to account for the § 801(b) factors. *See Amusement & Music Operators Ass’n v. Copyright Royalty Tribunal*, 676 F.2d 1144, 1148 (7th Cir. 1982) (approving tribunal’s decision under § 801(b) to “rely[] primarily on marketplace analogies”); *1980 Adjustment of the Royalty Rate for Coin-Operated Phonorecord Players (“Juke Box Decision”)*, 46 Fed. Reg. 884, 889 (Jan. 5, 1981) (analyzing marketplace benchmark rate and finding no need to adjust the market rate to achieve the objectives in § 801(b)(1)(A)); *Determination of Reasonable Rates and Terms for the Digital Performance of Sound Recordings (“PSS I”)*, 63 Fed. Reg. 25394, 25399 (May 8, 1998). As the

Seventh Circuit recognized, at least the first three factors of the § 801(b) rate standard are best addressed through “marketplace evidence, standing alone.” *Amusement & Music Operators*, 676 F.2d at 1157.

1279. No prior panel has ever looked to a different service with different demand characteristics that had previously been adjusted for the § 801(b) factors specific to that different service at a different time, precisely because, as discussed below, it is impossible first to remove the manner in which the § 801(b) factors affected the rate for the different service and then re-apply the § 801(b) factors again, this time for the specific service at issue.

1280. As Dr. Ordover explained, and as is clear from the factors themselves, § 801(b) rates cannot be deduced from “first principles”: if the rate is to be set with reference to the § 801(b) factors, it must start from somewhere. To an economist, the best starting point is one or more observed market rates. Ordover WRT at 10-11, SX Trial Ex. 119.

1281. Market rates reflect market dynamics that best implement the § 801(b) policy objectives. Whereas marketplace negotiations reflect many, if not all, of the considerations in the § 801(b) factors (and are made directly relevant by the second factor), regulated rates or rates negotiated under the shadow of regulation need not embody these considerations at all. Thus, marketplace rates provide a far superior starting benchmark. Ordover WRT at 2, SX Trial Ex. 119. The Court heard testimony from Dr. Ordover, Dr. Pelcovits, and Dr. Herscovici, all reaching this conclusion. Ordover WRT at 2, SX Trial Ex. 119; 7/09/07 Tr. 51:4-51:15 (Pelcovits); Herscovici WRT at 13, SX Trial Ex. 130.

1282. Indeed, Dr. Woodbury himself acknowledged that “... rates negotiated at arms-length are a promising start to developing the rate in question.” Woodbury WDT at 3, XM Trial Ex. 8. Moreover, in an earlier proceeding before a CARP, Dr. Woodbury endorsed an approach

based upon observed marketplace rates. 6/13/07 Tr. 68:20-74:18 (Woodbury). Indeed, he testified in the PSS proceeding that “competitive price levels would be given substantial weight by an economist in any economic assessment of the reasonableness of a proposed fee.” 6/13/07 Tr. 72:9-18 (Woodbury). Dr. Woodbury stated that he still agreed with his earlier testimony “as a general matter.” *Id.*

1283. Dr. Woodbury also testified in the *PSS I* proceeding that “[m]ost economists would approach the task of setting a reasonable fee for performance rights by considering the price that would arise from private market transactions in performance rights; that is, from the view of an economist, a useful analytical starting point would be to suppose that Congress has simply created the performance right, and then allowed private transactions to determine what the price of those rights should be.” 6/13/07 Tr. 73:3-18 (Woodbury). Dr. Woodbury again stated that he still agreed with his earlier testimony “as a general matter.” *Id.*

1284. Thus, despite his attempts to evade his prior testimony, Dr. Woodbury clearly acknowledges a connection between observed market rates and the rate resulting from an application of the § 801(b) factors. Otherwise, both could not represent reasonable approaches to answering the same question. It thus follows that if Dr. Woodbury’s approach in this case is flatly inconsistent with actual marketplace outcomes, his approach is similarly at odds with the § 801(b) statutory criteria.

1285. Nevertheless, Dr. Woodbury asserts that the PSS rate provides a useful benchmark precisely because it already reflects the application of the § 801(b) factors. But that argument assumes that the § 801(b) factors as they were applied to the PSS years ago would apply in precisely the same way to very different services – the SDARS – which have very different functionality (e.g., the SDARS are portable and the PSS are not), very different

consumer demand characteristics, and very different economic prospects (the SDARS are growing rapidly while companies are exiting the PSS market), to name only a few differences. Pelcovits WRT at 35-36, SX Trial Ex. 124. Among many other things, Dr. Woodbury did not consider differences in the elasticity of demand between the two services and ignored completely that consumers are willing to pay a significant sum for one service and are willing to pay effectively nothing for the other. 6/13/07 Tr. 68:10-15 (Woodbury).

1286. As the prior panels have made clear, and as is discussed in SoundExchange's Proposed Conclusions of Law, the four factors are quite plainly time and service (license) specific. A rate that balances the varying interests of buyers and sellers in accordance with the factors in this case will be a function of the SDARS' competitive positioning, their business model, their current and forecasted financial status, consumer demand for their services, and many other variables pertinent to them. As such, determination of a rate in this case should begin with recent market-based rates for distribution of content in channels that as closely as possible resemble distribution of content via SDARS along the relevant dimensions. As discussed below, the PSS rate fails to meet this requirement. Ordover WRT at 5-6, SX Trial Ex. 119.

1287. For example, under § 801(b)(1)(D), the Court must set a rate that minimizes the disruptive impact on the structure of the industries involved. There is no reason to think a rate that might have disrupted the PSS industry in 1998 or 2003 necessarily would disrupt the SDARS industry in 2007, particularly given the very different cost structure and demand conditions which the PSS and SDARS face in their respective markets. Dr. Woodbury does not explain how to disentangle and separately weigh each of the § 801(b) factors as they were

applied by the Librarian to the PSS in 1998, and then apply this insight to the SDARS in 2007. Pelcovits WRT at 11, SX Trial Ex. 124.

1288. For example, in 2003, the parties may have concluded that a 10% rate would be consistent with § 801(b) factors, but that the PSS were so near exiting the market – as two of them, DMX and Muzak, now essentially have done – that a lower rate was required to satisfy the fourth factor. There is, however, no way to know this and no way to remove the effects of the application of these factors on the 2003 PSS rate (even if one assumes the PSS rate perfectly captures the factors as applicable in 2003).

1289. Setting aside the very significant differences between the PSS service and the SDARS service in terms of consumer demand, (Point 5, *infra*), Dr. Woodbury utterly ignores changes in the digital music market since 2003. Among other things, he considers not at all the decline of the record industry which continues today and is projected into the future, and ignores that, from the perspective of the lawful dissemination of music in digital form, 2003 was essentially the beginning. In 2003, record company revenues from digital services were essentially zero and iTunes had not even launched. Today, revenues from digital sources are now 16% of industry revenue and growing. Herscovici WRT at 18-19, SX Trial Ex. 130; 8/30/07 Tr. 13:17-15:2 (Herscovici).

1290. In summary, no one in this proceeding can provide an evaluation of how the § 801(b) factors affected the PSS rate in 2003, and thus it is impossible first to remove the impact of the factors as they would have applied to the PSS in 2003, and then re-apply the factors in 2007 as they would apply to the SDARS. Thus, the PSS rate is a poor benchmark, even as Dr. Woodbury conceives it.

4. The PSS Rate Was Based On The Musical Works Rate, Which Since Has Been Rejected By The Court As A Useful Benchmark.

1291. In 1998, the Librarian set the PSS rate at 6.5%, in part relying on the rate for musical works as a benchmark. Pelcovits WRT at 11-12, SX Trial Ex. 124. In rejecting the musical works benchmark in the subsequent *Webcaster I* proceeding, the Librarian noted that the only reason the musical works rate was considered relevant in the *PSS I* proceeding was that there was no other probative benchmark. The Librarian further noted that the parties in the *PSS I* proceeding had not fully developed the issues related to the musical works rate in the record. 67 Fed. Reg. at 45247.

1292. As a result, in 1998, the CARP and the Librarian may have had no better benchmark on which to rely. To the extent, however, that the PSS rate is based on or infected by the poor record in the *PSS I* proceeding and the musical works benchmark, there is no basis for using it as a benchmark here. Indeed, the *Webcaster I* CARP and the Librarian each rejected the musical works rate as a benchmark, and this Court rejected it on multiple grounds in the recent webcasting decision. In contrast to 1996 (when the record for the *PSS I* proceeding was developed) today multiple digital music markets for sound recordings have developed and abundant marketplace evidence demonstrates that musical works rights and sound recording rights are not valued the same in the marketplace.

1293. Using the 2003 PSS rate, as Dr. Woodbury proposes, would effectively resurrect that now-discredited benchmark and fail to reflect the § 801(b) factors as they apply to the digital music market today. Pelcovits WRT at 12 and n. 28, SX Trial Ex. 124. Because the PSS rate set in 1998 was explicitly based on the musical works benchmark and that rate likely affected negotiations in 2003, it is likely that the 2003 PSS rate was affected by this now-discredited benchmark. Indeed, Dr. Pelcovits believes that the PSS rate negotiated in 2003 most plausibly

reflects an agreement to carry forward the 1998 rate set by the Librarian with a small adjustment. The closeness of the 2003 rate to the 1998 rate, and a common sense expectation of how the parties would negotiate, makes this a reasonable conclusion. 8/28/07 Tr. 126:1-128:13, 129:10-130:2 (Pelcovits).

1294. Dr. Woodbury concedes that “[t]he original PSS rate . . . appears to have been based on the DMX/Music Choice – ASCAP rate that was being adjudicated at the time.” Woodbury WDT at 14, XM Trial Ex. 8. Dr. Chipty, the SDARS’ expert in the 2005-5 proceeding, also agreed that the 1998 PSS rate was developed using the musical works rate as a marketplace benchmark, from which adjustments were made to account for the § 801(b) factors. SX Trial Ex. 119 at SX Exhibit 209 RP, Tr. 139:21-142:11 (Chipty). Dr. Woodbury is unsure whether the 1998 rate played a role in the negotiations of the 2003 rate. He agrees, however, that the parties had to start from the 1998 rate because that is what the PSS services were paying at the time. 8/23/07 Tr. 54:3-15 (Woodbury).

1295. To the extent that the parties were simply pushing forward the original 1998 rate set by the CARP and Librarian under § 801(b) (with a small increase), or the 2003 rate was otherwise influenced by the 1998 rate, the PSS rate thus is premised on a flawed benchmark. It should be rejected for precisely the same reasons as the musical works benchmark.

5. The PSS Services Are Fundamentally Different From The SDARS In Terms Of Functionality And Consumer Value.

1296. Even if the PSS rate did not suffer from the flaws discussed above, it still would be an inappropriate benchmark. 8/23/07 Tr. 289:15-290:22 (Ordovery). On multiple critical characteristics – especially consumer demand, the PSS service is vastly different from the SDARS services and thus is not a “comparable” service on which to base a rate here. These differences render the PSS rate useless as a benchmark.

a. The PSS Service and the SDARS Service Are Different in Critical Ways – All of Which Are Ignored by Dr. Woodbury.

1297. A comparison of the PSS and the SDARS highlights critical differences that make the PSS an extremely poor market benchmark. These differences go to the heart of the fundamental issue recognized by all economists here – the value that consumers place on the music used by the SDARS and the derived demand for sound recordings. As discussed in more detail below, Dr. Woodbury wholly ignores these differences and makes no effort to account for them.

1298. Dr. Woodbury's claims that the PSS and the SDARS offer similar services are untenable. This is obvious from multiple data points: 1) the behavior of consumers who pay large sums for the SDARS service and are willing to pay nothing for the PSS service; 2) the behavior of the SDARS themselves, who essentially give away programming over satellite television services in competition with the PSS; 3) the behavior of the PSS who have essentially fled this market; and 4) marketplace rates in every other context, which are vastly different than those embodied by the 2003 PSS rate.

1299. At bottom, the PSS are offering a service for which there is almost no willingness to pay, as evidenced by its failure as a standalone offering and the near zero monthly, per-subscriber revenues the PSS receive from cable companies. By contrast, the SDARS, since their inception, have grown rapidly in terms of subscribership, and have done so at a monthly subscription price of almost \$13. Ordover WRT at 17, SX Trial Ex. 119.

1300. As the record demonstrates, consumer demand for the PSS is extremely weak and the PSS get paid very little for their service – in stark contrast to the SDARS. As a result, even in an arms-length deal with the PSS, a record company's ability to obtain a fee that is more than trivial would be seriously constrained. Ordover WRT at 3, SX Trial Ex. 119.

1301. The SDARS charge \$12.95 per month for a subscription, and based on his channel attachment index calculation, *supra* Section IV.E, Dr. Woodbury agrees that XM and Sirius subscribers pay something in the ballpark of \$6 per month for the SDARS' music content. 6/13/07 Tr. 52:1-13 (Woodbury). By contrast, the lone remaining PSS service, Music Choice, receives an average of only [REDACTED] per subscriber in 2006. Pelcovits WRT at 13, SX Trial Ex. 124; Woodbury WRT at 7, 12, SDARS Trial Ex. 80.

1302. The [REDACTED] Music Choice rate, and the fact that XM and Sirius themselves provide a similar service over satellite television virtually for free establishes that the PSS service has very little value to consumers, when compared to other distribution channels. 8/23/07 Tr. 292:7-293:21 (Ordoover). Whatever multiplier one attaches to the SDARS retail rate of \$10-\$11 per subscriber per month to account for the presence of non-music content on the SDARS, it still would leave a rate associated with music that is orders of magnitude higher than the [REDACTED] charged by Music Choice. *Id.* 302:1-20.

1303. Dr. Pelcovits was cautious about drawing conclusions about whether the per-subscriber price paid to Music Choice by cable TV companies accurately reflected consumer value for the service, because PSS services are sold to consumers as part of a bundled product and consumers do not pay separately for the service. Pelcovits WRT at 12-13, SX Trial Ex. 124. Dr. Woodbury, on the other hand, believes that the [REDACTED] per subscriber fee paid by the cable television operator to Music Choice does indeed reflect the value of the PSS service to the ultimate consumers. Woodbury WDT at 22, XM Trial Ex. 8.

1304. Accepting Dr. Woodbury's conclusion that the value to consumers of music content on the SDARS services is approximately \$6 per subscriber per month, and the value of music content on the PSS services is [REDACTED], it is clear that there is a very large difference in how

consumers value PSS services and SDARS services – on the order of [REDACTED]. Indeed, Dr. Woodbury does not suggest that the SDARS and PSS provide the same experience to consumers and does not contest the fact that consumer valuation of the two services is radically different. The availability of the PSS service evidently adds practically no value to cable television service. Indeed, Dr. Ordover was not aware of any evidence – and Dr. Woodbury adduced none – that consumers subscribe to cable in order to obtain access to the PSS. Ordover WRT at 6-7, SX Trial Ex. 119. By contrast, music is clearly the backbone of satellite radio and the most important driver behind its rapid subscriber growth. *Supra* Section IV. There is thus no reason to believe that the rate paid by the PSS reflects considerations that are relevant for purposes of determining an appropriate rate for the SDARS. This is true whether one views the PSS rate as a market-based rate or a rate that incorporates the § 801(b) factors, or as the black box that it is. Ordover WRT at 7-8, SX Trial Ex. 119.

1305. The PSS were unable to successfully offer their service to consumers on a stand-alone or a la carte basis, with cable television customers paying a separate fee for the music service. 6/13/07 Tr. 53:19-22 (Woodbury). The a la carte pricing approach did not succeed, and Music Choice began selling its service as part of a bundle with the underlying cable television service. 6/12/07 Tr. 368:4-12 (Woodbury).⁵⁵ In contrast, the SDARS are rapidly growing their subscriber base offering a standalone service. Pelcovits WRT at 12, SX Trial Ex. 124.

⁵⁵ Despite this evidence, Dr. Woodbury claims that the PSS services are not a declining industry, citing as his “clearest evidence” the entry into the market of MTV Networks, which he asserted plans to provide a multi-channel residential audio music service. Woodbury WRT at 6-7, SDARS Trial Ex. 80. However, Dr. Woodbury based his statement about MTV only on conversations with colleagues or maybe a press release. He could recall nothing more definite about his source or even who or what his source was. 8/23/07 Tr. 92:22-96:1 (Woodbury).

1306. Originally there were three PSS services. 6/12/07 Tr. 240:16-19, 241:10-17 (Woodbury). Two of the three PSS providers no longer offer a residential service. Pelcovits WRT at n.30, SX Trial Ex. 124.

1307. The remaining PSS service, Music Choice, is increasingly selling video on-demand. SX Trial Ex. 119 at SX Exhibit 209 RP, Tr. 200:21-201:2 (Chipty). The exit of two of the three providers of PSS, and the re-orientation of the business of the third, provides further compelling evidence of the extremely weak consumer demand for the PSS. Ordover WRT at 7, SX Trial Ex. 119.

1308. The inability of the PSS to prosper (or even survive) – at any royalty rate – severely weakens the validity of the PSS rate as a benchmark. As Dr. Pelcovits, Dr. Ordover, and Dr. Herscovici conclude, the PSS and the SDARS are simply too different for one to provide a useful benchmark for the other. Pelcovits WRT at 12 and n.30, SX Trial Ex. 124; Ordover WRT at 2-3, SX Trial Ex. 119; Herscovici WRT at ¶ 79, SX Trial Ex. 130..

1309. Further reflecting the differences between the SDARS and PSS services, those services do not compete with one another. Indeed, XM and Sirius provide PSS-type audio music channels to satellite TV at a trivial or [REDACTED] price, because they view the PSS service as one that can promote increased use and subscribership of the SDARS services. Pelcovits WRT at n.30, SX Trial Ex. 124; SX Trial Ex. 119 at SX Exhibit 209 RP, Tr. 145:4-15, 166:5-21 (Chipty); Ordover WRT at 7, SX Trial Ex. 119.

1310. The SDARS services apparently have no concern that providing their music content to satellite TV will cause consumers simply to substitute a PSS-type service for an SDARS service. See Pelcovits WRT at n.30, SX Trial Ex. 124 (XM and Sirius provide services similar to Music Choice [REDACTED] in the expectation of promotional benefits). That

XM and Sirius do not view PSS services as ones that consumers may substitute for an SDARS service is clear evidence of just how different the PSS and SDARS services are.

1311. Indeed, despite all of the extensive discussions in their FCC filings of competing products and the greater audio entertainment market within which the SDARS claim to compete, the SDARS themselves do not include the PSS services among those that are substitutes for, or competitors of, satellite radio. SX Trial Ex. 106.

b. Marketplace Rates in Every Other Context Demonstrate that the PSS Rate Is an Outlier Based on the Lack of Value Placed on it by Consumers.

1312. Observed marketplace rates across a number of digital distribution channels, *supra* Section IV, demonstrate that the PSS rate is an outlier, and thus an inappropriate candidate for a benchmark in this case. Far more substantial rates are paid by a variety of music distribution channels. 8/23/07 Tr. 289:15-290:10-22 (Ordover).

1313. Dr. Ordover provides a detailed review of the types of compensation that sound recording copyright owners receive in other distribution channels. That review demonstrates that record companies receive vastly more in every other distribution channel than they do for the PSS.

1314. Dr. Ordover concluded that interactive subscription services are a decidedly superior starting point for purposes of determining an SDARS rate in this proceeding. Certain adjustments still must be made, but they are substantially less drastic and arbitrary than the adjustments to which Dr. Woodbury subjects the PSS rate. Ordover WRT at 17-18, SX Trial Ex. 119.

1315. Other digital audio services represent much closer analogies to the SDARS' target market and business operations. For example, interactive subscription services, like satellite

radio but unlike the PSS, are sold on a subscription basis to consumers. *Supra* Section V. The PSS attempted to implement such a business model and failed. Interactive subscription service providers, like satellite radio but unlike the PSS, are actively promoting their services in the marketplace and have provided no indication that they intend to exit the marketplace or otherwise re-vamp their operations. Interactive subscription services receive monthly revenues of approximately \$10 to \$15 per-subscriber, *id.*, a range that is consistent with the monthly, per-subscriber revenues received by the SDARS, but substantially different than the nominal retail value implied by the [REDACTED] per-subscriber wholesale price received monthly by Music Choice, even if one allows for the fact that Music Choice does not sell directly to listeners. Ordoover WRT at 17-18, SX Trial Ex. 119.

1316. Another measure of the outlier nature of the PSS rate can be seen by analyzing the PSS rate as a per-performance rate and comparing it to the per-performance rates in other markets. When Dr. Woodbury's proposed rate is translated into a per performance rate, the statutory webcasting rate is *11 times greater* than the resulting proposed SDARS rate in 2006, based on the PES benchmark. *Infra* Section VIII. The statutory webcasting rate rises to approximately 16 times greater than the proposed SDARS rate in 2010. 8/28/07 Tr. 88:21-90:2 (Pelcovits). In Dr. Pelcovits's opinion, there is no reason why market forces would result in a per-play rate for statutory webcasting that is so much higher than the SDARS rate. Indeed, he would expect the SDARS rate to be higher, given that the SDARS offer music on a mobile basis. 8/28/07 Tr. 90:3-18 (Pelcovits).

1317. Dr. Woodbury calculates that SoundExchange receives a per-subscriber royalty from Music Choice of [REDACTED]. Woodbury WRT at 12, SDARS Trial Ex. 80. In Dr. Woodbury's written rebuttal testimony, he calculated that the per-subscriber rate that would be

paid by the SDARS based on the PSS benchmark, as adjusted to account for differences in the amount of listening to PSS services and SDARS services, would be [REDACTED]. Woodbury WRT at 13, SDARS Trial Ex. 80. That amount is slightly more than only 1% of the per-subscriber payment made to SoundExchange by non-portable interactive services. 8/23/07 Tr. 145:18-147:18 (Woodbury). This radical difference on a per performance or per subscriber basis is wholly inconsistent with Dr. Woodbury's own testimony that sound recording rates should be equal on a unit basis no matter how the sound recording is delivered to consumers.

1318. In addition to being flatly inconsistent with observed marketplace rates for sound recording rights in other digital distribution channels, Dr. Woodbury's PSS benchmark is similarly untethered to the deals the SDARS have reached with various providers of non-music content. These agreements appear to reflect the expected value to the SDARS, *i.e.*, increased subscribership, derived from being able to offer specific content to their subscribers. If non-music content providers are compensated based upon the value that they add to the SDARS' services, Dr. Ordover can think of no sound economic basis upon which to conclude that compensation to copyright holders of sound recordings should be determined any differently. Ordover WRT at 16, SX Trial Ex. 119.

c. Conclusion

1319. The vast differences between the PSS rate service and the SDARS service render Dr. Woodbury's benchmark of no value. Indeed, even Dr. Noll appeared to concede this.

1320. As Dr. Noll acknowledged, the PSS is not a reliable benchmark because "there are differences that make it not strictly comparable" to the SDARS' service. 8/16/07 Tr. 236:17-18 (Noll). In fact, Professor Noll admits – as he must – that the PSS and the SDARS are dealing with different buyers, different costs, and different rights, and in fact they "operate in different

markets.” 8/16/07 Tr. 242:14-243:6 (Noll); ; *Id.* at Tr. 237:13-16 (“that’s where the analogy could potentially break down, is that it’s not the same kind of service. . . . So I agree that there’s an uncertainty to the analogy”). Indeed, remarkably, when asked by the Court whether he believed Dr. Woodbury’s benchmark was something the Court should rely on, Dr. Noll refused to vouch for it, saying only that “[a]t the end of the day, you’re left with a judgment call on how close [this is to] an appropriate benchmark, and I don’t know. I can’t answer that question.” *Id.* Tr. 242:4-8.

6. Dr. Woodbury’s Adjustments to The PSS Rate.

1321. Even assuming the PSS rate had value as a benchmark, the adjustments – or lack of adjustments – that Dr. Woodbury makes to the PSS rate to derive a rate for the SDARS are totally inconsistent with, among other things, the critical economic principle that defines value here – derived demand.

a. Dr. Woodbury’s Extreme Adjustments Render the PSS Benchmark Unreliable to Account for Derived Demand.

1322. Dr. Woodbury opined that the PSS rate must be adjusted to account for the greater costs of mobility and end-to-end service, before the PSS rate can be applied to the revenues of the SDARS services. Woodbury WDT at 23, XM Trial Ex. 8. According to Dr. Woodbury, it is the “cost difference that drives the revenue difference,” Woodbury WDT at 24, XM Trial Ex. 8, and the revenues paid to an end-to-end provider should increase in the same proportion to the increase in its costs compared to a hand-off provider. Woodbury WDT at 29, XM Trial Ex. 8. Thus, Dr. Woodbury multiplied the PSS rate of 7.25% the ratio of hand-off provider costs to end-to-end provider costs. Woodbury WDT at 30, XM Trial Ex. 8.

1323. Dr. Woodbury’s assumption that revenues will tend to reflect costs is based on an assumption that the SDARS function in a competitive environment “in the long run.” 6/12/07

Tr. 264:17-266:8 (Woodbury.) Dr. Woodbury declined to define “long run” as something close to the five year term of the SDARS license period. 6/12/07 Tr. 298:5-300:8 (Woodbury). Dr. Woodbury does not have any empirical evidence to support that assumption. 6/13/07 Tr. 87:1-22 (Woodbury).

1324. As a threshold matter, the reasonableness and reliability of Dr. Woodbury’s PSS benchmark rate is further undermined by the numerous and arbitrary adjustments he implements which reduce the rate from 7.25% all the way down to 1.2%. A reliable benchmark should not require a series of arbitrary adjustments and cost allocations in order to arrive at a rate for the SDARS. As Dr. Ordover explained in his written direct testimony, the principal disadvantage of a benchmark rate based upon payment terms voluntarily negotiated between record companies and other digital distribution channels is that consumers may value music differently when it is delivered via different media, with different functionalities, varying features, and so forth. Ordover WDT at 37, SX Trial Ex. 61. Consequently, the selected benchmark should mimic, as closely as possible, the pertinent factors as they apply to the SDARS. Ordover WRT at 17, SX Trial Ex. 119.

b. Dr. Ordover’s Adjustments Effectively Treat Music Like a Commodity in Violation of Fundamental Economic Principles.

1325. The PSS provide a wholesale service and the SDARS provide a retail service. Dr. Woodbury adjusts for this difference by allocating the SDARS’ costs between its wholesale and retail operations, and reducing the benchmark PSS rate according to the percentage of costs he allocates between a hypothetical SDARS’ wholesale and retail provider. Woodbury WDT at 27-31, XM Trial Ex. 8; 6/13/07 Tr. 52:1-7 (Woodbury).

1326. In other words, Dr. Woodbury treats the SDARS as if they each were two companies: a hypothetical wholesale music supplier that does nothing more than supply music to

a retailer; and a hypothetical retail provider who adds additional consumer value to the product, and recovers and retains all of the value it adds to the music. By engaging in this hypothetical construct, Dr. Woodbury has no choice but to make a series of assumption about what these hypothetical companies look like, but also effectively treats music like a commodity – none of the value added by the retailer (which in the case of the SDARS is substantial) is collected by the hypothetical wholesale supplier. 8/27/07 Tr. 14:4-16:8 (Ordovery); 8/27/07 Tr. 26:11-27:19 (Ordovery).

1327. As discussed in more detail below, this ignores the way record companies charge for their music in the real world, where they will attempt to capture some of the value provided to the customer. It also ignores fundamental economic principles.

1328. As the Court recognized in *Webcasting II*, a service's demand for sound recordings offered is a derived demand from consumer demand for the service's product. The more valuable consumers find the music used by the service, the greater the value of the underlying sound recordings. *Webcasting II*, 72 Fed. Reg. at 24092-24093.

1329. Economists retained by both sides in this controversy acknowledge the importance of considering the difference in how consumers value the benchmark service (the PSS service) compared to how they value the target market service (the SDARS). For example, Dr. Chipty testified that when evaluating any benchmark for reasonableness, the Court should think about the comparability of the benchmark and target services from the perspective of the listener, and the perspective of the buyer. The comparability of the services from the perspective of the buyers is related to the comparability of the services from the perspective of the listeners, through the concept of "derived demand." SX Trial Ex. 119 at SX Ex. 209 RP, Tr. 119:7-18.

1330. Dr. Woodbury explained that “derived demand” reflects, among other things, the value that ultimate consumers place on the service. With respect to the PSS benchmark, for example, he opined that “the payments made by the cable operator to Music Choice reflect the value that the ultimate cable subscribers place on the service because the cable operator’s demand for the service is derived from the consumer demand for the service.” Woodbury WRT at 8-9, SDARS Trial Ex. 80.

1331. Similarly, according to Dr. Pelcovits and Dr. Ordovery, the critical determinate of the market price of sound recordings ultimately is the value those sound recordings have to the consumers who purchase them. Pelcovits WDT at 5, SX Trial Ex. 68; Ordovery WDT at 18, SX Trial Ex. 61.

1332. Despite this fundamental agreement, what is remarkable about Dr. Woodbury’s analysis is that he utterly fails to address or even consider the difference in consumer demand – as reflected by the willingness of consumers to pay – between the SDARS service and the PSS service. He makes no adjustment of any kind for the differences. 8/28/07 Tr. 82:11-83:4 (Pelcovits).

1333. In fact, Dr. Woodbury did exactly the opposite, taking the PSS percentage-of-revenue rate and reducing it so that when it is applied to the larger revenue base of the SDARS, the resulting payment to the copyright owners effectively is the same as the payment made by the lower-value PSS services. 6/12/07 Tr. 337:18-339-3 (Woodbury). In other words, Dr. Woodbury translated the PSS rate into a rate for XM and Sirius in such a way that XM and Sirius would pay the same dollar amount that they would pay, in Dr. Woodbury’s opinion, if they

provided only the extremely low value of a handoff provider service in the same functional manner as a PSS service.⁵⁶ Woodbury WDT at 27, XM Trial Ex. 8.

1334. The failure to account for derived demand is fatal to Dr. Woodbury's analysis. By failing to adjust of account for the value that consumers place on the music component of the SDARS service, he utterly ignores the economic principles that govern.

c. Dr. Woodbury's Theoretical Basis for Ignoring the Overwhelming Differences Between the PES and the SDARS Services is that These Differences Are Irrelevant To What He Claims to be the "Inherent Value of Music." This Theoretical Claim Is Unsound as a Matter of Economics and Disproved by the Empirical Evidence.

1335. Dr. Woodbury's explanation for failing to account for derived demand is his claim that the "inherent value" of the music is the same for the SDARS service and the PSS service (and for every other music service as well). In other words, he treats music like a commodity, worth the same in every context. For that reason, Dr. Woodbury states that a substantial portion of the price paid by subscribers for music content on the SDARS is attributable to mobility, 6/13/07 Tr. 63:8-64:2 (Woodbury), 100% of the consumer value generated by mobility goes to the SDARS, and none is shared with the copyright owners. 6/13/07 Tr. 7:6-19 (Woodbury). Moreover, as discussed below, Dr. Woodbury appears to believe that there is an inherent "market" value for music, and also an inherent "801(b) value of music." *E.g.*, 6/12/07 Tr. 351:10-15 (Woodbury). Both concepts, however, are incoherent and grounded neither in economic theory or economic reality.

⁵⁶ Dr. Woodbury would not make any adjustment for mobility if there were no associated cost differentials. 8/23/07 Tr. 176:6-11 (Woodbury).

i. Dr. Woodbury’s “Inherent Value of Music” Theory Cannot Be Squared with the Statutory Standard.

1336. Repeatedly in his testimony, Dr. Woodbury expressed his view that there is a single, inherent value to music:

- 6/12/07 Tr. 351:10-15 (Woodbury) (explaining his handoff provider adjustment on the theory that “inherently the value of music is the same” for the PSS and the SDARS services);
- Woodbury WDT at 23, XM Trial Ex. 8 (contending that the copyright owners should not receive any of the higher revenues that result from providing a mobile service because the higher revenues do not result from “any inherently higher value of the music”);
- 8/23/07 Tr. 132:21-134:5 (Woodbury) (contending that the “underlying music” is the same for both PSS and SDARS services);
- 6/13/07 Tr. 7:20-8:8 (Woodbury) (contending that the copyright owners do not share in any consumer value generated by mobility because the “underlying characteristics of the music” are the same for mobile and non-mobile services);
- 6/13/07 Tr. 42:15-21 (Woodbury) (agreeing that additional revenues attributable to portability would not get paid to copyright owners because the “inherent value of the music” is the same);
- 6/12/07 Tr. 359:5-360:2 (Woodbury) (“Its not obvious to me that there is any difference in the inherent value of the music being provided by Music Choice versus that being provided by XM . . .”).

1337. Because Dr. Woodbury believes there is an “inherent value” of music, in his opinion, on a per-unit basis the payment for music should be the same regardless of whether the music is used by a mobile service or a non-mobile service,⁵⁷ 6/13/07 Tr. 8:21-9:5 (Woodbury):

Q: Okay. Just so we’re clear, it’s your view that on a per-unit basis, the payment to music would be the same for a portable and non-portable service.

A: On a per-unit basis.

Q: Is that right?

⁵⁷ In the answers that follow, Dr. Woodbury responded to questions about “portable” services on the assumption that “portability” meant the same as “mobility.” 6/13/07 Tr. 6:3-10 (Woodbury).

A: Correct.

1338. Dr. Woodbury's theory, in sum, is that he need not adjust for the difference in consumer value as between SDARS services and PSS services, on the grounds there is some "inherent value of music."

ii. Dr. Woodbury's "§ 801(b) Value of Music" Theory is Equally Incoherent

1339. As the Librarian and prior panels have made clear, § 801(b) calls for a time-specific and service-specific inquiry into the application of the factors. *See* SoundExchange's Proposed Conclusions of Law. It is thus error to think of a particular rate set under § 801(b) (or set in the shadow of an § 801(b) proceeding) as determining some kind of "801(b) value of music," 6/12/07 Tr. 351:19-22 (Woodbury), that can then be carried over as a benchmark to apply to a different service at a different time without adjustment.

1340. The § 801(b) factors cannot be relied upon in the abstract to establish the "value" of music. Instead, these criteria can be understood only as possibly modifying the value of music, as revealed by marketplace transactions or other appropriate benchmarks, to account for possible market failures as well as any potential disruptive impact to the industry and its participants. *Ordover WRT* at 11, *SX Trial Ex.* 119.

1341. Dr. Woodbury's use of his "801(b) value of music" formulation would seem to imply that the first § 801(b) determination for digital PSS services in 1998, as extended by the negotiated settlement in 2003, must necessarily form the basis for all future determinations. However, such an approach in this case would run directly counter to observed marketplace outcomes and, equally importantly, be inconsistent with sound public policy objectives that the four factors are supposed to promote. The evidence of significant dispersion in payments to copyright holders in different channels reflects the differing values of the music provided by the

services to consumers, and the record companies' ability to capture some of that value. In other words, market-based rates make clear that music does not have a single "value" irrespective of the service into which it is incorporated, and Dr. Ordover is not aware of any language in § 801(b) that suggests the Court is supposed to assign a single value to recorded music. Ordover WRT at 11-12, SX Trial Ex. 119.

1342. Indeed, there is no reason to believe that the same rate should be applied to mechanical royalties, jukeboxes, the PSS services, and the SDARS services – even though all are subject to the § 801(b) rate standard.

iii. Dr. Woodbury's "Inherent Value of Music" Theory is Inconsistent with Uniformly Understood Economic Principles.

1343. To an economist, the concept of an "§ 801(b) value of music" is meaningless. 8/23/07 Tr. 279:6-17 (Ordover). There is no such thing as a unique § 801(b) rate because the rate will be specific to the service, to the time, and to the economic circumstances under which the rate was set. 8/23/07 Tr. 303:12-304:14 (Ordover). Dr. Woodbury has never offered any recognized economic theory to justify his claim that there is a uniform or inherent value for music. Pelcovits WRT at 5, SX Trial Ex. 124.

1344. As Dr. Ordover explained, Dr. Woodbury's claim that music has a single, inherent value is economically unsound and inconsistent with the uniform treatment in the economics literature of the pricing or valuation of intellectual property of all sorts, which is routinely sold at different prices to different users based on the value to the consumer. Ordover WRT at 3, SX Trial Ex. 119. For example, Dr. Woodbury's colleague at Charles River Associates, Professor Carl Shapiro, put the issue quite simply in discussing how firms should seek to price information

(which, like sound recordings, is a form of intellectual property) (Pelcovits WRT at 4, SX Trial Ex. 124):

“We’ve seen that a key aspect of pricing information is to use value-based pricing: sell your product at different prices to different consumers, according to how much they are willing to pay for it.”

Pelcovits WRT at 4, SX Trial Ex. 124 (citing Carl Shapiro and Hal R. Varian, Information Rules, A Strategic Guide to the Network Economy, Harvard Business Press, Boston, MA (1999) p. 53).

1345. Like other forms of intellectual property, music is characterized by high fixed costs, but zero or extremely low marginal costs per listener exposure. Marginal cost pricing is not efficient, because if all users pay zero, the record companies will go bankrupt, and the music will not be recorded in the first place. Prices must be above marginal cost. Ordover WDT at 14-17, SX Trial Ex. 61. In choosing among various ways to implement regulatory above-marginal-cost pricing, economists suggest “Ramsey” pricing principles (explained by Dr. Ordover in his direct testimony, Ordover WDT at 17-20, SX Trial Ex. 61), which offer a sound theoretical basis for differential pricing of services with zero or little marginal cost, based on the value of the intellectual property to the customer. Ordover WDT at 17-20, SX Trial Ex. 119; Pelcovits WRT at 4-5, SX Trial Ex. 124.

1346. As Dr. Ordover explained, while a uniform low “commodity” price that reflects marginal costs serves the goals of static efficiency, it undermines dynamic efficiency considerations because it precludes the owner of the intellectual property from ever being able to recoup its initial investment. Ordover WRT at 15-16, SX Trial Ex. 119; 8/23/07 Tr. 306:1-307:14 (Ordover); 8/27/07 Tr. 28-7-29:14 (Ordover). Through application of value pricing principles, consumers with a high willingness to pay (*i.e.*, those with inelastic demands) contribute disproportionately to the recovery of up-front investments, while consumers with a

lower willingness to pay (*i.e.*, with highly elastic demands) pay less but still have the opportunity to access the content. *Id.* In this way, value-based pricing provides the proper incentives for producers of content insofar as overall revenues from all sources are expected to recover the costs of creating the content in the first place while minimizing the consequences of pricing above marginal costs. *Id.* These well-established economic principles are directly contrary to the incorrect assumption embraced by Dr. Woodbury, namely that music is a commodity-like product that should command the same price irrespective of the value of the service to which it contributes. *Id.*

1347. Dr. Woodbury's analysis not only is without support in recognized economic theory, it is illogical. Dr. Woodbury argues that virtually the entire value of a portable music service carried by the SDARS should go to the SDARS themselves, since they create the mobility, and the music itself is the same whether portable or not. *See* Woodbury WDT at 23, XM Trial Ex. 8. But the value of the SDARS service to consumers reflects the combination of content and mobility, and one could just as well approach the issue by asking what the value of SDARS' mobile service would be without content. The answer is zero, and by this logic the entire value should go to the music and none to the SDARS. But to give the entire consumer valuation for mobile music to the owners of sound recordings would be every bit as illogical as giving the entire mobility premium to the SDARS. Both parties are needed to provide the service, and one would expect them to share in the premium value consumers place on the combination of music plus mobility. Pelcovits WRT at 8, SX Trial Ex. 124.

1348. Ironically, precisely the same point was made in federal appellate authority on which Dr. Woodbury relied in an effort to find support for his theory that he need not adjust his benchmark to account for different consumer values. Specifically, Dr. Woodbury cited a

footnote in the Second Circuit decision, *United States v. Broad. Music, Inc.*, 316 F.3d 189 (2nd Cir. 2003), for the proposition that the copyright owners should not share in any value added to the music service by the SDARS. Woodbury WDT at 4, XM Trial Ex. 8. But the Second Circuit decision, in fact, squarely rejected Dr. Woodbury's theory.⁵⁸ Indeed, there is a striking contradiction between Dr. Woodbury's theory – in his own words – and the Second Circuit's holding.

- According to Dr. Woodbury, attempting to justify why he gives music no credit for the value of the SDARS service: “The value added – the nationwide footprint, the ability to listen to content seamlessly in moving cars, and the non-music alternatives – all reflect investments and innovations on the part of XM and Sirius to which the record industry has made no contribution.” Woodbury WRT at 9-10, SDARS Trial Ex. 80.
- According to the Second Circuit, Dr. Woodbury is wrong: “It is true without doubt that to make the music available to its customers, the retail seller must incur expenses for various processes and services not provided by the owner of the music, such as the laying of cable, the establishment of satellite systems, etc. However, this is in no way incompatible with the proposition that retail revenues derived from the sale of the music fairly measure the value of the music. The customer pays the retail price because the customer wants the music, not because the customer wants to finance the laying of cable or the launching of satellites.” 316 F.3d at 195.

⁵⁸ In the case Dr. Woodbury cites, *United States v. Broad. Music, Inc.*, 316 F.3d 189 (2nd Cir. 2003), the Second Circuit reversed the District Court for doing exactly what Dr. Woodbury would have this Court do. The District Court in that case based its decision “on its perception that (1) the price paid for music by retail customers did not reflect the fair market value of the music to the extent that it covered the cost of materials and services not provided by the authors of the music but necessary to effectuate the delivery of the music; and (2) the fair market value of the music was better expressed by the wholesale price at which Music Choice sold to the cable and satellite operators.” *Broad. Music*, 316 F.3d at 190, 194. The District Court's view appears to be Dr. Woodbury's view as well: Dr. Woodbury agrees that the SDARS are effectively selling at a retail price to consumers, while the PSS can be viewed as wholesalers (6/12/07 Tr.342:5-343:3 (Woodbury)), and that his approach is to look at the value of music based on the wholesale rate paid by the cable services to the PSS services and not based on the retail rate paid by consumers to the SDARS. 6/12/07 Tr. 355:3-356:14 (Woodbury). The Second Circuit squarely rejected the District Court's reasoning (and, consequently, Dr. Woodbury's), holding that the District Court's “reasoning was flawed” and that “what retail customers pay to receive the product or service in question (in this case, recorded music) seems to us to be an excellent indicator of its fair market value.” 316 F.3d at 190, 194.

1349. If there was such a thing such as the “commodity value of music,” Dr. Woodbury does not establish why the PSS is the appropriate benchmark that “reveals” this “universal” value. If anything it appears to be an outlier, paying a much lower royalty rate than virtually all other services in the marketplace. As the royalty rates reflected in the tables at *supra* Section V.C illustrate, record companies are able to capture a significant portion of the value that is created by combining music with attractive distribution media. Ordover WRT at 3, SX Trial Ex. 119.

iv. Dr. Woodbury’s “Inherent Value of Music” Theory Does Not Comport with Economic Reality.

1350. Dr. Woodbury claims he never bothered to check whether his theory comports with reality. With respect to empirical support for his theory that there is an “inherent value” of music, Dr. Woodbury did not know whether in actual markets copyright owners get paid more per unit of music by portable services than by non-portable services. 6/13/07 Tr. 22:20-23:4 (Woodbury). He did not look to see whether record companies are paid the same by portable and non-portable music services. 6/13/07 Tr. 25:11-21 (Woodbury). These are not credible responses: licensing rates for portable and non-portable interactive subscription services were presented in Dr. Ordover’s written direct testimony, Ordover WDT at 51, SX Trial Ex. 119, which Dr. Woodbury testified he reviewed. Ordover WRT at 9-10, n.7, SX Trial Ex. 119. In any event, Dr. Woodbury admits that he has no real-world evidence to support his view that music sold to a portable music service is paid the same as music sold to a non-portable service. 6/13/07 Tr. 25:22-26:5 (Woodbury).

1351. In fact, the empirical evidence shows that the pricing of sound recordings is based on the value that consumers receive from a service and the amounts they are willing to pay for the ultimate service. These facts were made extremely clear by the record company witnesses

who testified about how their sound recordings are valued in the marketplace. *Supra* Section V.C.2.

1352. Portability and interactivity impact the value of a service to a consumer and also allows the services to charge a higher retail price for their product; consequently, these functionalities impact the rates record labels are able to negotiate for distribution of their sound recordings. Record companies are able to charge approximately twice as much for portable services than they charge for non-portable services. 6/27/07 Tr. 28:8-15 (Kenswil).

1353. Record companies get paid different rates for different types of services, based on the functionality that is being offered by the service and how the service is using the licensed music. 6/18/07 Tr. 148:1-4 (Eisenberg). To determine an appropriate price for a particular service's licensing of music, the record companies look at "the value that the music has in a given service to the end user or the consumer." 6/18/07 Tr. 148:8-13 (Eisenberg). "The more value that the music has to the user . . . the higher the rate [the record companies are] going to charge, because of the . . . benefits that are bestowed on that user." 6/18/07 Tr. 148:13-18 (Eisenberg); Eisenberg WDT at 6; Kenswil WDT at 4, SX Trial Ex. 66; 6/27/07 Tr. 21:6-18 (Kenswil); 6/27/07 Tr. 21:6-22:7 (Kenswil) (the higher the value to the customer, the higher the price that the product will command at retail and the higher the rate UMG can acquire through its digital deals).

1354. For example, UMG is able to charge a higher rate for a marketplace license based on the higher value consumers place on portability. Kenswil WDT at 5-6, SX Trial Ex. 66. *See also* 6/27/07 Tr. 23:9-11, 24:4-8 (Kenswil). Because portability increases the value of a service to the consumer, portability also increases the rate that UMG receives in the marketplace for the use of its music content by such portable services. Kenswil WDT at 5-6, SX Trial Ex. 66. In

fact, the market reveals that consumers are willing to pay a premium of approximately \$5.00 *over and above* the cost of a non-portable subscription service for portability. Kenswil WDT at 5, SX Trial Ex. 66. Services charge approximately 50% more at retail for a portable service than they do for a non-portable service. 6/27/07 Tr. 24:7-11 (Kenswil).

1355. Satellite radio functions as a portable service: it is available anytime, anywhere, whether in the car or through portable devices. 6/27/07 Tr. 29:13-30:6 (Kenswil).

Consequently, because the SDARS are portable services, this would mean that the record companies “would be able to get more money for [their] licenses than [from] a similar service that was not portable.” 6/27/07 Tr. 32:9-14 (Kenswil); Kenswil WDT at 6, SX Trial Ex. 66.

1356. Specifically, many portable interactive streaming services sell to consumers at a subscription price of about \$15 per month, and these services have agreed to pay a royalty of [REDACTED] per play. Many non-portable interactive music services have a retail price to the consumer of \$10 per month, and these services have agreed to pay a per-play rate of [REDACTED] per play.

Yahoo’s LAUNCHCAST Plus, a non-interactive and non-portable statutory webcasting services, is sold to consumers for a subscription price of \$3.99 per month, according to its website, and this Court set a rate for non-interactive services (which LAUNCHCAST Plus claims to be) ranging from \$.0011 per play in 2007 to \$.0019 per play in 2010. Pelcovits WRT at 5-6, SX Trial Ex. 124; *see Webcasting II*, 72 Fed. Reg. at 24100.

1357. The empirical evidence thus shows that consumers pay more for different attributes of music services – they pay more for portable music services compared to non-portable services, and more for interactive services compared to non-interactive services. And in general, the more consumers are willing to pay, the more the copyright owner receives as a royalty. 8/28/07 Tr. 77:12-78:14 (Pelcovits); Ordover WRT at 9-10, SX Trial Ex. 119.

1358. Dr. Woodbury agrees that a mobile service like the SDARS is different from a service that consumers can only receive on their TV. 8/23/07 Tr. 132:21-134:5 (Woodbury). And economists on both sides agree that some portion of the difference in how consumers value a PSS service compared to an SDARS service lies in the fact that the latter is a mobile service and the former is not. Economists on both sides likewise agree that consumers will pay more for a mobile service. *See* Woodbury WDT at 4, XM Trial Ex. 8 (noting that one of the significant differences between the SDARS and the PSS services is “the mobility of the XM and Sirius services.”); 6/12/07 Tr. 358:5-359:4 (Woodbury) (agreeing that consumers will pay more for a portable or mobile music service); 6/13/07 Tr. 6:3-7:5 (Woodbury) (same); Pelcovits WRT at 12, SX Trial Ex. 124.

1359. In Dr. Pelcovits’s opinion, for this reason it is simply not possible to take a benchmark service that offers music that is available only over a television set, and compare it to a service that offers music available on a mobile basis in automobiles, where the services are valued very differently by consumers, without making an adjustment for the different consumer valuation. Pelcovits WRT at 13, SX Trial Ex. 124; 8/28/07 Tr. 82:11-83:4 (Pelcovits).

1360. In sum, this data demonstrates that the copyright owners do not obtain one single price reflecting the “inherent value of music.” 8/28/07 Tr. 78:19-79:9 (Pelcovits). Instead, and as economic theory predicts, the record companies are able to obtain higher royalty rates from services that have higher value to consumers. Pelcovits WRT at 5-6, SX Trial Ex. 124. That is not true of a commodity. 8/23/07 Tr. 9:1-11:16 (Ordover).

d. Dr. Woodbury’s Responses to These Flaws Provide No Support for His Theories.

1361. Confronted on cross examination with the fact that copyright owners obtain different royalties from different music services, on a per-unit basis based on different consumer

value, Dr. Woodbury offered several theories to explain the empirical evidence and defend his music commodity theory. First, he acknowledged that when a copyright owner allows its sound recordings to be used by an interactive music service, the copyright owner might (though he said he did not know) be able to charge a higher price than it could charge a non-interactive music service, but when the copyright owner allows its sound recordings to be used by a *mobile* music service, it will not be able to charge a higher price than it could charge a non-mobile music service. 6/13/07 Tr. 17:18-20-14 (Woodbury).

1362. It was necessary for Dr. Woodbury to propose this distinction between interactivity and mobility, because one key difference between the SDARS and his PSS benchmark is that the SDARS offer music on a mobile basis, and the PSS do not. If Dr. Woodbury conceded that record companies can command a premium when they license mobile music services, his PSS benchmark analysis would be fatally flawed, inasmuch as he made no attempt to adjust his royalty rate upwards to account for the greater value of music to a mobile service. Pelcovits WRT at 6-7, SX Trial Ex. 124.

1363. Dr. Woodbury's attempt to explain why record companies might theoretically charge more for the use of music by an interactive music service but could not charge more for the use of music by a portable music service is unsatisfactory. He contends that in the case of interactivity, the copyright holder was licensing the music *and* the choice of when to listen to it. He attempts to contrast this with the case of SDARS, where he claims that the SDARS are providing the mobility, not the record companies. 6/13/07 Tr. 7:14-19, 18:11-19:8 (Woodbury). This is a distinction without a difference. In the case of interactive services, it is the service provider, not the record company, that solves the physical problem of how to make the service interactive. Yet the record company is able to charge a premium for the right to use its music in

an interactive service. Similarly, in the context of the SDARS, the fact that the service provider solves the physical problem of making the service mobile is no reason why the record companies should not be able to charge a premium to use the music. According to Dr. Woodbury, however, the record companies can (and should be allowed to) collect higher royalties when the consumer's high valuation relates to *when* he or she can listen to the music, but the record companies cannot and should not similarly be able to charge higher royalties when the consumer's high valuation is due to *where* he or she listens to the music. Illogically, according to Dr. Woodbury, "music plus when" is a proper exercise of value-based pricing, but "music plus where" is not. Pelcovits WRT at 7-8, SX Trial Ex. 124.

1364. As Dr. Ordover has shown, what explains variations in marketplace rates is not the empty distinctions drawn by Dr. Woodbury, but the fact that copyright holders are able to obtain a portion of the value of the service, as reflected in consumers' willingness to pay for the service, and that the portion which they are able to obtain may vary across services. There is no basis in economics to conclude that the SDARS' rate should substantially deviate from this paradigm. Ordover WRT at 12-13, SX Trial Ex. 119.

1365. Dr. Woodbury also attempts to distinguish the marketplace evidence that copyright owners are paid more by highly-valued music services on the theory that higher royalties are paid when the music service – either an interactive music service or a portable music service – gives the user temporary ownership of the music through a "tethered download." 8/23/07 Tr. 129:9-21 (Woodbury).

1366. A tethered download allows the consumer to listen to that piece of music on demand, but (for non-portable services) the consumer cannot transfer that piece of music to another device, and the ability to listen to that music ends when the consumer terminates his or

her subscription. Effectively, therefore, a tethered download is simply a piece of music that can be listened to on an interactive, on-demand basis. 8/23/07 Tr. 169:13-173:2 (Woodbury).

1367. The problem with Dr. Woodbury's theory is that there is no difference in the marketplace between the royalty for a tethered download and the royalty for a stream with the same functional characteristics. Thus, in the contracts for interactive services, the music services pay exactly the same royalty for the use of a sound recording on a tethered download basis as the do for the use of a sound recording that is streamed to a consumer. 8/28/07 Tr. 139:20-140:22 (Pelcovits). Yahoo!, for example, gives its customers the option to receive a tethered download or a stream for its interactive service, but it charges consumers the same for both. 8/28/07 Tr. 252:2-253:19 (Pelcovits). A tethered or conditional download to a computer is not more valuable in the marketplace than a stream to the computer. 8/28/07 Tr. 147:18-148:4 (Pelcovits).

1368. Similarly, where the consumer is allowed to transfer the tethered download to a portable device and carry it with them, that is treated by the record companies and the music services as a more valuable use of the music. 8/28/07 Tr. 141:8-142:10 (Pelcovits). But that does not mean that a music service which streams music to customers on a mobile basis (as to the SDARS) will pay less for the music than a music service that achieves mobility by allowing customers to transfer a tethered download to a portable device. Dr. Pelcovits does not believe that for the consumer, mobile streaming is any different from a functionality standpoint than portable conditional downloads. 8/28/07 Tr. 150:1-151:4 (Pelcovits). As evidence of this, Dr. Pelcovits points to the fact that streaming music to a cell phone is significantly more valuable than streaming music to a computer due to the mobility of the cell phone.⁵⁹ 8/28/07 Tr. 153:8-

⁵⁹ It simply cannot be, as the SDARS would have it, that a tethered download is more valuable because it is a different legal right. If that were the case, it would not explain why a music service like Rhapsody pays [REDACTED] per play for its interactive service that provides tethered

154:5 (Pelcovits). Mobile streaming is very similar in value to portable conditional downloads. 8/28/07 Tr. 150:1-151:4 (Pelcovits).

1369. In short, mobility commands a large premium in the marketplace, and generates higher royalties for the copyright holder. Pelcovits WRT at 12, SX Trial Ex. 124. Dr. Woodbury's commodity theory of music is as wrong in fact as it is in theory. And Dr. Woodbury's PSS benchmark, based on his invalid commodity theory of music, should for this reason as well be rejected by the Court.

7. The Custom Radio Agreements Provide No Support for Dr. Woodbury's Conclusions and Indeed Demonstrate the Many Flaws in His Testimony.

1370. Finally in rebuttal, Dr. Woodbury provided testimony concerning a custom radio agreement that was selected for him by the SDARS in a purported attempt to bolster his conclusions about the PSS rate with a "true" marketplace rate. Woodbury WRT at 30, SX Trial Ex. 80. That effort was both transparently flawed and proves precisely the opposite of what Dr. Woodbury intended.

1371. As a threshold matter, Dr. Woodbury's analysis is infected by the fact that he did not even analyze all of the rate terms of the agreement he held up as an example. He looked only at the revenue share of a single custom radio agreement. Woodbury WRT at ¶ 68, SDARS Trial Ex. 80. He took the [REDACTED] of revenue paid by one webcaster service and adjusted it, as he did his PSS benchmark, for claimed differences in the costs structure between webcasters and the SDARS, as well as for the availability of non-music content on the SDARS. Notably, he did not

downloads to subscribers' computers, but [REDACTED] per play for the exact same tethered downloads loaded on to a portable device. Pelcovits WRT at 7, SX Trial Ex.124. It is not the nature of the legal right, but rather the functionality, that drives the difference in consumer value, and mobility/portability have a higher value for consumers, from which the record companies are able to extract a higher royalty. 8/28/07 Tr. 150:1-151:4 (Pelcovits); Pelcovits WRT at 12, SX Trial Ex. 124.

make any changes to his “cost adjustment” based on differences between the PSS and webcasters, (such as that fact that webcasters pay for the cost of bandwidth for each transmission to each subscriber, which is one of the two most significant costs paid by webcasters. Thus, he used a one-size fits all “adjustment” for any other digital music service when compared with the SDARS. His calculation yields a result of 2.57% of revenues as the equivalent SDARS rate.

Woodbury WRT at 30, SDARS Trial Ex. 80.

1372. However, Dr. Woodbury conceded that the custom radio agreements contained a “greater of” rate structure in which the buyers paid the greater of a percentage of revenue rate or a per play rate. If the per play rate yielded a higher royalty, that is the rate that would apply.

8/23/07 Tr. 180:5-181:3 (Woodbury). Failure to consider all of the rate terms of the agreement renders his analysis useless in support of his claims.

1373. Moreover, as Dr. Woodbury stated repeatedly, he is of the view that a single unit of music – delivered by whatever medium – should have the same cost. As he conceded, assuming that view, the per-play rate would not have to be adjusted at all to reflect cost differences between the Internet custom radio service and the SDARS. 8/23/07 Tr. 179:1-180:4 (Woodbury). Thus, Dr. Woodbury’s attempt to apply a cost-adjustment to the custom radio agreement is simply irrelevant, since any effective lowering of the percentage of revenue rate would result in the parties’ paying under the per play rate, which Dr. Woodbury agrees requires no adjustment. 8/30/07 Tr. at 178:9-180:4 (Woodbury).

1374. Notably, the SDARS did not put into the record the custom radio agreement they used for Dr. Woodbury’s analysis, recognizing that the per play rates would have demonstrated the absurdity of their rate proposal. The SDARS did, however, introduce into the record one other custom radio agreement. That agreement provides for custom radio rates that are [■]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] As discussed in more detail below, this per performance rate is more than [REDACTED] higher than the rate that the SDARS propose here.

1375. In any event, as explained by Dr. Ordover, agreements for custom radio also suffer from the flaw that custom radio rates are negotiated in the shadow of a statutory license proceeding, insofar as these rates are more indicative of what the parties believed would be the result of a rate case than they reflect a marketplace outcome. Where, as in the custom radio arena, the parties still dispute whether or not the service is subject to a statutory license, rates negotiated cannot help but be affected by the statutory rate. In particular, the rate set for “custom radio” plausibly reflects the record companies’ aversion to taking the risk that the license dispute would be unfavorably resolved. Here too, the dynamic at work in these contractual negotiations is simply too bound up in regulatory considerations and judgments to be a useful indication of market rates. Ordover WDT at 43, SX Trial Ex. 119. Indeed, even Dr. Woodbury agrees that the negotiations over the custom radio rate may have been affected by the fact that the Internet services claim that custom radio services are subject to the statutory webcasting rate. 8/23/07 Tr. 189:3-190:1 (Woodbury).

8. Conclusion

1376. For all these reasons, the Court should reject Dr. Woodbury’s PSS benchmark, as well as his last-minute attempt to rely on an undisclosed custom radio agreement.

B. Musical Works Rates Are A Poor Benchmark

1377. As a second benchmark, Dr. Woodbury points to the musical works royalty payments made to the performance rights organizations – ASCAP, BMI, and SESAC.

Woodbury WDT at 36, XM Trial Ex. 8. It is Dr. Woodbury’s opinion that the royalty rate established in this proceeding should not exceed the royalty rate for musical works. *Id.*

1378. Dr. Woodbury characterizes the royalty payments made to the performance rights organizations (“PROs”) as a “useful benchmark for the SRPR royalty rate.” He reasons that “a buyer of the sound recording performance rights needs both rights in order to render a public performance of the sound recording,” which puts the buyer in the “same position with regard to the two broadcast rights.” Likewise, he argues that the sellers of the two rights are in the same position because the “direct cost of using either right for additional performances is the same (zero).” Woodbury WDT at 36-37, XM Trial Ex. 8. Expounding in his oral testimony, Dr. Woodbury explained that the musical works benchmark was appropriate because “it involved a similar right, similar sellers, obviously, the same purchasers, the SDARS and for a comparable service.” 6/12/07 Tr. 247:4-7 (Woodbury). His implication is that marketplace transactions between the buyers and sellers of the two performance rights would yield similar royalties. As applied to this case, Dr. Woodbury argues that the PRO payment should serve as an upper bound for the sound recording performance right. Pelcovits WRT at 27, SX Trial Ex. 124.

1379. Dr. Woodbury thus offers two reasons for this opinion. First, in his view the buyers of the rights need both a musical works right and a sound recording right in order to provide a music service. Woodbury WDT at 36-37, XM Trial Ex. 8. Second, he believes that

the sellers of musical works and sound recordings incur zero incremental costs in connection with licensing their rights. *Id.* Both are wrong and have been previously rejected by this Court.

1380. The Court should reject use of the musical works benchmark in this case for the same reasons it rejected this benchmark in *Webcasting II*. In *Webcasting II*, the Court found that “substantial empirical evidence shows that sound recording rights are paid multiple times the amounts paid for musical works rights.” *See Webcasting II*, 72 Fed. Reg. at 24094. The Court also rejected reliance by the Services’ expert on sunk cost as a justification for using the musical works benchmark. The Court found that “there is ample empirical evidence to controvert [the] premise the market for sound recordings and the market for musical works are necessarily equivalent.” *Id.* Pelcovits WRT at 27-28, SX Trial Ex. 124.

1. That The Services Need Both Rights Does Not Mean They Have Equal Value.

1381. Dr. Woodbury’s first argument (that digital music services each need both rights and thus should pay the same), standing alone proves nothing. The fact that a distributor like XM or Sirius requires both rights does nothing to support the proposition that the two rates should be equivalent, or even remotely close. Numerous products and services require multiple inputs, but that fact alone does not lead to price parity across those inputs to the buyer. For example, a personal computer requires both a microprocessor and dynamic random access memory (DRAM), but the computer manufacturer pays very different prices for those two essential inputs. Similarly, the SDARS require both satellites for transmission and recorded music for content, but nobody is suggesting that, assuming that flows of services can be made commensurate, they should be priced the same to the satellite radio company. Ordover WRT at 19, SX Trial Ex. 119.

1382. The evidence from the marketplace for the digital distribution of music shows that the two necessary inputs – sound recording rights and musical works rights – command different license fees. A review of the royalty rates paid by various services, including permanent download services like iTunes and interactive subscription services like Rhapsody, demonstrates that copyright holders of sound recordings are paid multiple times the amounts paid for musical works rights.

1383. Dr. Woodbury does not know, and has never attempted to determine, the relative prices of musical works and sound recordings in any other market, including clip samples, ring tones, digital downloads, music videos, interactive digital music services or non-interactive digital music services. 6/13/07 Tr. 99:8-100:8 (Woodbury).

1384. For example, for wireless full-length audio downloads, the sound recording rate is [REDACTED] the musical works rate; for digital downloads, the sound recording rate is [REDACTED] the musical works rate; and for mastertones and ringtones, the sound recording rate is [REDACTED] the musical works rate.⁶⁰ Eisenberg WRT at 5, SX Trial Ex. 126. More specifically:

⁶⁰ To calculate the multiple, Mr. Eisenberg backed out the publishing rate from the indicated sound recording rate, which is a gross number that includes the rate owed to the publishers. See Eisenberg WRT at 5 n. 5, 7, 9, SX Trial Ex. 126.

Service	Sound Recording Rate (in SONY BMG agreements)	Publishing Rate	Rough Multiple (Sound recording rate/publishing rate)
Wireless Full- Length Audio Downloads (Portable)	[REDACTED]	\$.091 per track	[REDACTED]
Digital Downloads	[REDACTED]	\$.091 per track	[REDACTED]
Mastertones and Ringtones	[REDACTED]	[REDACTED]	[REDACTED]

Eisenberg WRT at 5, SX Trial Ex. 126.⁶¹

1385. In addition to these rates, there are two markets in which musical works rates have not yet been set, but for which the publishers have set forth publicly an aspirational musical works rate that they hope to receive. Eisenberg WRT at 6, SX Trial Ex. 126; 8/29/07 Tr. 15:5-11 (Eisenberg). And like the digital markets discussed above, in these newly developing markets, the rates that sound recording copyright owners receive for the music is volumes greater than the rates proposed by the music publishers. For example, in the market for pre-programmed music videos, sound recording copyright owners receive a rate that is [REDACTED] the rate sought by

⁶¹ Note that there is one caveat with respect to these rates. While the sound recording rates in the table are established by individual negotiations between the record companies and the digital services, the musical works rate for digital downloads is established by statute. And in many cases, record companies actually pay less than statutorily set rates. Eisenberg WRT at 5-6, SX Trial Ex. 126.

music publishers, while in the on-demand music video market, they receive a rate that is [REDACTED] the rate sought by the publishers. *Id.* More specifically:

Service	Sound Recording Rate (in SONY BMG agreements)	Aspirational Publishing Rate	Rough Multiple (Sound recording rate/publishing rate)
Preprogrammed Music Videos	[REDACTED]	5.1% of revenue for performance; plus additional fees for synch rights under negotiation	[REDACTED]
On-Demand Music Videos	[REDACTED]	6.5% of revenue for performance; plus additional fees for synch rights under negotiation	[REDACTED]

Eisenberg WRT at 6, SX Trial Ex. 126; 8/29/07 Tr. 15:5-11 (Eisenberg).⁶²

1386. In many other digital markets, it is simply impossible to compare the sound recording royalty to the musical works royalty, as the rates are structured in ways that defy comparison. Eisenberg WRT at 7, SX Trial Ex. 126. For example, for noninteractive webcasting, this Court recently set a per-play sound recording performance royalty of \$0.0011 in 2007, going up to \$0.0019 in 2010. The publishers, by contrast, publicly seek a rate of 5.1% of revenue, unconnected to the number of performances. Eisenberg WRT at 7 & n.12 (citing ASCAP Internet Music License Agreements), SX Trial Ex. 126. And although the per-play sound recording rate would certainly translate to a revenue share for webcasters that is multiples

⁶² Note that the publishing rates are based on ASCAP Internet Music License Agreements, available at <http://www.ascap.com/weblicense> (last visited July 20, 2007). Note too that for the music video rates, these do not include the synchronization right which has not yet been established. Once that right is included, the ratio will decrease somewhat. Eisenberg WRT at 6 & n.10, 11, SX Trial Ex. 126.

higher than 5.1%, the exact ratio could vary significantly among webcasters, thus making precise comparisons extremely difficult. Eisenberg WRT at 7, SX Trial Ex. 126.

1387. Likewise, for interactive streaming services, Sony BMG receives [REDACTED]
[REDACTED]. Eisenberg WRT at 7, SX Trial Ex. 126. The publishers, by contrast, publicly seek a rate of 6.5% of revenue, unconnected to the number of performances. Eisenberg WRT at 7 & n. 13 (citing ASCAP Internet Music License Agreements), SX Trial Ex. 126. At the same time, the publishers have proposed a complex mechanical royalty rate regime of the greater of 12.5% of revenue; \$.00275 per use or \$0.00053 per minute of playing time or fraction thereof; or 27.5% of the total content costs paid for mechanical rights to musical compositions and rights to sound recordings. Eisenberg WRT at 7 & n. 14 (citing as a source the publishers' rate proposal in the mechanical proceeding before this Court), SX Trial Ex. 126. Though precise comparison is impossible, given the vastly different rate structures, it appears that even the aspirational rates sought by the publishers for interactive streaming are significantly lower than the prevailing rates that SONY BMG receives for sound recording performances. Eisenberg WRT at 7, SX Trial Ex. 126.

1388. As these aspirational publishing proposals reveal, musical works copyright owners themselves do not argue that they should receive compensation that is equivalent to that received by sound recording copyright owners. Eisenberg WRT at 8, SX Trial Ex. 126. In other words, by proposing a musical works benchmark to set the rates for the performance of sound recordings, the SDARS are making an argument about the value of musical works that even the publishers do not make when negotiating fees for their copyrighted works. Eisenberg WRT at 8, SX Trial Ex. 126. Rather, the truth of the matter is that these two rights are distinct, are valued

differently by digital services, and accordingly, they receive vastly different rates in the marketplace. Eisenberg WRT at 8, SX Trial Ex. 126.

1389. The market for ringtones provides another instructive example of the different values of musical works and sound recordings, as it is a market that the publishers put forth as an example of the value of their copyrighted content, and a market in which the record companies believe the publishers extracted above-market rates. Eisenberg WRT at 8, SX Trial Ex. 126. Music publishers negotiated the rates for musical compositions used for ringtones before sound recording copyright owners had a product to sell, and thus, the publishers were successful in extracting relatively high prices for the musical works. Eisenberg WRT at 9-10, SX Trial Ex. 126. Consequently, publishers receive approximately [REDACTED] for mastertone ringtones. Eisenberg WRT at 10, SX Trial Ex. 126. Yet even though record companies believe this rate is above-market, it is still only a fraction of the rate that sound recording copyright owners receive for the use of music as ringtones. Eisenberg WRT at 7, SX Trial Ex. 126. For example, under agreements that Sony BMG entered into directly with music publishers for mastertones, Sony BMG receives [REDACTED] for ringtones from the distributor, and then out of that [REDACTED], the publishers receive [REDACTED] – just [REDACTED] the total monies allocated to Sony, which is just [REDACTED] of the rate Sony ultimately receives. Eisenberg WRT at 10, SX Trial Ex. 126. These differing rates demonstrate the vastly different values that distributors place on sound recording as compared to musical works.

1390. Even the SDARS themselves pay very different rates for the musical works and the sound recording rights associated with the music they broadcast as part of their service. Eisenberg WRT at 3, SX Trial Ex. 126. And in fact, the SDARS have never offered to pay

music publishers the same rate for the musical works that they pay for the public performance of these sound recordings. Eisenberg WRT at 3, SX Trial Ex. 126.

1391. Likewise, the sound recording copyright owners do not take musical work rates into account when negotiating economic terms with digital retailers and distributors for use of their music. 8/28/07 Tr. 269:21-270:5 (Eisenberg). In fact, musical works rates are totally “irrelevant” to the task of ensuring that record companies receive a fair return for the substantial investment and risk they contribute in developing their artists and their music. Eisenberg WRT at 3-4, SX Trial Ex. 126.

1392. In sum, for music products and services distributed to end users, there is a notable asymmetry between the relative economic values attached to sound recordings, on the one hand, and to musical works, on the other hand. Eisenberg WRT at 1, SX Trial Ex. 126. Indeed, as this Court recognized in the webcasting decision, in all cases in which end-users enjoy master recordings in a manner similar to the entertainment experience within a DMCA-licensed radio service, the sound recording copyright owners are compensated at significantly higher levels than the musical works copyright owners. Eisenberg WRT at 1, SX Trial Ex. 126 (citing to *Determination of Rates and Terms of Digital Performance Right in Sound Recordings and Ephemeral Recordings*, Docket No. 2005-5 CRB DTRA (Mar. 2, 2007)). This asymmetrical compensation scheme reflects the corresponding asymmetrical levels of investment and risk that recording copyright owners and publishers take in discovering and developing talent and in creating, marketing, and promoting artists and their music to the public. Eisenberg WRT at 1, SX Trial Ex. 126.

1393. As Dr. Ordoover concludes, these differences in the rates are plausibly explained by the fact that sound recording copyright owners provide the bulk of the investment in the

products that benefit both sound recording copyright owners and musical works copyright owners. For that reason among others, the sound recording royalty is typically many multiples higher than the musical works royalty. The Court earlier this year pointed to this substantial empirical evidence as a compelling reason to reject the use of musical works rates in setting a rate for sound recording rights.⁶³ Ordover WRT at 19-20, SX Trial Ex. 119; Pelcovits WRT at 28, SX Trial Ex. 124. Dr. Woodbury fails to account for or explain this abundant evidence from the marketplace that the two different rights are valued differently.

2. The Theoretical Basis for Dr. Woodbury’s Reliance on Musical Works is as Unfounded as the Empirical Basis.

1394. Dr. Woodbury also argues that record company costs are already sunk, that they make no incremental investment in the SDARS service, and that SDARS revenues are so small that they “would not have any detectable effect on the sound-recording production decisions of the labels.” Woodbury WDT at 37, XM Trial Ex. 8. These arguments are all theoretically unsound and/or incorrect as a matter of fact. The Court should reject these arguments for the identical reasons that it rejected them in *Webcasting II*.

1395. As Dr. Pelcovits explained, the economic reasoning behind these arguments is flawed. A business will not be indifferent economically about how much revenue it can earn from a service (and how much of its costs it can recover), simply because the service currently accounts for a small portion of its total sales. Rather, a rational business will consider each opportunity to increase revenues and cover a portion of its costs as worthwhile in its own right. So long as the business does not have to incur a transaction cost that offsets the benefit of charging what would otherwise be a profit-maximizing price, it will attempt to do so. With respect to the sale of sound recordings for use by the SDARS, it is nonsensical to say that it is

⁶³ 37 C.F.R. § 380 at 24094.

not worth the effort involved to negotiate a price that more closely reflects conditions in the SDARS market and in particular the willingness to pay of the consumer. Indeed, this is especially true in light of the evidence, discussed at *supra* Section V.E., that SDARS listening substitutes for CD sales. Pelcovits WRT at 28-29, SX Trial Ex. 124.

1396. Dr. Woodbury acknowledges that the record companies and artists continue to make sound recordings, and will continue to do so throughout the term of the license in this case. He expects that the SDARS will be playing during the license term music that has not yet been created. 6/13/07 Tr. 96:6-18 (Woodbury). Dr. Woodbury does not know whether the sellers of sound recordings have higher costs than the sellers of musical works, and in any event this was not something he took into account when he proposed the musical works benchmark. 6/13/07 Tr. 97:16-98:8 (Woodbury). Moreover, Dr. Woodbury agrees that the copyright owners will base their production decisions on the total revenues they expect to receive, including revenues from the SDARS. 6/13/07 Tr. 98:17-99:6 (Woodbury).

1397. On a more fundamental level, Dr. Woodbury ignores the structure of the markets that he is looking at and the relationships that define these industries. Although there are separate licenses at issue – one for the musical work and one for the sound recording – there is only one final product that is provided to the SDARS and to their customers; the sound recording. The structure of the market for music is one in which record companies invest in the creation, development, and marketing of sound recordings from which both record companies and music publishers benefit. Pelcovits WRT at 29, SX Trial Ex. 124. Music publishers earn the vast majority of their revenues from sales or licenses of sound recordings that use musical works as an input, not on sales or licenses of musical works by themselves. *Id.* Therefore, even though the music publisher holds a separate right from the sound recording copyright (for which in

many cases, the user must negotiate separately), the value of this right is not arrived at independently in the market. *Id.* Moreover, any attempt by the music publishers to extract an equal payment for its right will not succeed in the long run, unless the long run value of its input is as great as all other inputs combined. *Id.*

1398. The music publishing business is fundamentally different in character from the sound recording business. They play very different roles in creating and selling music, and vary enormously in terms of the magnitude of investments they make and risk they take in producing music. Ciongoli WRT at 3, SX Trial Ex. 118. While there is little consumer market for musical works standing alone, consumers buy and listen to sound recordings – of which musical works is just one component. Ciongoli WRT at 3, SX Trial Ex. 118. On the recorded music side, there are advances paid to the artists, there is the procurement and making of the sound recording, and then there is the subsequent marketing, promotion, and distribution costs that are associated with the product. 8/23/07 Tr. 203:18-204:4 (Ciongoli). By comparison, on the music publishing side, there is no creation of a final product, so there are no associated marketing, promotion, or distribution costs associated with the business. 8/23/07 Tr. 204:4-8 (Ciongoli). Thus, the recording business is a “high risk, high reward” business, while the music publishing business is “low risk,” with “consistent but lower returns.” Ciongoli WRT at 3, SX Trial Ex. 118.

1399. Record companies invest significant sums of money up front in order to create their final music products. Then they invest additional money to market and promote that final product in the hopes of earning back through sales their significant upfront investments. Ciongoli WRT at 3-4, SX Trial Ex. 118; 8/23/07 Tr. 203:20-204:4 (Ciongoli). These substantial expenditures include investments in recording costs, overhead, marketing, promoting, manufacturing and distributing the sound recordings. Ciongoli WRT at 5, SX Trial Ex. 118.

However, rarely do the record companies recoup these upfront costs, as the vast majority of sound recordings are not ultimately profitable. Ciongoli WRT at 4, SX Trial Ex. 118.

1400. As Mr. Eisenberg explained, record companies invest significantly more in developing artists and music than do music publishers, who typically do not get involved in a songwriter's career until after he or she has signed with a record label. 8/28/07 Tr. 312:7-12 (Eisenberg). It is the record label – not the music publisher – that first discovers and develops the talent. 8/28/07 Tr. 312:13-17 (Eisenberg). After the label has invested significant sums of time and money into a songwriter, that songwriter then uses the record deal as evidence of their commercial success to secure a music publishing deal. 8/28/07 Tr. 313:11-19 (Eisenberg).

1401. By comparison, music publishers are not in the business of creating a final product and therefore, they do not undertake the same upfront investments that record companies do. They do not have to invest in creating, marketing, promoting, manufacturing, and distributing the musical works; rather, in general, music publishers decide to invest in the acquisition of catalogs only after the catalog's past performance has proven to be successful and capable of earning a revenue stream. Ciongoli WRT at 4-5, SX Trial Ex. 118; 8/23/07 Tr. 204:4-8 (Ciongoli). If and when a music publisher invests in musical works that do not already have a proven track record, they usually do so only after a record company has already signed the artist/songwriter and has thus made clear that it will be spending significant sums of money to help ensure the success of these musical works. Ciongoli WRT at 4, SX Trial Ex. 118.

1402. These differences in risk and investment are reflected in the different rates that sound recording copyright owners earn as compared to what musical works copyright owners receive. Ciongoli WRT at 5, SX Trial Ex. 118.

1403. A review of some of the specific expenditures made by record companies as compared to music publishers reveals the fundamental differences between the two businesses. For example, record companies invest significant sums of money in A&R costs, which go towards finding and developing artists and songwriters and to bringing the final product to the market. Ciongoli WRT at 5-6, SX Trial Ex. 118. The record companies often pay significant advances for recording, producing, mixing, mastering, and other expenses involved in creating the sound recordings. Ciongoli WRT at 6, SX Trial Ex. 118. Many of these expenditures are never recouped. Ciongoli WRT at 6, SX Trial Ex. 118. Meanwhile, music publishers invest very little to create the final music product sold to consumers; any advances they provide – if any – are smaller and are wholly recoupable by the publishers. Ciongoli WRT at 6, SX Trial Ex. 118. In 2006, UMG’s record labels had a gross A&R expenditure – that is, the gross amount of advances plus recording costs – of [REDACTED], while Universal Publishing had gross A&R expenditures of [REDACTED]. Ciongoli WRT at 6, SX Trial Ex. 118; 8/23/07 Tr. 204:21-205:5 (Ciongoli). Likewise, in 2006, UMG record labels’ net A&R expenses – that is, the amount that is written off that is not deemed to be recovered – totaled [REDACTED], or [REDACTED] of UMG’s labels’ FY 2006 total net revenue; for this same time period, Universal Publishing recouped their A&R costs and showed a net positive [REDACTED], or [REDACTED] of net revenue for FY 2006, meaning they had previously written off costs in a prior year that they recovered in 2006. Ciongoli WRT at 7, SX Trial Ex. 118; 8/23/07 Tr. 205:14-18, 206:6-11 (Ciongoli). *Compare* SX Trial Ex. 118 at SX Exhibit 213 RR (Universal Music Group US Only Income Statement, 1999-2006 Actuals) *with* SX Exhibit 214 RR (Universal Music Publishing Group, US - Publishing, Full Year Historical Results and Historical Overhead Expenses, 1999-2006).

1404. An examination of the different marketing costs of the record companies and the music publishers reveals the same trend. Record labels spend significant sums to market and promote their new albums and artists, investing in music videos, print advertisements, television advertisements, point of purchase advertising materials, co-op advertising, radio advertising, Internet advertising, promotional merchandise, and a host of other marketing expenses. Ciongoli WRT at 8, SX Trial Ex. 118. Like the A&R costs, most of these investments are made upfront before the record company has generated any revenue from the sound recording. Ciongoli WRT at 8, SX Trial Ex. 118. By comparison, music publishers do not invest much in marketing, but rather benefit from the expenditures made by the record companies. Ciongoli WRT at 8, SX Trial Ex. 118. The only “marketing” type costs that music publishers incur are small amounts of money for advertising. 8/23/07 Tr. 207:2-14 (Ciongoli). For fiscal year 2006, UMG record labels spent a total of [REDACTED], or [REDACTED] of their total net sales, on marketing, while Universal Publishing spent just [REDACTED], or [REDACTED] of its total publishing income on marketing-related expenses. Ciongoli WRT at 8, SX Trial Ex. 118. *Compare* SX Trial Ex. 118 at SX Exhibit 213 RR (Universal Music Group US Only Income Statement, 1999-2006 Actuals) *with* SX Exhibit 214 RR (Universal Music Publishing Group, US - Publishing, Full Year Historical Results and Historical Overhead Expenses, 1999-2006).

1405. Because recorded music operations employ significantly more personnel than do music publishers, UMG’s record labels have significantly greater overhead costs than does Universal Publishing. Ciongoli WRT at 9, SX Trial Ex. 118; 8/23/07 Tr. 207:21-208:14 (Ciongoli). For fiscal year 2006, UMG’s record labels incurred overhead costs of [REDACTED], or [REDACTED] of net sales, while Universal Publishing’s overhead costs were [REDACTED], or [REDACTED] for fiscal year 2006. Ciongoli WRT at 10, SX Trial Ex. 118.

Compare SX Trial Ex. 118 at SX Exhibit 213 RR (Universal Music Group US Only Income Statement, 1999-2006 Actuals) with SX Exhibit 214 RR (Universal Music Publishing Group, US - Publishing, Full Year Historical Results and Historical Overhead Expenses, 1999-2006).

1406. Likewise, UMG's record labels invested significant sums of money for manufacturing and distribution costs in order to produce the physical product that is sold to the consumer. Ciongoli WRT at 10, SX Trial Ex. 118. For fiscal year 2006, UMG's record labels spent [REDACTED] in manufacturing and inventory related costs, and [REDACTED] in distribution and selling costs (including overhead). Ciongoli WRT at 10, SX Trial Ex. 118. See also SX Trial Ex. 118 at SX Exhibit 213 RR. These manufacturing and distribution costs represented [REDACTED] of net sales in 2006. Ciongoli WRT at 11, SX Trial Ex. 118. By comparison, music publishers do not have any manufacturing costs at all, as they are not providing a product directly to retailers or consumers. Ciongoli WRT at 11, SX Trial Ex. 118; 8/23/07 Tr. 209:4-7 (Ciongoli).

1407. To summarize (Ciongoli WRT at 5-11, SX Trial Ex. 118):

	UMG Record Labels	Universal Publishing
FY 2006 Gross A&R Investment as % of UMG Record Labels' Total Net Sales and Music Publishing's Total Revenue	[REDACTED]	[REDACTED]
FY 2006 Marketing Costs as % of UMG Record Labels' Total Net Sales and Music Publishing's Total Revenue	[REDACTED]	[REDACTED]
FY 2006 Overhead Expenses as % of UMG Record Labels' Total Net Sales and Music Publishing's Total Revenue	[REDACTED]	[REDACTED]
FY 2006 Manufacturing and Distribution Costs as % of UMG Record Labels' Total Net Sales and Music Publishing's Total Revenues	[REDACTED]	[REDACTED]

1408. Finally, a musical works rate is further flawed as a benchmark because it, like the PSS benchmark, was established in the shadow of regulatory intervention. As explained earlier, a rate that is negotiated under regulatory constraints may bear little or no relationship to a rate that would prevail in an unfettered market setting. Absent a demonstration that observed musical works rates are consistent with market-based rates for such rights and that there is a reasonable link between these rights and the rights at issue in this proceeding, their use as a benchmark in this proceeding is inappropriate. Ordover WRT at 4-6, SX Trial Ex. 119.

1409. In sum, Dr. Woodbury presents no arguments in favor of the musical works benchmark in this case other than those that this Court already rejected in the webcasting case. The Court should reject these arguments here as well. Pelcovits WRT at 29, SX Trial Ex. 124.

C. In Any Event, Dr. Woodbury’s Application of the Four Statutory Factors to His Benchmarks Is Also Fundamentally Flawed.

1410. As discussed in more detail, *supra*, Section VI, and the testimony of Dr. Herscovici, Dr. Woodbury’s analysis of how the four statutory factors would apply to any of his benchmarks is deeply flawed. Among other things, with respect to his PSS benchmark, Dr. Woodbury’s conclusions with respect to the application of the factors depends entirely on his assumption that the SDARS service is promotional. Woodbury WDT at 41-47, XM Trial Ex. 8. Because that assumption rests on no foundation and is wholly contradicted by the only relevant evidence in the record, even if Dr. Woodbury had chosen the correct benchmarks, his analysis would have to be discarded for failure to address the statutory factors.

VIII. SOUNDEXCHANGE’S RATE PROPOSAL AND RATE STRUCTURE

1411. SoundExchange’s Third Amended Rate Proposal provides alternative rate structures, each designed to yield the same gross royalty amount if one assumes that the SDARS

broadcast the same number of sound recordings subject to the statutory license over the next rate term as they broadcast in the most recent past. The second proposed rate structure (“Option B”) gives the SDARS the ability and opportunity to pay a higher or lower gross royalty to SoundExchange depending upon the number of sound recordings they broadcast, while the first proposed structure (“Option A”) does not provide this opportunity, but is less distortionary and allows fewer opportunities for manipulation.

1412. Specifically, SoundExchange’s “Option A” proposes a rate that is based on the greater of a percent of revenue paid or payable to the SDARS from its customers, excluding all revenue entirely unrelated to the provision of the SDARS’ service, or a royalty based on a per subscriber per month measurement. SoundExchange’s “Option B” proposal is based on the number of sound recordings subject to the statutory license each SDARS broadcasts each month, multiplied by the number of the SDARS’ subscribers.

1413. A critical feature shared by both Option A and Option B is that the respective rate levels increase over time based on the SDARS’ subscriber counts. SoundExchange structured its rate proposal to start at a rate substantially below the range of rates consistent with the first three statutory factors, gradually increasing to a level consistent with the first three factors as the SDARS increase their customer base. Rather than have those increases occur automatically on an annual basis, the proposed increases are triggered by the SDARS’ subscriber counts. Specifically, the SDARS’ royalty rates start at a low level and increase as the SDARS grow to over 9 million subscribers, increase again when they achieve 11 million subscribers, 13 million subscribers, 15 million subscribers, 17 million subscribers and 19 million subscribers. The parties’ finance witnesses agree that the SDARS will not likely reach the 17 or 19 million

subscriber thresholds in this next rate period unless the two SDARS merge. *See* Butson WRT, App. A-B (projecting just over 16 million subscribers for each SDARS in 2012).

1414. This rate structure, which, to repeat, is a feature of both Option A and Option B, is responsive to both the second and fourth statutory factors. It is responsive to the fairness criteria of factor two because under the proposals SoundExchange will fairly share in the SDARS' upside potential, and will also fairly share in their downside risk. If the SDARS do not grow as expected, SoundExchange will never achieve a royalty at the level indicated by the benchmarks and other analyses. It is responsive to the fourth factor, because the SDARS' increasing profitability, and their ability to pay increased royalties, is closely linked to their ability to grow their customer bases. Pelcovits WDT at 33, SX Trial Ex. 68.

A. SoundExchange's Option A -- The Greater of a Percent of Revenue or Per Subscriber Structure, Is a Common Marketplace Rate Structure Fairly Implemented Here by SoundExchange

1415. As Dr. Pelcovits explained, a rate structure based on the greater of a percentage of revenue or a per-subscriber minimum is common in the record industry, fairly protects the interests of all parties, and is reasonably well associated with the underlying value of music that is intended to be captured by the rate. Pelcovits WRT at 25-26, SX Trial Ex. 124.

1416. As described in more detail in the discussion of the digital distribution contracts entered into by the record companies and the services that provide music to consumers, the record labels and their contracting services generally employ a "greater-of" structure that includes both a percentage of revenue and per subscriber metric. *See supra* Section V.C.2. The "greater of" structure including a percentage of revenue gives the record companies an "upside" potential should the service prove more lucrative than anticipated, which would imply that the service has more consumer value than anticipated, to which the record companies are entitled to

a reasonable share. The per subscriber metric provides downside protection by providing a minimum level of guaranteed compensation. *Id.*; 6/27/07 Tr. 34:2-17 (Kenswil); Eisenberg WDT at 17, SX Trial Ex. 53; Kenswil WDT at 7, SX Trial Ex. 66.

1417. Indeed, this “greater-of” structure is “a key point” in the record companies’ licensing negotiations in the open market, as it ensures that the record companies and their artists receive the fair value for their sound recordings regardless of how the service at issue decides to use that music. Kenswil WDT at 7, SX Trial Ex. 66. Specifically, the per-subscriber minimum ensures that the record companies and their artists earn a fair return from a service that may charge discounted rates to consumers -- thus earning diminished revenues from the music content -- while monetizing their service through other means. Kenswil WDT at 7, SX Trial Ex. 66.

1418. Although this Court declined to adopt a percent of revenue metric in the webcasting proceeding, most of the reasons the Court gave there do not apply here. To the contrary, many of the reasons the Court gave in that case for rejecting a percent of revenue metric there counsel *for* adoption of a percent of revenue metric here.

1419. In the Webcasting case, the Court adopted a “per play” metric that compensated the record companies and artists for each time one of their sound recordings was listened to. (To avoid confusing this metric with a metric based on the number of times a sound recording is broadcast, we refer to this “per play” metric as a “per listen” metric, since listens are what are actually being measured). In the Court’s view, and in the view of all parties experts in this case as well, a per listen metric best reflects the value of music to the listener, since listening is how the sound recording is actually consumed. 6/13/07 Tr. 121:2-9 (Woodbury); Woodbury WRT at

20, SDARS Trial Ex. 80; 8/28/07 Tr. 93:5-16 (Pelcovits); *Webcasting II*, 72 Fed. Reg. at 24089 & n.10.

1420. In the Webcasting case, it was a straightforward administrative matter to keep track of customer listens. One of the features of a webcast is that the webcaster knows exactly how many computers are turned on to a particular song. Pelcovits WRT at 15-16, SX Trial Ex. 124. There was little administrative cost in imposing a per listen metric.

1421. Unfortunately, that is not the case here, at least at present. The SDARS employ a one-way transmission from the service to the user that does not count performances. *E.g.*, Woodbury WRT at 20 & n.26, SDARS Trial Ex. 80; Pelcovits WRT at 15, SX Trial Ex. 124. The technology does not track what any particular listener is listening to at any given time or how many listeners are listening to any particular sound recording that is broadcast. *Id.*

1422. Thus, although Dr. Pelcovits estimated in his written rebuttal testimony what the SoundExchange rate proposal would be if expressed as a per-play rate, Pelcovits WRT at 17, SX Trial Ex. 124, a pure per-play rate structure is not currently possible. Thus, broadcasting one song at a particular time on one channel may represent one play (if only one subscriber is listening) or it may represent a million plays (if a million subscribers are listening). Presently, there is no way know. *Id.* at 19.

1423. Given current technical limitations, a per-play-type fee structure requires the use of surrogate data to estimate the number of listens. Using data on hours spent listening by the average subscriber might provide such surrogate data, permitting the type of calculation of a number of plays. The existing survey data does not, however, provide a precise quantification of listenership, and therefore implementation of a per-play fee could not begin immediately. Moreover, even if an acceptable survey were conducted prior to implementing a per-play rate

structure, it would be necessary to repeat the survey at regular intervals in order to realize one of the major benefits of this rate structure, which is to allow royalty fees to track usage on an ongoing, dynamic basis. But periodic surveys may engender periodic disputes between the parties, as one side or the other may disagree with the survey design, methodology, implementation and results. Thus, although there are benefits to a true per-play rate, it currently not administrable here. Pelcovits WRT at 19-20, SX Trial Ex. 124.

1424. Accordingly, no party in this proceeding has proposed a true per-performance rate. For the same reasons, the PSS rate structure has never included a per-performance metric. *See* 37 C.F.R. § 260.2. Technological limitations also are one reason why many license agreements in the marketplace do not include a per-performance metric, *see Webcasting II*, 72 Fed. Reg. at 24089 n.12.

1425. In the webcasting proceeding, the Court explained that, in its view, measuring revenue is to a large extent a proxy for measuring usage, a proxy it found unnecessary in that case because a true measurement of usage was available.⁶⁴ The Court made clear, however, that such a revenue-based metric could be appropriate in other circumstances, and it noted that revenue-based metrics are often used in the marketplace where the technology at issue is unable to count performances.⁶⁵

1426. The Court in the webcasting proceeding also found that, based on the evidence before it, a revenue-based metric presented administrative difficulties for certain webcasters associated with measuring, defining and auditing revenue.⁶⁶ Those concerns do not exist here. Unlike in the webcasting proceeding, here there are only two services -- XM and Sirius -- that

⁶⁴ *Webcasting II*, 72 Fed. Reg. at 24089-24090.

⁶⁵ *Id.* at 24089-24090, n.12.

⁶⁶ *Id.*

ever will be subject to the rate set in this proceeding. Both are publicly traded companies that publicly report their revenues on a quarterly basis. *See, e.g.*, SIR Trial Ex. 62 at SIR Exhibit 47 & SIR Exhibit 57; XM Trial Ex. 10 at XM Exhibit 1 & Exhibit 2.

1427. Thus, SoundExchange has been able to propose a straightforward and administrable definition of revenue: “all revenue paid or payable to the SDARS, excluding only revenues that are entirely unrelated to the provision of preexisting satellite digital audio radio services as defined in 17 U.S.C. § 114(j)(10).” *See* Third Amended Rate Proposal For SoundExchange, Inc., Option A. Unlike in the webcasting case, where the many services (not to mention unknown future services) had vastly different business models and accounting practices, the necessary revenue figures here can be taken directly from the SDARS’ 10-Q and 10-K forms. And any doubt that remains would be easily resolved in an audit given the accounting requirements already imposed by law on the SDARS as public companies. In short, whereas in webcasting the Court determined that it was easier to track listens than revenue, here it is the opposite: the unique characteristics of the SDARS’ service and business model make it far easier to track revenue than listens.

1428. SoundExchange’s royalty rate is fully consistent with the record evidence in the case. Mr. Butson projects that absent a merger both XM and Sirius will have under 17 million customers by year end 2012. That would translate into a rate of no more than 17% of revenue or \$2.25/customer/month in 2012, with lower rates in earlier years, starting at 8% or \$.85/customer/month. Such rates are consistent with and supported by the adjusted benchmarks and modeling results obtained by Drs. Pelcovits and Ordober. The results are set forth in the following chart:

Method	% of Revenue
“Howard Stern” Benchmark ⁶⁷	23%
Non-Music Content Benchmark ⁶⁸	13.3%
Non-Music Content Benchmark (including Howard Stern) ⁶⁹	22%
Digital Music Benchmarks ⁷⁰	19% - 28%
Satellite Television Analysis ⁷¹	18.5% - 23.5%
Shapley Model Analysis ⁷²	18%
SoundExchange Rate Proposal	8% - 17%

Method	Per Subscriber Per Month
“Howard Stern” Benchmark ⁷³	\$2.76
Digital Music Benchmarks ⁷⁴	\$2.81 - \$5.00
Retail Rate Analysis ⁷⁵	\$2.48
Satellite Television Analysis ⁷⁶	\$2.17 - \$2.70
Shapley Model Analysis ⁷⁷	\$2.37
Opportunity Cost Floor ⁷⁸	\$1.29
Hauser Survey Data ⁷⁹	\$1.78
SoundExchange Rate Proposal	\$0.85 - \$2.25

1429. Thus, the rates in SoundExchange’s rate proposal are below market rates. They are phased in over time. In the early years the proposed royalties actually result in the record industry losing money, as they are below the opportunity costs reflected by the loss of CD sales

⁶⁷ Pelcovits Amended WDT, SX Trial Ex. 70, *supra* Section V.B.2.

⁶⁸ 7/09/07 Tr. 278:1-279:13 (Pelcovits), *supra* Section V.B.3.

⁶⁹ *Supra* Section V.B.3.

⁷⁰ Ordover WDT at 46, SX Trial Ex. 61, *supra* Section V.C.3.a.

⁷¹ Ordover WDT at 41-42, SX Trial Ex. 61, *supra* Section V.C.3.c.

⁷² Pelcovits WRT at 38-39 & n.64, SX Trial Ex. 124, *supra* Section V.F.

⁷³ *Compare* Pelcovits WDT at 14, SX Trial Ex. 68, *with* Pelcovits Amended WDT at 8, SX Trial Ex. 70, *supra* Section V.B.2.

⁷⁴ Ordover WDT at 47-50, SX Trial Ex. 61, amended as described at *supra* Section V.C.3.b.

⁷⁵ Ordover WDT at 50-51, SX Trial Ex. 61, as amended by data in SX Ex. 210 RP, *Supra* Section V.C.3.b.ii.

⁷⁶ Ordover WDT at 41-42, SX Trial Ex. 61, *Supra* V.D.

⁷⁷ Pelcovits WRT at 38-39 & n.64, SX Trial Ex. 124, *Supra* V.F.

⁷⁸ *Supra* Section V.E.3.

⁷⁹ Hauser WRT at ¶ 11, SDARS Trial Ex. 77, *supra* Section V.G. Hauser, of course, was sponsored by the SDARS.

caused by the SDARS. Pelcovits WDT at 33, SX Trial Ex. 68. Indeed, as the last line of the second chart above shows, SoundExchange's per-subscriber monthly minimum is largely consistent even with the testimony of the SDARS' sponsored expert, Dr. Hauser.

B. SoundExchange's "Option B" Per-Broadcast Proposal

1430. Although it is not technically possible to provide a pure "per listen" metric in this case, SoundExchange was interested in providing the Court the flexibility to consider a rate structure that captured one key feature of a "per listen" metric that is not present in its "Option A": the SDARS' ability to control the amount they spend on music by increasing or decreasing the amount of music listened to on their networks. There are obvious advantages to a rate proposal that incorporates such flexibility.

1431. Most of all, it is a nearly complete response to the SDARS' claim that they simply cannot afford to pay a royalty rate that would be reflected in an arms-length transaction, and that SoundExchange has shown would be the result of the application of the statutory factors. If that is really the case (and the record evidence establishes that it is not), a per listen-type rate structure gives the SDARS a simple choice -- use less music. Dr. Ordover agrees that responsiveness is a useful feature of a rate structure if it can be built in; that is, all else equal it would be better if the service can cut back on music usage if it wishes to make lower payments to the record company. 6/21/07 Tr. 235:14-236:2 (Ordover).

1432. In the same way, such a rate structure allows market-like incentives to operate to the greatest extent possible under the statutory license. Assuming a rate that at least covers the record industry's opportunity costs (which, to repeat, the SDARS' rate does not, and even the SoundExchange rate does not in the early years), obviously it is in the record industry's interest to receive the maximum revenue possible from the SDARS. If the statutory royalty rate really

was too high for the SDARS to afford, under Option B they would cut back on music, and the record industry would suffer. That dynamic would lead to a negotiated solution that better aligned with all parties' interests. On the other hand, in this proceeding, the SDARS have at times asserted that music is not especially valuable or necessary to them. A rate that allowed the SDARS to purchase only so much music as they needed would put that proposition to the test. Once again, it would lead the parties to reach a market-like equilibrium in which the SDARS were purchasing what is for them the optimal amount of music at a cost that is mutually satisfactory to the parties.

1433. Finally, all parties' economic experts in this case (including Dr. Noll, Dr. Pelcovits and Dr. Woodbury) agree with the conclusion reached by the Court in the webcasting case that a rate structure that most closely approximates a per play rate best reflects the underlying value of music that is the touchstone in this case. Professor Noll, the SDARS' economic expert, thus concludes that the cleanest way to get economic incentives correct is to set the royalty rate in these proceedings as a per listen rate. 8/16/07 Tr. 219:17-20 (Noll). Dr. Pelcovits too believes that a per play rate should take into account the number of people who listen to each broadcast or transmission, because it is only then that one can measure how much music is being *used* and how much benefit the music service receives. 8/28/07 Tr. 92:22-93:16 (Pelcovits). Dr. Woodbury also agrees that the best rate would be a per-play/per-listener rate, though he also claims that the data for such a rate was not available. 8/23/07 Tr. 77:15-78:8 (Woodbury); *See also* 6/21/07 Tr. 235:14-236:2 (Ordovery).

1434. Accordingly, Dr. Pelcovits endorsed in his rebuttal oral testimony the most reasonable approximation of a per-play rate structure possible given the limitations set out above. 8/28/07 Tr. 98:19-102:17 (Pelcovits). That proposal is set out in Option B of SoundExchange's

Third Amended rate proposal, and, to the greatest extent possible based on the evidence in the record, it equates a per-broadcast metric with the number of subscribers that are actually listening to each broadcast -- precisely what the economic experts uniformly recommend.

1435. The rate structure is a per-broadcast/per-subscriber fee. A “broadcast,” for these purposes, is the single broadcast of one sound recording, regardless of how many consumers listen to it. A royalty payment is assessed based on each sound recording broadcast on the SDARS on a per-subscriber basis. Because the SDARS know how many sound recordings they broadcast, and how many subscribers they have, basing a rate on the number of broadcasts times the number of subscribers would avoid the problem that the SDARS do not know how many people listen to each broadcast. Additionally, it is reasonable to assume that as the number of subscribers increases, so too does the number of “listens” or “plays” of the music broadcast by the SDARS. Consequently, multiplying a rate per broadcast times the number of subscribers serves as a proxy for a per-listen rate. Pelcovits WRT at 20, SX Trial Ex. 124.

1436. SoundExchange established its Option B “per broadcast per customer” structure as follows. First, since its goal was to produce a rate that was the same in gross dollar terms as the rates in its Option A, it started with the “per subscriber” fees set out in its Option A.

1437. Next, SoundExchange divided its proposed monthly per subscriber fee from its Option A by the number of songs broadcast each month on the SDARS’ service. For example, Dr. Pelcovits assumed in his written rebuttal testimony that an SDARS broadcasts sixty-nine music channels, 24 hours a day, 30 days a month. He further assumed the SDARS’ broadcast 15.5 songs per hour on each channel. This then translates into 770,040 songs broadcasts each

month (15.5 songs per hour times 24 hours a day times 30 days a month times 69 channels).⁸⁰

Assuming 12 million subscribers, for which SoundExchange has proposed a monthly per subscriber fee of \$1.45 in its Option A, Dr. Pelcovits calculated the monthly per-broadcast fee in his written rebuttal testimony to be \$0.0000019 (i.e., \$1.45/subscriber ÷ 770,040 songs broadcast each month). The monthly gross fee in dollar terms that an SDARS would pay in this hypothetical thus would be equal to the per broadcast rate of \$.0000019, times the number of songs broadcasts, times the number of subscribers. Pelcovits WRT at 20-21, SX Trial Ex. 124.

1438. The table below further describes how, in his written rebuttal testimony, Dr. Pelcovits transformed SoundExchange’s rate proposal into a per-broadcast/per-subscriber fee at each subscription tier assuming 69 music channels on the SDARS and 15.5 plays per hour, 24 hours a day. This calculation then could be adjusted to correspond to a different number of channels or a different total number of broadcasts of sound recordings per channel. Pelcovits WRT at 21, SX Trial Ex. 124.

Fee per-Broadcast Rate in Pelcovits’s Written Rebuttal Testimony

Number of Subs	<9m	9m to 11m	11m to 13m	13m to 15m	15m to 17m	17m to 19m	>19m
Monthly Fee Per Sub	\$0.85	\$1.15	\$1.45	\$1.80	\$2.25	\$2.65	\$3.00
Number of Channels	69	69	69	69	69	69	69
Music Broadcasts Per Channel	11,160	11,160	11,160	11,160	11,160	11,160	11,160
Total Broadcasts per Sub	770,040	770,040	770,040	770,040	770,040	770,040	770,040
Fee Per Broadcast	\$0.0000011	\$0.0000015	\$0.0000019	\$0.0000023	\$0.0000029	\$0.0000034	\$0.0000039

1439. Subsequent to Dr. Pelcovits’ written rebuttal testimony, through Dr. Woodbury’s written rebuttal testimony, SoundExchange obtained more precise data on the number of songs

⁸⁰ In the rate proposal, this figure is updated based on data provided in Dr. Woodbury’s rebuttal testimony. 8/28/07 Tr. 210:17-211:6 (Pelcovits).

subject to the compulsory license that are in fact broadcast by the SDARS each month. Instead of the 770,040 number used above and in Dr. Pelcovits’ written rebuttal testimony, based on internal SDARS data Dr. Woodbury determined that there were 652,500 compensable performances a month for each SDARS. Woodbury WRT at 22, SDARS Trial Ex. 80. That led to the following fee per broadcast, which was the data subsequently used in SoundExchange’s Third Amended Rate Proposal. 8/28/07 Tr. 210:17-211:6 (Pelcovits); Woodbury WRT at 22, SDARS Trial Ex. 80; Third Amended Rate Proposal of SoundExchange, Inc. at 5 n.1:

Fee per-Broadcast Rate in Third Amended Rate Proposal

Number of Subs	<9m	9m to 11m	11m to 13m	13m to 15m	15m to 17m	17m to 19m	>19m
Monthly Fee Per Sub	\$0.85	\$1.15	\$1.45	\$1.80	\$2.25	\$2.65	\$3.00
Total Broadcasts per Sub	652,500	652,500	652,500	652,500	652,500	652,500	652,500
Fee Per Broadcast	\$0.0000013	\$0.0000018	\$0.0000022	\$0.0000028	\$0.0000034	\$0.0000041	\$0.0000046

C. Addressing the Distortionary Effect of the Per Broadcast Rate Proposal

1440. Unfortunately, as Dr. Pelcovits explained, and as Professor Noll subsequently acknowledged as well, there is a major drawback in using a flat per-broadcast/per subscriber fee structure that makes it far too distortionary to use in practice. As indicated above, one of the principal advantages of this rate structure is that the SDARS can change the amount they pay by changing the amount of music they broadcast. If each sound recording was listened to by the identical amount of customers, and if for every sound recording eliminated there was a concomitant reduction in the number of songs listened to across an SDARS’ network, then a reduction in broadcasts would be the exact equivalent to the reduction in listening, which is the metric this rate structure is intended to capture indirectly.

1441. However, neither of these assumptions holds. Pelcovits WRT at 21, SX Trial Ex. 124.

1442. There are two reasons for this. First, all SDARS' music channels are not equally popular. To the contrary, some music channels are much more highly listened to than others. For example, the most listened to music channel on Sirius has a past week listening index of [REDACTED] and the least listened to music channel has a listening index of [REDACTED]. SX Trial Ex. 52 at EX Exhibit 112 DR, at 45-64 (Sirius Satellite Radio Listener Study, Wave 2, October 2006). Indices are for Big-80s and Classical Voices. XM's top rock station garnered [REDACTED] listeners in a seven day period compared to an estimated [REDACTED] listeners for its least favorite rock channel. SX Trial Ex. 52 at SX Exhibit 125 DR, at 17 (XM Satellite Radio Inc., Who Are You Talking To?, Presented to Programming Staff during the August 28, 2006 Boot Camp).

1443. If the SDARS decided to reduce royalties by eliminating sound recording broadcasts, they would not eliminate the most-listened to broadcasts. They would instead eliminate some of the least listened-to broadcasts. Although an SDARS would be unlikely to drop all stations with low listenership (because some customers attach great value to niche programming), it can be expected that the average listening on the dropped channels will be much less than on the retained channels. This would artificially reduce the effective per-play rate; that is, it would result in significantly lower royalties for sound recording copyright owners and performers, out of all proportion to the actual reduction in listening. Pelcovits WRT at 22, SX Trial Ex. 124.

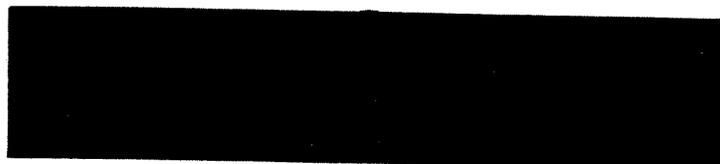
1444. Dr. Noll agreed. He testified that it is important to take into consideration the size of the audience for each channel when calculating the rate, rather than charging a flat per

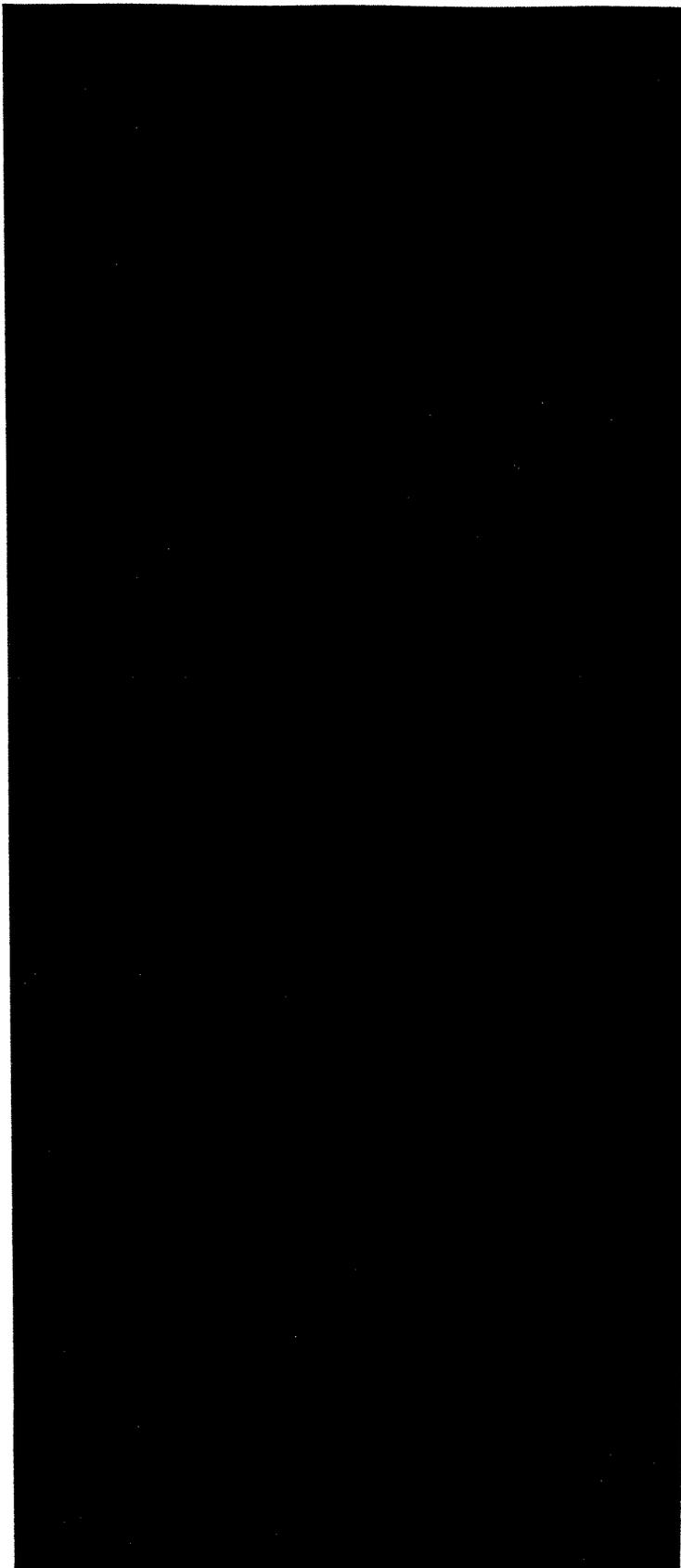
broadcast rate regardless of the popularity of any given channel. 8/16/07 Tr. 220:13-221:22 (Noll).

1445. Professor Noll further testified that because a pure per broadcast rate does not account for different audience sizes or the popularity of a specific channel; thus, such a rate is “distortionary.” 8/16/07 Tr. 222:1-6, 158:1-2 (Noll). He found that the distortionary effect is particularly a concern here since there is orders of magnitude more listening on some SDARS music channels as compared to others. In that context, it is “important to account in that context [for] the differences between listening on some channels and listening on other channels,” since here, for example, we are “comparing the jazz channel with the contemporary top 40 channel, [and] we’re talking in one or two order of magnitude difference in how many people actually listen to it.” 8/16/07 Tr. 220:18-221:11 (Noll). *See also id.* at 226:7-12 (“The problem arises because . . . there are some channels that are extremely popular that have audiences that are extremely high and other channels that have very low audiences.”). That is because the “theoretically correct measure does, in fact, apply at the level of a specific performance and how many people actually listen to it.” *Id.* 221:4-7. Therefore, the SDARS’ own economic expert testified that a rate that based solely on the number of songs broadcast on each channel without taking into account different listening intensity on the channels is distortionary and problematic. *Id.* 221:13-222:6.

1446. The extreme variation in listening is represented by the following data provided by the SDARS themselves. Pelcovits WRT at 24 & Appendix B, SX Trial Ex. 124.

Listening time on Sirius Music Channels







1447. The second reason that listening likely would not decline in proportion to a decline in the number of broadcasts is that some subscribers from dropped channels can be expected to shift some of their music listening to other music channels that continue to be broadcast. To the extent this happens, while the number of broadcasts will decline, the number

of listens per broadcast will increase, and the use of a constant per-broadcast fee will effectively reduce the per-listen fees paid to the sound recording copyright holders. For both of these reasons, a straight per-broadcast/per-subscriber rate will not properly reflect actual listening over the course of the rate term. Pelcovits WRT at 22, SX Trial Ex. 124.

1448. Dr. Pelcovits provided an example of what might happen under the per broadcast/per subscriber fee structure outlined above. Dr. Pelcovits assumed, for example, that an SDARS broadcasts 770,040 sound recordings in a month, and that there are on average 10 people listening to each broadcast. That would equate to 7,700,400 plays under a per-play rate fee structure. He then supposed that the SDARS eliminates one-third of its music channels, reducing the number of sound recordings broadcast per month to 512,847. And, finally, he assumed that all of the people who had been listening to the channels that were cut now switch their listening time to the remaining channels. In that case, the number of broadcasts would decline by a third, and therefore the royalty payment would decline by a third, but the number of *performances* (i.e., the number of times one person heard one song) would not have changed at all. The point was that if the Court wants to establish a rate structure that mirrors the per-play rate used in the webcasting case, and effectively is tied to the SDARS' use of music, a straight per broadcast/per subscriber fee will not work. Pelcovits WRT at 22-23, SX Trial Ex. 124.

1449. The same kind of results might occur as a result of the SDARS cutting unpopular channels. Again, Dr. Pelcovits assumed that an SDARS broadcasts 770,040 sound recordings in a month, and the average of 10 people listening to each broadcast is distributed unequally among broadcasts, so that the least popular one-third of the broadcasts are heard by only one person per broadcast, the most popular one-third of the broadcasts are heard by nineteen people per broadcast, and the middle tier of the broadcasts are heard by 10 people per broadcast. Again, the

total number of plays assumed was 7,700,400. If the SDARS cuts the least-popular one-third of its channels, again it has cut its royalties by one-third. But the number of plays has decreased, not by one-third, but by less than 4%. This is because out of the original 7,700,400 plays, only 256,423 occurred on the least popular one-third of the channels (770,040 broadcasts times 33.3% times one listener per broadcast). Here again, it is the case that a per-broadcast/per subscriber rate does not accurately, or even closely, track the results of the kind of per-play rate the Court adopted in the webcasting case. Pelcovits WRT at 23 n. 39, SX Trial Ex. 124.

1450. It is not possible to design a per broadcast rate structure that fully addresses this problem. It is possible, however, to add a feature to address at least the most egregious deficiency in this proposal -- the distortion identified by Dr. Noll associated with the uneven listening patterns on the SDARS stations. To address this, Dr. Pelcovits and SoundExchange proposed a two-tier rate structure, whereby the per broadcast fee is allocated among more heavily listened to stations and less heavily listened to stations. Under this structure, when the SDARS eliminate a sound recording, it is assumed to be a sound recording on a less heavily listened to station. Note that this adjustment does not address at all the second obvious distortion built into this rate structure -- the fact that when the SDARS eliminate a song (or a channel), it is not the case that all of the listeners of that song or channel stop listening to music on the SDARS. No doubt many simply switch to a different music channel.

1451. In any event, this two-tier structure reduces, but does not eliminate, the most significant distortion. Under this two-tier approach, if the number of broadcasts were to decrease by 10%, the total royalty revenues would decline by some amount less than 10%. In this way a two-tier rate would remedy some of the distortions discussed above relating to the lack of

proportionality between total listening and the number of broadcasts. Pelcovits WRT at 23-24, SX Trial Ex. 124.

1452. In establishing the two tiers in SoundExchange's rate proposal, following Dr. Pelcovits' recommendation, SoundExchange divided the total number of songs played so that 50% of the royalty revenue would be collected from the sound recordings in the top tier rates and 50% of the revenue would be collected from sound recordings placed in the bottom tier. To put it another way, broadcasts of most popular songs representing half of the "listens" would be in the first tier, broadcasts of least popular songs representing the other half of the "listens" would be in the second tier. *See* 8/28/07 Tr. 109:2-20 (Pelcovits); Third Amended Rate Proposal of SoundExchange, Inc. at 5 n.1. Dr. Pelcovits used Sirius internal survey data (in evidence as SX Trial Ex. 34) on relative channel listenership to determine the number of broadcasts that received 50% of the listenership, and that number of broadcasts represents the first tier of the SoundExchange rate proposal. 8/28/07 Tr. 109:21-110:15 (Pelcovits). That data is reported below:⁸¹

⁸¹ Specifically, Dr. Pelcovits relied on weekly channel listening data provided by Sirius. Pelcovits WRT at 24 & App. B, SX Trial Ex. 124(relying on SX Trial Ex. 34 at 79-106, collecting "Past Week Listening -- Total Sample"). Of the 69 music channels listed, the first 18 accounted for 50.6% of the listening. *Id.* The ratio of 18/69 is approximately 25%. Applying that .25 ratio to the total number of songs played as calculated by Dr. Woodbury, which is approximately 600,000/month (precisely 652,500), 8/28/07 Tr. 210:17-211-6 (Pelcovits), yields 150,000 in the top tier.

APPENDIX B

Channel Name	Past Week Total Listening	Percentage of listening
Big '80s	317	4.29%
Classic Vinyl	293	3.97%
Classic Rewind	285	3.86%
The Pulse	260	3.52%
Sirius Hits 1	246	3.33%
Totally '70s	234	3.17%
Alt Nation	227	3.07%
Hair Nation	225	3.05%
The Vault	216	2.92%
Buzzsaw	215	2.91%
Octane	210	2.84%
New Country	166	2.25%
60s Vibrations	164	2.22%
Super Shuffle (New)	144	1.95%
First Wave	143	1.94%
The Spectrum	132	1.79%
Prime Country	130	1.76%
Radio Margaritaville	130	1.76%
First Tier Stations		50.60%
Hard Attack	124	1.68%
Faction	122	1.65%
The Coffee House	118	1.60%
Sirius Blues	106	1.44%
The Bridge	106	1.44%
The Roadhouse	106	1.44%
BackSpin	105	1.42%
Sirius Love	102	1.38%
Movin' Easy	101	1.37%
Rolling Stones Radio	99	1.34%
Sirius Gold	98	1.33%
Outlaw Country	97	1.31%
Shade 45	96	1.30%
Hip-Hop Nation	94	1.27%
Jazz Café	92	1.25%
Radio Disney	89	1.21%
Reggae Rhythms	85	1.15%
StarLite	85	1.15%
Left of Center	84	1.14%
Underground Garage	82	1.11%
Elvis Radio	80	1.08%
Pure Jazz	80	1.08%
Hot Jamz	78	1.06%
Jam_ON	78	1.06%
The Beat	78	1.06%
Bluegrass	73	0.99%
Area 33 (New)	71	0.96%
Standard Time	71	0.96%
Spa 73 (New)	70	0.95%
Kids Stuff	68	0.92%
The Strobe	67	0.91%
Soul Town (New)	66	0.89%
Sirius Disorder	65	0.88%
Symphony Hall	65	0.88%
Boombox	62	0.84%
RadioClassics	62	0.84%
Sirius Pops	60	0.81%
Planet Jazz	59	0.80%
Broadway's Best	56	0.76%
Chill	56	0.76%
Heart & Soul	52	0.70%
BBC Radio 1	51	0.69%
Spirit	33	0.45%
Rumbon (New)	30	0.41%
Classical Voices	28	0.38%
Revolution (New)	23	0.31%
Praise	20	0.27%
Universo Latino	20	0.27%
Iceberg Radio (New)	19	0.26%
CBC Radio 3 (New)	11	0.15%
bande a part (New)	5	0.07%
Total Listening All Channels	7385	

1453. This resulted in a structure in which 150,000 popular songs broadcast each month represented one-half of the listening, while 502,500 less popular songs broadcast each month represented the other half of the listening. Then, under SoundExchange’s Third Amended Rate Proposal, Option B, each SDARS will pay the first-tier rate in each year for up to 150,000 broadcasts each month, and the second-tier rate on all broadcasts in excess of 150,000 each month. Assuming current usage, this will yield a total royalty equal to the per-subscriber minimum set in out “Option A” of the SoundExchange rate proposal. Pelcovits WRT at 19-26, SX Trial Ex. 124. On the other hand, if the SDARS add more music channels, the proposal assumes that they will be “niche” channels playing less popular music, and the SDARS will pay a relatively low price for that music. If the SDARS remove music channels, the proposal likewise assumes that they will be “niche” channels playing less popular music, and the SDARS will receive savings accordingly. Pelcovits WRT at 22, SX Trial Ex. 124.

1454. The following table shows how the rates for each year were calculated using the methodology explained in Dr. Pelcovits’s written rebuttal testimony and the updated numbers that he explained at trial. Pelcovits WRT at 23-24, SX Trial Ex. 124; 8/28/07 Tr. 109:2-20 (Pelcovits); 8/28/07 Tr. 210:17-211:6 (Pelcovits); Woodbury WRT at 22, SDARS Trial Ex. 80:

Broadcasts Per Month			Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 7
	652,500	Rate	\$ 0.85	\$ 1.15	\$ 1.45	\$ 1.80	\$ 2.25	\$ 2.65	\$ 3.00
		Subs	8,000,000	10,000,000	12,000,000	14,000,000	16,000,000	18,000,000	20,000,000
		Royalty	\$ 6,800,000	\$ 11,500,000	\$ 17,400,000	\$ 25,200,000	\$ 36,000,000	\$ 47,700,000	\$ 60,000,000

	Quantity	Value	Broadcasts	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 7
First Tier	22.72%	50.00%	150,000	\$ 3,400,000	\$ 5,750,000	\$ 8,700,000	\$ 12,600,000	\$ 18,000,000	\$ 23,850,000	\$ 30,000,000
Second Tier	77.28%	50.00%	502,500	\$ 3,400,000	\$ 5,750,000	\$ 8,700,000	\$ 12,600,000	\$ 18,000,000	\$ 23,850,000	\$ 30,000,000
Total	100.00%	100.00%	652,500	6,800,000	11,500,000	17,400,000	25,200,000	36,000,000	47,700,000	60,000,000

First Tier		0.0000028	0.0000038	0.0000048	0.0000060	0.0000075	0.0000088	0.0000100
Second Tier		0.0000008	0.0000011	0.0000014	0.0000018	0.0000022	0.0000026	0.0000030
Untiered Rate	148,228.01	0.0000013	0.0000018	0.0000022	0.0000028	0.0000034	0.0000041	0.0000046
							23,850,000	

1455. The multi-tier fee structure will do a better job than a single-tier fee at adjusting for the decreased importance and amount of listening to the less popular broadcasts. It will

provide a fairer fee structure that compensates the copyright holder based on usage and also deters the SDARS from reducing music channels to bring down their royalty payments artificially even if listening to music declines very little. Pelcovits WRT at 25, SX Trial Ex. 124.

1456. Nonetheless, Dr. Pelcovits does not believe that even such a two-tier per-broadcast/per-subscriber fee addresses all of the problems inherent in this approach. For this reason and others, both Dr. Pelcovits and SoundExchange continue to believe that the best and most effective metric for an SDARS rate is the greater of a percent of revenue and per-subscriber minimum. Pelcovits WRT at 25-26, SX Trial Ex. 124. First, the per-broadcast/per-subscriber metric can never provide an accurate and dynamic measure of listening/consumption. It is by its nature static, based on music listening habits as recorded by the SDARS last year. Second, Dr. Pelcovits is aware of no marketplace agreements in which the per broadcast metric is used. The absence of any acceptance at all in the marketplace suggests that neither copyright owners nor copyright users favor this approach. Moreover, the untested nature of this metric means that it may be susceptible to be abuse in ways unforeseen. As noted above, absent a multi-tier approach or some protection like a significant percentage of revenue minimum, the SDARS can manipulate their programming to reduce music broadcasts and royalties without reducing listening. Without any marketplace experience with this metric, there is a great deal of uncertainty as to how such a rate might operate. Pelcovits WRT at 25-26, SX Trial Ex. 124.

1457. It is, however, a structure that is easy to administer, and it does give the SDARS the ability to control the amount of music they purchase and the amount they spend on that music. Moreover, because it is an effort to reflect the amount of listening by SDARS' customers, it is the closest possible structure to a per listen metric that all parties agree is the ideal metric, though not feasible in this case.

D. The SDARS' Per Broadcast Proposal

1458. The SDARS too amended their initial rate proposal to provide a “per play” like option. However, unlike SoundExchange’s Option B, the SDARS’ proposals utterly fails to address the problems that make this approach distortionary and unfair.

1459. Under the SDARS’ per play rate proposal, the SDARS would pay the same royalty for each broadcast regardless of whether one person listened to it or one million people listened to it. 8/23/07 Tr. 150:15-20 (Woodbury). This is precisely the distortion that the SDARS’ own expert, Dr. Noll, warned against, concluding that it is important to take into consideration the size of the audience for each channel when calculating the rate, rather than charging a flat per broadcast rate regardless of the popularity of any given channel. 8/16/07 Tr. 220:13-221:22 (Noll). *See also* 8/16/07 Tr.Tr. 152:14-16 (Noll) (“to the best approximation these rates should be on a performance basis”). Dr. Noll did not seem to be aware of the SDARS amended rate proposal. But in his view, a rate structure such as that proposed by the SDARS would be inadequate and distortionary, because it would charge more for the more popular, i.e., the more listened-to channels, and less for those channels with smaller audiences. 8/16/07 Tr. 221:18-22 (Noll). He opposed a per broadcast rate because it does not account for different audience sizes or the popularity of a specific channel; thus, such a rate is “distortionary.” 8/16/07 Tr. 222:1-6, 158:1-2 (Noll). Dr. Noll agreed, moreover, that the distortionary effect is particularly a concern here since there is orders of magnitude more listening on some SDARS music channels as compared to others. In that context, it is “important to account in that context [for] the differences between listening on some channels and listening on other channels,” since here, for example, we are “comparing the jazz channel with the contemporary top 40 channel, [and] we’re talking in one or two order of magnitude difference in how many people actually

listen to it.” 8/16/07 Tr. 220:18-221:11 (Noll). *See also* 8/16/07 Tr. 226:7-12 (Noll) (“The problem arises because . . . there are some channels that are extremely popular that have audiences that are extremely high and other channels that have very low audiences.”). That is because the “theoretically correct measure does, in fact, apply at the level of a specific performance and how many people actually listen to it.” 8/16/07 Tr. 221:4-7 (Noll). Therefore, the SDARS’ own economic expert testified that a rate that based solely on the number of songs broadcast on each channel without taking into account different listening intensity on the channels, such as the rate structure proposed by the SDARS, is distortionary and problematic. 8/16/07 Tr. 221:13-222:6 (Noll). In sum, on this count, Dr. Noll favors SoundExchange’s rate structure, which through its two-tier structure is designed to address customer listens, to the SDARS’ rate structure, which is based purely on the SDARS’ plays.

1460. Dr. Woodbury himself conceded that it is certainly possible that the SDARS could reduce the number of broadcasts by 10%, and thereby cut their royalties by 10%, while reducing performances -- the actual *usage* of sound recordings on their services -- by a significantly smaller amount. 8/23/07 Tr. 154:10-155:2 (Woodbury).

1461. Finally, in addition to this very fundamental problem, Dr. Woodbury’s calculation of a per-play rate did not include incidental uses of music, and included only full length songs, 8/23/07 Tr. 85:17-88:2 (Woodbury), and his calculation of the per play rate excluded pre-1972 recordings without any effort to determine whether those sound recordings had been remixed or reasserted after 1972, 8/23/07 Tr. 157:20-159:8 (Woodbury).

1462. In sum, not only is the gross amount of the royalty proposed by the SDARS deeply inconsistent with the four statutory factors, the rate structure they propose would lead to substantial abuses that would further undermine the fairness of the rate.

IX. TERMS

1463. Section 114(f)(1)(B) of the Copyright Act requires the Copyright Royalty Judges to establish both rates and terms. As the CRJs explained in the webcasting proceeding, “it is our obligation to adopt royalty payment and distribution terms that are practical and efficient.” *Final Determination of Rates and Terms*, Docket No. 2005-1 CRB DTRA, 72 Fed. Reg. at 24102 (May 1, 2007).

A. Introduction

1464. SoundExchange submitted proposed regulations that include a complete set of proposed terms (re-submitted with the Proposed Findings). To support the proposed terms and address issues known to be in dispute, SoundExchange presented the testimony of Barrie Kessler, its Chief Operating Officer, relating to several terms issues, including census reporting, late fees, confidentiality of statements of account, audits and verification of payments, reports of use, and definition of revenue. *See* Kessler WDT, SX Trial Ex. 55; Kessler WRT, SX Trial Ex. 127. In addition, SoundExchange introduced into evidence the designated testimony of Ms. Kessler from the webcasting proceeding in support of her testimony here. *See* SX Trial Ex. 56. SoundExchange also submitted evidence into the record that SoundExchange should be the sole collective designated to collect and distribute the performance royalties paid by the SDARS. Kessler WDT at 15-17, SX Trial Ex. 55.

1465. Ms. Kessler indicated in her testimony that she hopes the parties to this proceeding can stipulate to some or all of the terms at issue. To date, the parties have not stipulated to any terms.

1466. In large part, SoundExchange has proposed terms similar or identical to the terms this Court adopted in webcasting proceeding, where applicable. Although SoundExchange

believes the record supports even more stringent terms, Ms. Kessler explained that consistency across licenses benefits both SoundExchange and licensees. 6/19/07 Tr. 41:16-42:1; 54: 11-22; 87:13-21 (Kessler); 8/29/07 Tr. 23:9-18 (Kessler).

1467. XM and Sirius failed to produce any testimony or other evidence to support their requested terms, other than written testimony from witnesses who merely stated in conclusory fashion that they support the SDARS' proposed terms. Thus, SoundExchange is the only party in this proceeding that has submitted record evidence on terms issues.

B. Census Reporting

1468. Under 17 U.S.C. §114(f)(4)(A), the Copyright Royalty Judges must “establish requirements by which copyright owners may receive reasonable notice of the use of their sound recordings under this section, and under which records of such use shall be kept and made available by entities performing sound recordings.” The statute does not exempt certain uses of sound recordings from this requirement, nor does it exempt licensees from reporting uses of sound recordings on certain types of channels.

1469. SoundExchange has requested census reporting of sound recordings played because accurate data is critical to ensuring that copyright owners and performers are paid for performances of their copyrighted recordings. Kessler WDT at 17-18, SX Trial Ex. 55. Indeed, SoundExchange presented evidence showing that sampling (as opposed to census reporting) would result in copyright owners and artists being underpaid. Kessler WDT at 18, SX Trial Ex. 55 at SX Exhibit 001 DP. The evidence also establishes that census reporting is necessary for accurate and fair distributions of royalties to copyright owners and performers, regardless of whether this Court adopts a revenue based rate or a per play rate. 8/29/07 Tr. 27:7-13; 27:22-28:5 (Kessler).

1470. It appears from the SDARS' Rates and Terms proposal that they also support census reporting, but with an important limitation. Kessler WRT at 6, SX Trial Ex. 127 (citing XM and Sirius Rates and Terms Proposal, § 26_.6(d), which proposes the reporting of a licensee's "intended or actual playlist for each channel and each day"). Significantly, the SDARS propose to provide *census* reporting on their music channels, but provide *no* reporting at all of sound recordings played on "channels reasonably classified as news, talk or sports," no matter how many sound recordings those channels play. *Id.*

1471. There is no basis in the record for allowing the SDARS not to report their use of sound recordings on news, talk or sports channels, or on channels that play programming provided to them by third parties. 8/29/07 Tr. 23:19-25:11 (Kessler). Section 114(f)(4)(A) provides that copyright owners are entitled to "receive reasonable notice of the use of their sound recordings," and the statute does not create any exceptions for sound recordings used on channels that are devoted to particular types of programming. Kessler WRT at 6-7, SX Trial Ex. 127.

1472. Indeed, because the SDARS propose to define "music channel" as any channel on which sound recording performances constitute 50% or more of programming, the SDARS' proposal would mean that the SDARS would not have to report (or pay for) performances on channels on which music constitutes 49% of the programming. Kessler WRT at 7-8, SX Trial Ex. 127. Nothing in the statute or evidentiary record supports this proposal.

1473. By their proposal, the SDARS are not proposing to exempt merely incidental uses of snippets of music from reporting – they are proposing to exempt long blocs of music programming that happen to be on channels they characterized as "non-music." The record demonstrates that the SDARS play long blocs of sound recordings – essentially multiple hours of

back-to-back music programming – on many of their “non-music” stations. Herscovici WRT at 15-17, SX Trial Ex. 130.

1474. Among other things, the SDARS’ proposal would appear to exempt the 61 hours of pure music programming per week on Sirius OutQ (1/3 of its total programming), the 38 hours per week of music on Sirius’ Maxim Radio, the 29 hours per week of music on Sirius’ Cosmo Radio, and the 53 hours per week of music and comedy on Sirius’ Road Dog Trucking. Herscovici WRT at 16, SX Trial Ex. 130.

1475. The CRJs have previously addressed notice and recordkeeping in a prior regulatory proceeding, requiring those making digital audio transmissions under the statutory license to report on a sample basis. *Notice and Recordkeeping for Use of Sound Recordings Under Statutory License*, Docket No. RM 2005-2, 71 Fed. Reg. 59010 (Oct. 6, 2006). Where, however, as here, all participants to a statutory license proceeding propose census reporting and not simply sample reporting, there is a strong record basis on which to adopt census reporting.

1476. Unlike in the webcasting case, where there are myriad webcasters of all sizes, some of whom claimed that they could not comply with census reporting, this proceeding involves only services that are large companies with revenues approaching \$1 billion apiece in 2007. *See supra* Section II.D. The SDARS have made no arguments that census reporting would be burdensome to them, and indeed, they have proposed reporting on a census basis (at least on their music channels).

1477. Moreover, in this very proceeding, XM and Sirius each have demonstrated their ability to provide census reporting because they provide detailed data from years past to their expert, Dr. Woodbury, to complete his analysis of sound recordings performed that he claims are not subject to the statutory license. Woodbury WRT at 23, SDARS Trial Ex. 80 (reviewing

census data over multiple years). There can be little argument such reporting would be unduly burdensome.

1478. Indeed, marketplace agreements regularly impose obligations on licensees to report every performance of a copyrighted sound recording owned by the record company, as well as information about the artist, title, album, and ISRC code. *See, e.g.*, Kenswil WDT at 8, SX Trial Ex. 66; Eisenberg WDT at 14, SX Trial Ex. 53. These agreements all involve not simply reporting a playlist that has been broadcast to many listeners, but actually tracking each sound recording transmitted to each listener or recipient. *See, e.g.*, SX Ex. 104 DR at Ex. E ([REDACTED]); SX Ex. 105 DR at Annex III ([REDACTED]); SX Ex. 107 DR at Ex. E ([REDACTED]); SDARS Trial Ex. 85 at § 7 (SE-REB 0027789) ([REDACTED]).

C. Late Fees

1. Late Payments

1479. Under 17 U.S.C. § 803(c)(7), “[a] determination of Copyright Royalty Judges may include terms with respect to late payment, but in no way shall such terms prevent the copyright holder from asserting other rights or remedies provided under this title. “

1480. Under the regulations that have govern the pre-existing subscription services to date, a PSS “shall pay a late fee of 1.5% per month, or the highest lawful rate, whichever is lower, for any payment received after the due date. Late fees shall accrue from the due date until payment is received.” 37 C.F.R. § 260.2(d).

1481. Under the regulations that govern webcasters, adopted on May 1, 2007, late fees for late payments by webcasters are 1.5% per month. 37 C.F.R. § 380.4(e). *See Final Determination of Rates and Terms*, Docket No. 2005-1 CRB DTRA, 72 Fed. Reg. at 24107 (May 1, 2007).

1482. SoundExchange has proposed late fees of 1.5% per month for untimely payments by the SDARS, consistent with both the PSS and the webcasters. Kessler WRT at 2, SX Trial Ex. 127.

1483. With respect to the issue of late payment and late statements of accounts, as set forth below, SoundExchange provided evidence from Barrie Kessler, based on the actual experience of administering the statutory license, which demonstrated that significant late fees are needed to compel licensees to make payment and file statements of account in a timely fashion. The record evidence shows that the SDARS have in the past been untimely with payments and have been assessed (and have paid) late fees. 6/19/07 Tr. 91:10-12; 94:14-16; 95:2-5 (Kessler). SoundExchange's experience with all licensees is that many fail to pay in a timely manner, and that late payments can range from a few days to a few months. SX Trial Ex. 56 at 25-29. As Ms. Kessler explained, late fees are the only remedy available to combat late payments other than infringement actions. And late fees will not impose any burden on the SDARS so long as they timely pay SoundExchange for their use of sound recordings. Kessler WRT at 2, SX Trial Ex. 127.

1484. In SoundExchange's experience, lower late fees – such as 0.75% per month under the old webcasting regulations – fail to give licensees an adequate incentive to timely pay SoundExchange, and by extension the copyright owners and performers, the royalties to which they are entitled by law. SX Trial Ex. 56 at 26. Increasing the monthly rate from 0.75% to 1.5%

would prompt payment of royalties, reduce SoundExchange’s costs of obtaining payment from licensees, and create disincentives for licensees to delay payments. SX Trial Ex. 56 at 27.

1485. The SDARS have proposed late fees of 0.50% per month for failure to make timely payments. Kessler WRT at 2, SX Trial Ex. 127. But they have failed to offer any rationale as to why they are entitled to more favorable (to them) late fee rates than webcasters. They have also failed to present any record evidence supporting a 0.50% rate.

1486. As this Court found in the webcasting proceeding, marketplace agreements “establishing a range [of late fees] of 1.0% to 2.0%, with the majority of the agreements containing the 1.5% figure.” *Webcasting II*, 72 Fed. Reg. at 24107. Agreements in the record in this proceeding similarly establish that a late fee of 1.5% is well within the range that parties agree to in the marketplace.

1487. Significant late fees are common in marketplace agreements between record companies and digital music services. Those late fees are set at much higher levels than those proposed by the SDARS, even though these marketplace agreements also provide parties the right to terminate the license agreement for breach — a remedy not available to SoundExchange.

For example, EMI’s standard terms require licenses to pay late fees equal to [REDACTED] [REDACTED]. SDARS Trial Ex. 86 at SE-REB0025070 (§ 7.2)

([REDACTED]). The [REDACTED]

agreement for streaming requires the licensee to late fees equal to [REDACTED]

[REDACTED]. SDARS Trial Ex. 87 at SE-REB 0025912 (§ 6.04(d))

([REDACTED]). See also SX Ex. 105 DR at Ex. A, § 5(b) ([REDACTED]

[REDACTED]

[REDACTED]).

2. Late Statements of Account

1488. In addition, the SDARS' terms proposal omits reference to late fees for untimely submission of statements of account. Without a statement of account, SoundExchange cannot distribute a licensee's royalty payments, even if full payment has been made. Late fees imposed where services fail to submit valid reports in a timely manner would create a financial incentive for licensees to comply with regulations. Kessler WDT at 29-30, SX Trial Ex. 55. But as this Court observed in the webcasting proceeding, "timely submission of a statement of account is critical to the quick and efficient distribution of royalties." Kessler WRT at 3, SX Trial Ex. 127 (quoting *Final Determination of Rates and Terms*, Docket No. 2005-1 CRB DTRA, 72 Fed. Reg. at 24107-08 (May 1, 2007)). There is nothing the record in this proceeding that supports reaching a different conclusion here. To the contrary, for the same reasons as Ms. Kessler testified with respect to late payments, late fees of 1.5% on statements of account are appropriate. Kessler WRT at 3, SX Trial Ex. 127.

3. Late Reports of Use

1489. SoundExchange also requests late fees of 1.5% for the untimely submission of reports of use. Timely, accurate and complete reporting is essential to SoundExchange's ability to distribute royalties. Kessler WRT at 3, SX Trial Ex. 127. The evidence establishes that licenses routinely fail to submit timely or accurate reports of use. 6/19/07 Tr. 44: 15-45:6 (Kessler).

1490. Late fees on reports of use are necessary for the same reasons this Court articulated with respect to statements of account. Late and inaccurate reports of use can delay the distribution of royalties, and late fees are an appropriate incentive to ensure timely submission. Kessler WRT at 3, SX Trial Ex. 127.

D. Confidentiality

1491. SoundExchange proposes that the Court adopt the same confidentiality provisions that it adopted in the webcasting proceeding, Docket No. 2005-1 CRB DTRA, which would allow copyright owners and performers, and their agents (as well as attorneys, consultants and authorized agents in future proceedings) to review confidential information included in and pertaining to statements of account, subject to appropriate confidentiality agreements. Kessler WRT at 5, SX Trial Ex. 127. The evidence shows that access to this information is necessary for copyright owners and performers to make informed judgments about whether licensees are complying with their statutory obligations and in making audit and enforcement decisions. Kessler WRT at 5, SX Trial Ex. 127; SX Trial Ex. 56, at 30-35.

1492. The SDARS essentially propose confidentiality restrictions that would severely limit the ability of SoundExchange to disclose information to copyright owners and performers – the ultimate beneficiaries of the royalties here. SoundExchange has significant experience with such confidentiality restrictions under the prior webcasting regulations, which caused significant operational and other problems making it difficult for SoundExchange to complete its work and been unfair to copyright owners and performers. SX Trial Ex. 56 at 30-33.

1493. Under the prior webcasting regulations, statements of account were not public. SX Trial Ex. 56 at 30; 37 C.F.R. § 262.5 (superseded). Moreover, SoundExchange could not disclose licensee-specific information to copyright owners and performers. SoundExchange could only disclose the identities of services that have obtained licenses, and whether the services are current in their obligations to pay minimum fees and submit statements of account, but SoundExchange could not disclose the amount of underpayment or the length of the licensee's delinquency.

1494. Because the SoundExchange Board is composed exclusively of copyright owners and performers, the confidentiality of statements of account impedes the SoundExchange Board's policy and operational decisions. For example, under the old webcasting regulations, SoundExchange was unable to share the results of audits with its Board. SX Trial Ex. 56 at 33.

1495. Due to the confidentiality of the statements of account, SoundExchange also could not share its history of payment from individual licensees with its Board. SX Trial Ex. 56 at 33. This impeded the Board's ability to approve operational and budgetary aspects of SoundExchange's operation. SX Trial Ex. 56 at 33.

1496. Licensor copyright owners and performers need to have access to the payment information in the statements of account in order to make an informed decision about what action to take. SX Trial Ex. 56 at 31. Factors such as how much in royalties a given service owes, how frequently the service pays late, and how overdue the payments are might help copyright owners and performers weigh the decision about pursuing copyright infringement remedies. SX Trial Ex. 56 at 31.

1497. Copyright owners also request payment information from SoundExchange for budget purposes. SX Trial Ex. 56 at 31. They want to include estimates of incoming royalties in their revenue projections. SX Trial Ex. 56 at 31. They also need this information when they are negotiating collectively with licensees. SX Trial Ex. 56 at 31.

1498. Copyright owners and performers have also asked SoundExchange for payment information in the context of bankruptcy proceedings, for use in determining what action to take, if any, concerning royalties owed by a service that has filed for bankruptcy. SX Trial Ex. 56 at 32. A regulation that precludes SoundExchange from disclosing information to individual copyright owners impedes owners from proving their own claims and precludes SoundExchange

from helping copyright owners and performers devise royalty collection strategies. SX Trial Ex. 56 at 32.

1499. The confidentiality restrictions sought by the SDARS stand in stark contrast with other statutory licenses, which require licensees to disclose publicly a variety of information, including information about revenues. SX Trial Ex. 56 at 34. Although marketplace agreement in evidence in this proceeding routinely include confidentiality provisions, they do not preclude entities from disclosing information to those, here copyright owners and performers, whose rights are at issue and do not prevent the board of any company from obtaining information needed to operate practically and efficiently and enforce their own rights.

1500. The SDARS have proposed to limit confidential information to a smaller universe of people in a manner similar to the troubling regulation that governed the prior webcasting regulations. Kessler WRT at 4, SX Trial Ex. 127. The SDARS have failed, however, to offer any justification or record evidence that would support this departure from the terms this Court adopted in the webcasting proceeding. In this respect, the SDARS' position is no different from the arguments advanced by webcasters in the webcasting proceeding and rejected by the CRJs: "The Copyright Royalty Judges come to the conclusion that while Services may *want* the information contained in statements of account to remain confidential, they have not demonstrated how disclosure of that information is, or is likely to be, harmful." *Final Determination of Rates and Terms*, Docket No. 2005-1 CRB DTRA, 72 Fed. Reg. at 24107-08 (May 1, 2007).

E. Audits and Verification of Payments

1501. SoundExchange proposes that the Court adopt the same audit and verification provisions it adopted in the webcasting proceeding. Kessler WRT at 5, SX Trial Ex. 127.

Although this Court did not in the webcasting proceeding grant SoundExchange the full extent of the audit terms SoundExchange had requested (*e.g.*, SoundExchange had asked that the threshold for shifting the cost of an audit should be 5% of the royalty fee due, not the 10% that this Court adopted and that SoundExchange seeks here), SoundExchange believes that consistency across licenses is appropriate. 8/29/07 Tr. 23:9-18 (Kessler).

1502. The record evidence shows that SoundExchange's experience has been that strong audit controls are important to the effective operation of the statutory license. SX Trial Ex. 56 at 35-42. Unlike other commercial transactions, SoundExchange cannot terminate a statutory license for breach. Accordingly, the need for strong audit controls is critical. SX Trial Ex. 56 at 32-33.

1503. The types of audit provisions adopted by this Court in the webcasting case and sought by SoundExchange here are common in agreements between record companies and digital music services. *See, e.g.*, SDARS Trial Ex. 86 at SE-REB0025075-76 (§ 3) ([REDACTED] [REDACTED]); SDARS Ex. 87 at SE-REB0028158 (§ 7(h)) ([REDACTED] [REDACTED]); SX Ex. 105 DR at Ex. A ([REDACTED]) (similar audit provisions). As this Court found in the webcasting case, the 10% figure for shifting the cost of an audit is "consistent with several of the record company/music service agreements." *Final Determination of Rates and Terms*, Docket No. 2005-1 CRB DTRA, 72 Fed. Reg. at 24109 (May 1, 2007).

F. Definition of Revenue

1504. If this Court adopts a rate that includes royalties that are based in whole or in part on a percentage of the SDARS' revenue, then SoundExchange requests that the definition of revenue should include all revenues "paid or payable" in the base of revenues against which a percentage is to be applied. Kessler WDT at 18, SX Trial Ex. 55; Kessler WRT at 8, SX Trial Ex. 127. When licensees fail to collect revenues from third parties (as a discount or for some other consideration), some revenue that should be attributed as part of the revenue base is hidden and thus not counted. That is unfair to record companies and artists whose copyrighted works – the licensees use the copyrighted works to obtain a benefit, but the record companies and artists are denied the corresponding benefit to which they are entitled. Kessler WDT at 18, SX Trial Ex. 55; 6/19/07 Tr. 43: 2-16 (Kessler)

G. The Need for a Single Collective

1505. SoundExchange presented evidence supporting its request to be named as the sole collective for the collection and distribution of royalties paid by the SDARS under the Section 112 and 114 licenses. No other party submitted any evidence on this issue.

1506. Ms. Kessler testified about the need for and benefits of having a sole collective. Kessler WDT at 15, SX Trial Ex. 55. In particular, the evidence shows that a system of multiple collectives or agents would require SoundExchange to expend significant resources to create the accounting platform necessary to track innumerable distributing agent relations, and to keep accounts current when parties change affiliation with agents. The complications introduced by a system with multiple collectives would also result in substantial delays in distributing royalties and would generate disputes between collectives. Kessler WDT at 15-16, SX Trial Ex. 55.

1507. No other entity in this proceeding has asked the Judges to create a system of multiple collectives or to be designated as a collective. Although Royalty Logic, Inc. (“RLI”) originally filed a petition to participate in this proceeding, it later withdrew and did not submit any testimony or other evidence in the record.

1508. The evidence establishes that collecting and distributing statutory royalties is a significant and complicated undertaking. SoundExchange maintains over 3,200 licensee accounts for services that play sound recordings. SoundExchange distributes royalties to nearly 25,000 copyright owner and performer accounts, and has processed over 800 million sound recording performances, principally from the preexisting satellite and subscription services. Kessler WDT at 11, SX Trial Ex. 55. With a staff of fewer than thirty people, SoundExchange has allocated more than \$83 million in royalties.

1509. SoundExchange’s administrative costs (exclusive of expenses incurred in participating in rate adjustment proceedings) for 2005 were 7.6% of total revenue. Kessler WDT at 14-15, SX Trial Ex. 55. In 2006, its administrative costs were less than 7% of revenue. 6/19/07 Tr. 38: 2-3 (Kessler).

1510. Ms. Kessler testified about SoundExchange’s procedures for accurately and efficiently distributing royalties, including the processes by which SoundExchange receives and logs payments and reporting data; matches the reported data with information in SoundExchange’s database identifying copyright owners and performers of sound recordings; conducts manual searches for sound recording data when no match is initially found; assigns sound recording performances to accounts belonging to copyright owners and performers; allocates and distributes royalties; makes adjustments to accounts. Kessler WDT at 2-12, SX Trial Ex. 55.

1511. It would needlessly increase costs of royalty distribution if separate collectives were designated to perform the same functions. SX Trial Ex. 56, at 16-22, 43. There would also likely be disputes among collectives, which would only serve to increase administrative costs and delay royalty distributions. SX Trial Ex. 56, at 20-22.

1512. In sum, for the same reasons articulated by this Court in the webcasting proceeding, and in the absence of any evidence or argument to the contrary, SoundExchange should be the sole collective for collecting and distributing statutory royalties paid by the SDARS. *See, e.g., Final Determination of Rates and Terms*, Docket No. 2005-1 CRB DTRA, 72 Fed. Reg. at 24102-06 (May 1, 2007) (“In sum, we find that selection of a single Collective represents the most economically and administratively efficient system for collecting royalties under the blanket license framework created by the statutory license. Transaction costs to the users of such a license are minimized when they can make payment to a single Collective, as opposed to allocating their payments among several. And there is no credible evidence that demonstrates copyright owners and performers suffer increased costs from a system with a single Collective.”).

H. Ephemerals

1513. Ephemeral copies are temporary copies of sound recordings made to enable or facilitate the digital transmission of such recordings. Under 17 U.S.C. § 112(a)(1), a webcaster may use a single ephemeral copy in the streaming process to facilitate a performance under 17 U.S.C. § 114.

1514. The ephemeral copy license differs from the license for making digital audio transmissions in one significant respect. Under 17 U.S.C. § 112(a)(1), payments made for ephemeral copies go to copyright owners only; they are not split with artists, as the payments

made for §114 performance right are. *Compare* 17 U.S.C. § 114(g)(2) (directing the division of proceeds for the Section 114 license) *with* 17 U.S.C. § 112(e) (setting forth the statutory license for making ephemeral copies and requiring payment to copyright owners, but not performers).

1515. In 2002, the Librarian set the rate for ephemeral copies for webcasting to equal an additional 8.8% to be added to the rates set for performances under § 114. *Webcaster I Librarian 's Decision*, 67 Fed. Reg. at 45262.

1516. In 2004, the Copyright Office adopted regulations, pursuant to an agreement between webcasters and SoundExchange, setting rates and terms for the right to make performances of sound recordings and ephemeral copies pursuant to the Section 112 and 114 rights. *See* 69 Fed. Reg. 5693. Under those regulations, ephemeral copies were included within the overall royalty rate and were deemed to reflect 8.8% of the overall royalty fee. 37 C.F.R. § 262.3(c).

1517. In the 2007 webcasting decision, this Court found that marketplace evidence showing an attribution to the ephemeral copies of a certain portion of overall royalty payments for digital music services did not reflect a marketplace agreement on the value of ephemeral licenses. Rather, the evidence presented to the CRJs showed that the rights to make ephemeral copies and digital audio transmissions were always licensed together (at least for services making digital audio transmissions) and the license to make ephemeral copies is “an add-on to the securing of the performance right granted by the section 114 license.” *Final Determination of Rates and Terms*, Docket No. 2005-1 CRB DTRA, 72 Fed. Reg. at 24101 (May 1, 2007). The Court’s finding with respect to the fact that the two rights are regularly licensed together in the marketplace remains true on this record.

1518. Nonetheless, there remains a basis for implementing the 8.8% rate proposed by SoundExchange – albeit one that this Court also appears to have rejected in the webcasting case. *See Final Determination of Rates and Terms*, Docket No. 2005-1 CRB DTRA, 72 Fed. Reg. at 24101 (May 1, 2007).

1519. An important difference between the performance right and the right to make ephemeral copies is the destination of the royalties — performance royalties are divided 50-50 between record companies and recording artists; royalties from the making of ephemeral copies are paid only to the record companies. *See* 17 U.S.C. § 112(a)(1); 17 U.S.C. § 114(g)(2). The agreement between the thousands of copyright owners and performers represented by SoundExchange’s Board and that is embodied in SoundExchange’s proposal reflects an agreement as to the proper division of royalties between the making of ephemeral copies and digital audio transmissions by the only two entities with an interest – copyright owners and performers.

1520. Because the rights are licensed together, the SDARS presumably care only about the overall fee, not the attribution. In contrast, because of the structure that Congress created in the two statutory licenses – and their different provisions concerning distribution of royalties – it is only copyright owners and performers with an interest in the attribution. Thus, an agreement between record companies and artists as to the proper division of such fees should be a sufficient basis on which to adopt a rate for the making of ephemeral copies. SoundExchange has proposed that the rate for making ephemeral copies under § 112 be 8.8% of the overall license fees pursuant to the statutory licenses.

Respectfully submitted,

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CERTIFICATE OF SERVICE

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