

Before the
COPYRIGHT ROYALTY BOARD
LIBRARY OF CONGRESS
Washington, D.C.

In the Matter of)
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DIGITAL PERFORMANCE RIGHT IN)
SOUND RECORDINGS AND EPHEMERAL)
RECORDINGS)
)
)

Docket No. 2005-1 CRB DTRA

TESTIMONY OF

MICHAEL PELCOVITS

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Library of Congress
Washington D.C.

Testimony of MICHAEL D. PELCOVITS

I. INTRODUCTION AND QUALIFICATIONS

My name is Michael Pelcovits. I am a Principal of the consulting firm Microeconomic Consulting & Research Associates, Inc. ("MiCRA"), which specializes in the analysis of antitrust and regulatory economics. My business address is 1155 Connecticut Avenue, Washington, D.C. 20036.¹

Since joining MiCRA in 2002, I have prepared reports and testimony on a wide range of telecommunications and applied microeconomic issues. I have consulted for major corporations in telecommunications and other industries and provided testimony before the Federal Communications Commission, many state regulatory commissions, the Office of Telecommunications (OfTel) in the United Kingdom, the European Commission, and the Ministry of Telecommunications of Japan.

Prior to joining MiCRA, I was Vice President and Chief Economist at WorldCom. In this position, and in a similar position at MCI prior to its merger with WorldCom, I was responsible for directing economic analysis of regulatory and antitrust matters before federal, state, foreign, and international government agencies, legislative bodies, and courts. Prior to my employment at MCI, I was a founding principal of a consulting firm,

¹ A copy of my curriculum vitae is attached as Appendix B.

Cornell, Pelcovits & Brenner. From 1979 to 1981, I was Senior Staff Economist in the Office of Plans and Policy, Federal Communications Commission.

I have conducted analysis and research on economic issues related to the Internet for the last several years. During my tenure at MCI, I worked closely with the Internet engineering group to help formulate public policy positions relating to the Company's wide ranging business activities in the Internet.

I have lectured widely at universities and published several articles on telecommunications regulation and international economics. I hold a B.A. from the University of Rochester (*summa cum laude*) and a Ph.D. in Economics from the Massachusetts Institute of Technology, where I was a National Science Foundation fellow.

II. OVERVIEW OF TESTIMONY

I have been asked by counsel for SoundExchange to analyze the market for Internet music services and provide a recommended rate for the compulsory license fee to be set in this proceeding for the digital audio transmission of sound recordings under the statutory licenses set forth in 17 U.S.C. § 114(f)(2)(B) and 17 U.S.C § 112(a)(1). My goal has been to develop a rate that fully comports with the statutory requirement, discussed more fully in Section III of my testimony, that license rates should “most clearly represent the rates and terms that would have been negotiated in the marketplace between a willing buyer and willing seller.”²

In summary, I have concluded that a market rate can best be derived by analyzing the license fees that have been negotiated in the recent past between willing buyers and

² 17 U.S.C. § 114(f)(2)(B).

willing sellers in a very similar market. The economic rationale for this “benchmark” approach is explained in Section IV of my testimony. In that section, I also explain that the market I have selected as the most appropriate benchmark from which a statutory license fee can be derived in this proceeding is the market for non-portable interactive digital music services (for example, interactive music services such as Rhapsody or Napster Membership). The sellers of copyrighted material in the market for interactive digital music services are the same entities who are “sellers” in this proceeding, and many of the buyers in that market are also “buyers” in this proceeding. The license fees negotiated in the interactive digital music services market transferred the right to use the same digital audio transmissions that are the subject of this proceeding. Because of these similarities, among others, I have used the contracts (described in Section V of my testimony) negotiated by the four major record companies in the interactive digital music services market as the benchmark from which to derive an appropriate statutory license rate for the services at issue here.

There are, of course, some differences between the benchmark market and the market at issue here, most notably that the music service providers who were buyers in the benchmark market provide interactive services to their customers, while the “buyers” in this proceeding provide non-interactive services. In Section VI of my testimony, I describe adjustments to the proposed statutory license fee that account for these differences. These adjustments reflect differences in the value of an interactive and a non-interactive license, as well as differences in the way the services are used and the impact that each type of service may have on other revenue streams for the willing buyer and willing seller.

Section VII presents evidence on copyright fees in some other markets, which serve to verify the methodology and recommendations that I have made. Finally, in Section VIII, I discuss the rapidly evolving market for streaming services provided on mobile devices. Music services may utilize the statutory license to make transmissions to mobile devices, and in the free market copyright owners would command a premium for a distribution of their works in any fashion that makes them portable or accessible via a wireless device. I propose that the Board establish royalty rates that recognize this market premium placed on mobile services.

III. FRAMEWORK FOR ANALYZING THE WILLING BUYER/WILLING SELLER STANDARD

A. Willing Buyer/Willing Seller Standard

In its prior decision setting the compulsory license fees for non-subscription, non-interactive webcasting, a Copyright Arbitration Royalty Panel (“CARP”) ruled that “the willing buyer/willing seller standard is the *only* standard to be applied.”³ The Panel explained that the two other factors enumerated in the statute (i.e., substitution/promotion effects on phonorecords, and relative roles of the parties) do not constitute additional standards or policy considerations.⁴

I am in complete agreement that the willing buyer/willing seller standard can and should be interpreted broadly enough to encompass these two other factors and any other consideration that would affect the outcome of a negotiation in the free market. Markets function very effectively to take account of all the considerations that are important to

³ *In re Rate Setting for Digital Performance Right in Sound Recordings and Ephemeral Recordings*, No. 2000-9 CARP DTRA 1&2, slip op. at 21 (CARP Feb. 20, 2002) (Report of the Copyright Arbitration Royalty Panel to the Librarian of Congress).

⁴ *Id.*

buyers and sellers. By using a benchmark analysis, I avoid the necessity of having to separately value each of the considerations relevant to buyers and sellers, because the market already has done so -- my task is simply to adjust for any relevant differences between the benchmark market and the market at issue here.

B. The Marketplace

I also understand that the willing buyer under this statutory standard is a webcasting service that seeks to make non-interactive transmissions of copyrighted sound recordings to consumers. The willing seller is an owner of copyrights in a single or multiple sound recordings, usually a record company. I further assume that no party has monopoly power, but that the owner of copyrighted sound recordings has, due to the nature of the copyright itself as a monopoly, a unique asset that is different from the bundle of sound recordings offered by other copyright owners.

I also assume that an individual webcaster will seek to obtain the best price that it can in the marketplace and that it might forego providing some digital music services if others are more profitable. Similarly, an individual record company will try to maximize profits across all of its various revenue streams. Such behavior is consistent with the concept of a willing seller of a differentiated product in a competitive market. Thus, for example, the willing seller might set a higher rate in a market than it otherwise would, if sales in that market would substitute for more profitable sales in a different market.

I also assume that both the willing buyer and willing seller in this hypothetical marketplace are commercial entities fully motivated to maximize profits. "Sellers expect to make a profit and will extract from the market what they can, just as buyers will do everything in their power to get the product at the lowest possible price." *Determination*

of Reasonable Rates and Terms for the Digital Performance of Sound Recordings and Ephemeral Recordings, 67 Fed. Reg. 45,240, 45,245 (July 8, 2002) (“67 Fed. Reg. 45,240”). Thus, I do not attempt to set separate rates for noncommercial entities or hobbyists that are not seeking to maximize profit, or even those small webcasters that may be unable to survive without the benefit of a below-market statutory license. As the Librarian has explained, the willing buyer/willing seller standard requires the setting of rates “that a willing buyer and willing seller would have agreed upon in a hypothetical marketplace that was not constrained by a compulsory license.” *Id.* at 45,244.

That a rate might cause consolidation in the marketplace for webcasting is neither a bad nor a good thing. It is, however, the way that a free market economy functions. Firms in a free market are free to thrive and free to fail. Almost all markets go through constant changes as firms enter and exit the business. Indeed, a rate that is set too low may have serious economic dangers. By setting the rate too low, inefficient entry may be encouraged, and inefficient levels of production will be encouraged, which can hinder the development of an efficient market. It is also worth noting that setting the statutory rate too high will not necessarily be harmful to the market. If the price is too high, parties can (and are almost certain to) negotiate agreements for rates lower than the statutory standard. Thus, a rate set too high is likely to “self-adjust” because of the sellers’ natural incentive to meet the market. But a rate set too low will create permanent distortion because there is no incentive for the buyers to pay extra -- they may obtain the product at the lower rate without any market correction.

C. The Product

In evaluating this market, I have understood the product at issue to be a blanket license from a record company “which allows use of that company’s complete repertoire of sound recordings.” 67 Fed. Reg. 45,240, 45,244. This license includes only a license for the sound recording copyright, not the separate musical works copyright. It is worth noting that this is not necessarily the equilibrium that a free market would have reached. Willing sellers may have refused to license certain sound recordings (for any of a number of reasons), may have required premium payments for certain sound recordings, or may have held back some sound recordings from widespread distribution in order to offer exclusive deals to a single music service.

I also understand the product to be offered to be a license for non-interactive (as that term is defined in the statute) webcasting, including the right to provide such a service through the making of multiple ephemeral copies used to facilitate transmissions and performing copyrighted sound recordings through digital audio transmissions. Although there are two separate rights at issue (reproduction and performance), each with independent value, I have not sought to quantify them separately in this report. It appears that, in the current marketplace, parties negotiate for a single rate to encompass both the public performance and the reproduction rights.

Finally, I am aware that there may be disputes between record companies and webcasters concerning the definition of “non-interactive” under the statute and thus disputes over the scope of services that fall inside and outside the statutory license. I take no position on that legal issue. For purposes of this analysis, I have presumed that non-interactive webcasting does not permit any form of user input to “customize” particular

stations. As noted below, to the extent that the statutory license allows any degree of customization, its value would almost certainly increase and the royalty would have to increase as well.

IV. NEGOTIATED RATES FROM SIMILAR MARKETS SHOULD BE USED AS THE BENCHMARK FOR THE COMPULSORY LICENSE

In the discussion below, I will describe the nature of the supply and demand side of the hypothetical market for blanket licenses to use copyrighted sound recordings. Although the market is hypothetical, the participants are not, and it is possible to gain a very good understanding of the likely behavior of the participants were it not for the compulsory license. By looking carefully at the characteristics of the music services offered in the market, I have been able to derive proposed fee levels and a rate structure for the compulsory licenses that should closely approximate the result of a market negotiation between willing buyers and willing sellers.

I recommend that the Copyright Royalty Board adopt compulsory license fees for non-interactive digital audio transmissions (“NI-DATs”) derived from current market negotiated rates for copyright licenses used by music services providing interactive digital audio transmissions (interactive DATs). These benchmarks can be used for the compulsory fee after adjusting for the different characteristics of the two markets. I believe that benchmarking is superior to other approaches that might be proposed in this proceeding or to techniques that economists have used in other contexts. The reason for this is that there are reliable, comprehensive, and statistically meaningful data available on negotiated prices in the market for interactive DATs, which is nearly identical to the

“hypothetical” market for NI-DATs in virtually all respects. As discussed below, where there are differences between the two markets, it is possible to adjust the royalty rates for these differences using basic economic principles. This will minimize the complexity of the modeling used to develop the compulsory fee and make it much easier to focus the analytical efforts and identify a range of reasonableness for the compulsory fee.

In this section, I will explain the rationale for using prices from benchmark transactions to set the compulsory fees. Then, I will explain my choice of the benchmark. Finally, I will discuss other approaches to setting the rate for NI-DATs that I have considered and rejected.

A. *Benchmark Rates Satisfy the Willing Buyer/Willing Seller Standard*

In its prior decision, the CARP recognized the superiority of actual marketplace agreements as a benchmark for the compulsory fees:

The Panel believes that the quest to derive rates which would have been negotiated in the hypothetical willing buyer/willing seller marketplace is best based on a review of actual marketplace agreements, if they involve comparable rights and comparable circumstances.

In re Rate Setting for Digital Performance Right in Sound Recordings and Ephemeral Recordings, No. 2000-9 CARP DTRA 1&2, slip op. at 43 (CARP Feb. 20, 2002) (Report of the Copyright Arbitration Royalty Panel to the Librarian of Congress) (“*CARP I*”).

As the CARP explained, the use of benchmark agreements is invited by the statute and supported by the reasoning that “because ... it is extraordinarily difficult to predict marketplace results from purely theoretical premises, it is clearly safer to rely upon the outcomes of actual negotiations than upon academic predictions of rates those negotiations might produce.” *Id.*

The use of benchmark rates solves many of the informational and conceptual problems associated with trying to predict the outcome of an unobserved or “hypothetical” market. A market brings together buyers and sellers and “solves the equations” that specify the willingness of these parties to engage in a transaction at a particular price. The buyers’ equation consists of the sum of the willingness to pay of all of the existing and potential customers of a service. Their willingness to pay is dependent, among other things, upon the characteristics of the service, the income of the customers, and the prices of substitutes and complements to the service. The willingness of a seller to offer a service at a particular price is in large measure a function of its costs, the effect of sales of one service on sales of other services sold by the same company, and the intensity of competition in the marketplace both in the short and long run.

In the absence of a benchmark, the Board would need to weigh all of these factors and estimate their numerous and complex interactions and interdependencies. For example, if there were no data from markets where sound recordings were transmitted on the Internet, it would be very hard to estimate from the prices paid in other markets how much consumers would value this functionality. Consequently, it would be very hard to estimate the willingness of an Internet music service to pay for the right to play particular sound recordings, since this is derived from the underlying consumer demand for the music service. Use of a benchmark provides us with a shortcut through most of this analytical and informational thicket and creates a solid foundation for setting the compulsory fee for NI-DATs. It avoids the complexity of analyzing numerous factors in the market, and allows us to focus on only those few factors required to adjust from the known voluntary rates to the statutory rates.

Benchmarks are used in other situations, such as where government agencies set prices in an attempt to emulate the functioning of a competitive marketplace. When tasked with the job of setting regulated rates for cable television not subject to effective competition, the FCC adopted a benchmark approach that simulated the rates that would be charged by comparable cable systems subject to effective competition.⁵ The FCC has also relied on benchmarking in setting rates and judging practices of regulated telephone companies, stating that the alternatives to benchmarking are “more intrusive and costly methods of regulation.”⁶

B. Contracts for Interactive Digital Audio Transmissions Are the Best Benchmark for the Compulsory NI-DAT Fees

The goal in this proceeding is to set a blanket compulsory license fee for the use of copyrighted sound recordings for non-interactive digital audio transmissions for both subscription and non-subscription services. As the last CARP recognized, if there were negotiated agreements between webcasters and the major copyright owners of sound recordings for the precise types of services at issue, such agreements would likely provide the best available benchmark for setting the market rate. Absent such agreements (and I am informed that no major record label has entered into an agreement for non-interactive webcasting, other than to restate the current rate), the first issue is to determine the most closely analogous market that provides the best benchmark for the market at issue.

⁵ *In re Implementation of Section of the Cable Television Consumer Protection and Competition Act of 1992 Rate Regulation*, 8 F.C.C.R. 5631 (1993) (“Rate Order”).

⁶ *In re Applications of AMERITECH Corp., Transferor and SBC Communications Inc., Transferee*, 14 F.C.C.R. 14,712, ¶ 58 (1999).

Prices in a candidate market will serve as a good benchmark for price-setting in the target market if three conditions are met. First, the candidate market must have similar characteristics to the target market. Second, information on prices in the candidate market must be available and statistically valid. Third, it must be possible to adjust the prices in the candidate market for any major differences between the two markets. Based on my analysis of conditions in the market for interactive DATs and NI-DATs, I believe that all of these conditions are met and the use of this benchmark will generate a compulsory license fee that meets the statutory standard and is consistent with well-established economic principles.

1. Common Characteristics of the Benchmark and Target Markets

The following characteristics are common to both the non-interactive and interactive markets:

1. Similar buyers: The buyers and sellers in these markets are essentially the same -- Internet music services and sound recording copyright owners. Indeed, many of the major buyers in the two markets are the same companies. Music services, such as AOL, Yahoo! and Real Networks, have obtained copyright licenses (directly or through third-party providers such as MusicNet) for interactive DATs from all of the major record companies. These companies also use the compulsory blanket licenses on NI-DATs in order to offer a full range of service options to their customers.
2. Similar sellers: Owners of copyrights in sound recordings are the sellers in both markets. The vast majority of the market for sound recordings results from the

sales of the four major recording companies. Those companies have entered into contracts for interactive DATs and also are compelled to license their sound recordings under the statute at issue in this proceeding. Their willingness to license music in these two markets is affected by similar factors, including the effect that licensing a music service has on other revenue streams, such as the sale of CDs or the receipt of license fees from other types of music services.

3. Similar products: In both the interactive and non-interactive markets, the product being delivered to consumers at any given moment is essentially identical -- a digital audio transmission of a sound recording. The primary difference derives from whether the consumer selects the sound recording or the webcaster selects it.
4. Similar experience for the consumer: Consumers of interactive and non-interactive music services experience service offerings that are identical with respect to most features, including: the types of equipment needed or optimized for listening to music over those services (a computer, broadband access, etc.), the place where the services can be received (generally through a home computer), the range of titles, the option to receive commercial-free service (although non-subscription NI-DAT services have commercials, subscription NI-DAT services generally do not), and information about the songs played. Each service allows the user to listen to music, but not to keep a permanent copy. The commonality of the music experience and the similarity of the transaction allow us to draw inferences about the underlying value of the non-interactive license to the buyers.

2. Abundant and Robust Pricing Data Are Available

The second necessary condition for a good benchmark is that reliable and statistically valid data must be available on transactions in the candidate market. This condition is easily satisfied for the interactive DAT market. I have been given access to contracts between all four major record companies and the music services providing interactive services. These contracts state the terms and conditions of the transactions. Prices are stated explicitly in the contracts, and for the most part they can be easily summarized and compared across different companies. Also, as I will explain in greater detail in Section 5 below, the statistical properties of the data are very good and allow for strong inferences to be drawn about the level of prices in the market as a whole.

3. Few Differences Exist Between the Benchmark and Target Markets

1. Interactivity: There is one major difference between the benchmark and the target markets. The benchmark music services give the listener the ability to choose which titles to listen to at any point in time. All of the major music services that I have relied on for benchmarking provide their customers with a large music library from which they can select songs, build playlists, customize their listening experience (e.g., shuffling or repeating songs), or use various programming aids to identify and select music titles. By contrast, the music services that adhere to the requirements of the compulsory license stream music on channels targeted to particular genres, themes, or eras. Listeners cannot select particular songs, but rather can pick from many sub-genres of music, which will be provided to them upon request. In Section VI below, I will

explain how I adjusted the benchmark music licenses to account for the restriction on interactivity contained in the compulsory license.

2. Tethered downloads: Most of the benchmark interactive music services give listeners the option to download music to their computer. These downloads are “conditional,” which means that they will only play for as long as the customer subscribes to the service. I have not attempted to measure the value placed on conditional downloads to a fixed computer. Interactive music services do not charge consumers separately for the ability to receive tethered downloads, and I have found no evidence showing whether or by how much this option is separately valued by consumers. In part, it seems to be a benefit to the music services, which can save on Internet capacity by not having to stream music to customers whenever they listen to songs. Indeed, Yahoo! provides tethered downloads rather than on-demand streaming as the default option to their customers, which means that music is not streamed unless the customer actively selects this option. In any event, to the extent that tethered downloads provide some additional value to consumers, that value is already captured in the market price and therefore adjusted for in my analysis.

3. Portability: There are some interactive music services that offer users not only the ability to stream music to their computers and conditionally download such music, but also to transfer such conditional downloads to portable devices, such as certain mp3 players. This portability feature significantly changes the consumer experience. No longer are the users able to listen to music only over their personal computers; they can also take the music with them and listen to it wherever and whenever they want. It is clear that the market places a premium on such portability. Music services pay

significantly higher royalty rates for the portable (as opposed to non-portable) interactive DATs, and consumers generally pay more in the marketplace for such services.

Because of the significant difference in consumer experience, I have generally excluded such portable services as a relevant benchmark. Instead, in analyzing the benchmark market, I have focused on data available for those interactive DAT services that are non-portable, i.e., that prohibit consumers from transferring music from their computers and generally require consumers to listen to music over their personal computer or another home device. Such non-portable services are much closer to the market for non-interactive services.

4. Holdbacks: I have excluded from consideration one other difference between the licenses for the interactive DATs and the compulsory license for NI-DATs. The contracts for the interactive DATs are not blanket licenses. Rather, all of the record companies retain the right to withhold certain titles from the licensees for different purposes. As a result, listeners will not be able to play some or all titles of particular artists on demand. These holdback provisions may be the result of a popular artist's ability to control distribution of its music in digital form. For example, Rhapsody's online Frequently Asked Questions responds to "Why are some artists not listed on Rhapsody?" with "If you can't find certain artists in Rhapsody, we may not yet have the rights to offer their music."⁷ The Beatles are an example of a band not available via on-demand streaming. By contrast, a user of a non-interactive service under the compulsory

⁷ The complete response to the question is available on Rhapsody's Customer Support website at http://reclisten.custhelp.com/cgi-bin/reclisten.cfg/php/enduser/std_adp.php?p_faqid=134&p_created=&p_sid=IRp145Th&p_lva=1021574031&p_sp=&p_li=cF9zcmNoPTEmcF9zb3J0X2J5PSZwX2dyaWRzb3J0PSZwX3Jvd19jbnQ9NCZwX3Byb2RzPSZwX2NhdHM9JnBfcHY9JnBfY3Y9JnBfc2VhcmNoX3R5cGU9YW5zd2Vycy5zZWZyY2hfbmwmcF9wYWdlPTEmcF9zZWZyY2hfdGV4dD1iZWZl0bGVz&p_prod_lvl1=&p_prod_lvl2=&tabName=&p_topview=1

license can listen to a “Beatles” station that plays a substantial number of Beatles songs (so long as it complies with the sound recording performance complement requirements). In other cases, the record company may exercise its right to hold back certain sound recordings in order to release that sound recording exclusively to one service or in one particular form (e.g., on CD, but not over an Internet music service).

The holdback provision in the negotiated contracts reduces the value of this license to the music services, because their subscribers will not be willing to pay as much for access to a music library that is missing some titles from the “shelves.” Certainly the buyer of the license would be willing to pay to have access to all titles. This means that the benchmark license fees for interactive DATs are below the level that would be negotiated for a license without holdbacks. Since I have not made this adjustment, there is good reason to believe that my recommended rate for the compulsory license is conservative.

C. Other Possible Benchmarks Would Not Be Suitable

1. Rates for Copyrighted Musical Works

In the previous CARP proceeding, the music services proposed a fee for sound recordings derived from the fees charged by the performance rights organizations (“PROs”) for public performances of copyrighted musical works. *CARP I* at 27-32, 40-42. They argued that since rights to the musical work and the sound recordings both were essential to public performances, it was reasonable to compare the fees paid for the two rights. Further, the music services claimed that the fees charged by the PROs should be expected to be greater than the appropriate compulsory fees for non-interactive DATs.

Id.

The first response I have to this hypothesis is that it does not fit the facts. In several markets where the two copyright fees are negotiated freely among the parties, the license fees for the sound recordings are much higher than the license fees charged for the musical work.⁸ The music services providing interactive DATs voluntarily agreed to license fees for sound recordings that are in the range of [REDACTED]. By comparison, the fees paid for the right to perform musical works by interactive services are substantially less.⁹

These facts do not support the theory that the license fees for the two rights should be comparable. Rather, I believe that economic theory supports the notion that the fees paid to two key factors of production (such as the musical work and sound recording) do not necessarily bear any close relationship to each other. The primary reason for this is that the *ex ante* value of the two factors of production will depend on their scarcity value. To the extent that popular recording artists are “scarcer” than musical composers, the returns to the recording artists will be higher. By analogy, the profit shares of screenwriters, actors, and directors (all of whom are “essential” to production of a movie) will be very hard to predict based on a simple formula. The

⁸ There is currently a dispute concerning the amount that PROs will be paid by interactive music services. Sarah McBride, “Music Royalty Talks Hit Impasse,” *Wall St. Journal*, at B2 (Aug. 26, 2005). Although ASCAP at least has published rates for performance of musical works by interactive services, the dispute centers around whether a “mechanical” fee must be paid because a reproduction of a copyrighted musical work occurs in the transmission of an on-demand stream. According to published reports, the current dispute ranges from 6.9% (which the interactive services have offered) to 14% (which the PROs are requesting). Even under the highest amount that has been suggested by the PROs (and rejected by the interactive music services), the PROs would receive dramatically less than the sound recording copyright owner. In the only marketplace agreement for this type of license of which I am aware, the PROs provided a license to Streamwaves with a royalty rate that was the greater of 10% of revenue or \$1.00 per subscriber. See September 21, 2001 press release, available at <http://www.nmpa.org/pr/streamwaves.html>. This again is far less than the copyright owners in sound recordings receive from interactive music services.

⁹ Information about acquiring license fees from the three major publishing firms (ASCAP, BMI, and SESAC) for Internet webcasting is available at their respective websites: <http://www.ascap.com/weblicense/license.html>; <http://www.bmi.com/licensing/webcaster>; and <http://www.sesac.com/licensing/internetLicensing.asp>.

market will compensate a particular actor more than a director or screenwriter if attendance at the movie increases substantially when that actor plays the lead role. It would be improper to second guess the market and conclude that the compensation for actors, writers, and directors should be the same because all are needed to produce a movie.

2. Rates for Use of Sound Recordings for Customized Web Radio Broadcasts

Another possible benchmark for the NI-DAT fees is the fees negotiated for customized web radio services, which do not fall within the definition of a non-interactive service. There are, or at least have been, a number of custom web radio services that allow the user to interact with the radio station by rating the artists or songs or by controlling the play of music by pausing or repeating tracks. User interaction with these digital audio transmissions removes the service from eligibility for the compulsory license and requires the music service to negotiate licenses with the copyright holders to transmit the sound recordings to their customers.

Although the use of copyrighted music is similar between customized radio and NI-DATs, this does not mean that the license contracts for the customized radio services should serve as a benchmark for the compulsory fees set in this proceeding. The negotiated rates are not a good measure of a price that would emerge from a free and undistorted market where willing buyers and willing sellers were negotiating for the rights to use copyrighted sound recordings. Rather, for two reasons, the negotiations in this market are strongly influenced by the rates previously set by the CARP for NI-DATs.

First, at least one custom radio service has argued that its service falls within the

scope of the current statutory rate for non-interactive services, and litigation is pending over this issue. To the extent there is uncertainty about whether a particular service falls inside or outside of the statutory rate, any negotiated agreement for the use of such music will be affected by the cloud of litigation. Second, even if the legal status of the custom radio services were perfectly clear, the fact that they are close substitutes for the non-interactive services means that their prices will be strongly influenced by the compulsory fees. If the copyright holders try to set a much higher price for a nonstatutory customized service, the music services will simply not offer these services but instead limit their offerings to ones that can be provided under the compulsory license. This has the effect of driving down the rates that a willing seller can negotiate for custom radio services; this effect would not exist in a truly free market. *See* Testimony of Mark Eisenberg at 17; Lawrence Kenswil at 12; Stephen Bryan at 13; and Ken Parks at 9.

3. Compulsory License Fees for Other Digital Music Services

Compulsory license fees have also been set under the provisions of the Copyright Act for “preexisting subscription services,” such as residential subscription services providing music over digital cable or satellite television. *In re Determination of Statutory License Terms and Rates for Certain Digital Subscription Transmissions of Sound Recordings*, No. 96-5 CARP DSTRA (CARP Nov. 28, 1997); *In re Rate Adjustment for the Satellite Carrier Compulsory License*, No. 96-3 CARP-SRA (CARP Aug. 28, 1997) (“*Satellite CARP*”). These rates were not established in the free market. Moreover, the statutory standard under which such fees have been set is different than the “willing buyer-willing seller” standard that must be applied to the non-interactive music services

at issue in this proceeding. Consequently, the license fees for these services cannot be used as a benchmark.

4. The Current Rates

The last possible benchmark is the current rates, which were originally set by the Librarian following the last CARP, but which were pushed forward, with some modifications, by both sides for 2003 and 2004. The agreement in 2003 and 2004 to extend these rates does not provide a useful benchmark. First, that agreement does not reflect a negotiation in a marketplace that is unconstrained by the statutory license, and therefore comes nowhere near meeting a “willing buyer/willing seller” standard.¹⁰ Second, as explained in the Statement of John Simson, the agreement occurred during a period when the last CARP was still on appeal and it made little sense to re-litigate the same issues over again.

V. RECENT COPYRIGHT AGREEMENTS IN THE INTERACTIVE DIGITAL AUDIO TRANSMISSION MARKET

I have been provided with the contracts entered into between the four major recording companies (EMI, Warner Music Group, Universal Music Group, and Sony BMG) and the Internet music companies offering interactive music services. In the analysis below, I have focused on the contracts that are currently operating between willing buyers and willing sellers, with the exception of some contracts that are subject to restrictions that may affect their use in this proceeding. I have also excluded those

¹⁰ *Cf. Satellite CARP*, slip op. at 30 (refusing to select a highly comparable service as the benchmark, in part, because “the compulsory rates prescribed under [that] section [] are not fair market rates and cannot be utilized as a benchmark for a fair market valuation”).

contracts which are specifically limited to, for example, college students, rather than the general population.

A. Summary of Information Found in the Contracts

I have looked at approximately 40 contracts from the four major music studios that were executed between 2000 and 2005, covering uses of sound recordings during the period 2000 through 2006. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

I have summarized the key contract terms of the current agreements between the four major music companies and the interactive DAT services in Table 1 of Appendix A.

For seventeen contracts currently in effect,¹¹ Table 1 lists the dates when the terms of each contract become effective and expire and the [REDACTED] components of the rate structure stipulated in the contract. In addition, the average rate [REDACTED] is given at the bottom of the table.

B. Contrast Between Negotiated Contracts and Compulsory License

The negotiated contracts in the interactive market provide the parties with the same basic rights and obligations as the compulsory license (i.e., the right to stream music in exchange for the payment of royalties). The negotiated contracts, however, contain many additional provisions of value to copyright owners. These differences between the market licenses and the statutory license are presented and explained in the table below.

¹¹ Because the contract terms have changed over time, I restrict my analysis to the contracts currently in effect. The most recent agreements best represent the current market for interactive DAT services. [REDACTED] Thus, to the extent that my analysis weights contracts signed two years ago the same as contracts signed recently, it is conservative.

Table 5.1: Differences Between Market Licenses and the Statutory License

Special Features of Contracts for Interactive Services	Explanation	Benefit to Copyright Holder	Comparison to Compulsory License
Regular contract does not allow music to be used on a mobile or portable device	The major music services pay substantially more for portability	Limits substitutability for paid downloads or CDs	Can be used for mobile streaming service without extra payment (currently)
Promotional Consideration	Agreements with music services contain detailed promotional provisions	These promotions are guaranteed and individually negotiated	Provides no special promotional benefits
Advances	Guaranteed substantial payments from licensee	Reduces risk of unsuccessful venture by licensee; ensures that negotiations are only with serious business partners	Provides no advances, other than low minimum fees, to copyright owners
Data Reports	Licensees provide detailed reports regarding royalties and consumers' usage of sound recordings	Enforcement of royalties; valuable information for business development purposes	Data reports contain only minimal information of limited use to copyright owners
Audit Rights	Annual right to review licensees' books and records; [REDACTED] underpayment requires licensee to pay for audit	Allows proper enforcement of royalty obligations	Copyright owners do not have audit rights
Stream Security	Requires digital rights management software to protect against illegal or unauthorized downloads	Prevents/limits unauthorized copying or unpaid uses	Streams can be captured by end-user and converted to MP3 without payment of copyright fees
Holdbacks	Copyright holder reserves right to holdback some titles from licensees	Allows copyright holders to control release of music and obtain more revenue from sales of certain titles	Blanket license does not allow any music to be held back

As a general rule, these features in the voluntary agreements between the record companies and the music services are not incorporated into the statutory license. Because

the statutory license lacks some of the types of consideration bargained for in the negotiated agreements, the royalty rate for the statutory license should be relatively higher as a result (compared to a rate derived from the benchmark agreements without accounting for the absence of this consideration). If copyright owners were to negotiate in the free market, one would expect them to license non-interactive services only if they received terms such as those noted in the table or if they received some other valuable consideration, such as a higher royalty rate.

I have not, however, sought to quantify the value of the additional consideration contained in the benchmark agreements and have not adjusted the benchmark rates to account for the absence of that consideration. Since I have not quantified that increase, the compulsory fee that I derive in the subsequent discussion is conservative (i.e., lower) than it otherwise would be.

VI. ADJUSTMENTS CAN BE MADE TO THE BENCHMARK FEES TO ESTABLISH RATES FOR THE COMPULSORY LICENSE

Selecting a benchmark is the first step in developing the proper copyright fee. As discussed above, the benchmark provides a useful starting point because it captures what a willing buyer and willing seller would agree to in the marketplace. The next step is to make appropriate adjustments to the fee to account for differences in the two markets -- in this case the interactive and non-interactive DAT markets.

A. Overview

Below I provide a more detailed discussion of the economics behind making some of the adjustments. An overview of the steps can be provided in simpler terms.

- First, I will consider what rate *structure* would likely be negotiated between willing buyers and sellers in the non-interactive DAT market, using the interactive DAT market as a benchmark. I conclude that the appropriate royalty is the greater of a per subscriber rate (where applicable), a percentage of revenue, and a per play rate.

- Second, I determine the relationship between the license fees and the prices charged to consumers in the market for interactive music services. I apply that ratio to the consumer prices in the market for non-interactive services in order to derive an appropriate license fee for that market. Before doing so, I adjust the consumer prices to ensure that those prices reflect only the difference in value resulting from the absence of interactive functions.

- Third, having made that adjustment, I then consider another potentially relevant difference between the two markets that affects the per play rate. Because of the more passive listening experience of non-interactive services, non-interactive services may be used more than interactive services. Although such differences have no impact on a per subscriber minimum or a percent of revenue calculation, they do have an impact on the per play rate. To account for this difference, I adjust the per play rate down (to the benefit of webcasters).

- Finally, I examine a fourth factor that may impact the royalty rates for the two different types of services -- the possibility that one may have a greater substitution impact on CD sales. Although I find no evidence to support such an impact, my

analysis demonstrates that, even if a significant differential substitution effect could be proven (e.g., even if interactive services replace two CD sales per year and non-interactive webcasting replaces none), a significant increase in the current statutory rate is warranted.

The approach described above has two virtues. First, it accounts for the observable differences between the two markets. In the last CARP proceeding, copyright owners submitted a variety of “corroborating” agreements to the Panel, but made no effort to explain their relevance or to adjust the royalty fees in those agreements to account for differences in the statutory license. This approach accounts for those differences and thus provides a reliable benchmark. Second, it is my view that this approach comports with the way that willing buyers and willing sellers would actually think about negotiating agreements in the marketplace. As explained in the testimony of Stephen Bryan at 10-11, record companies use existing agreements in closely analogous markets as benchmarks in evaluating the proper copyright fee in other markets. They also seek to account for differences in functionality (such as portability) that may increase or lower the appropriate price. And they also consider the impact that a particular service may have on other revenue streams through substitution. Thus, I believe my analysis accurately captures the thinking of the willing buyer and willing seller and provides a reasonable approximation of the fee that would be negotiated in the marketplace.

B. Derivation of a Rate Structure for the Non-Interactive Market

In order to create a fee structure for the compulsory license, I propose adopting

[REDACTED]
[REDACTED]
[REDACTED] a three-part fee structure which requires the music service to pay the greater of (i) a fixed percentage of revenue, (ii) a per subscriber fee, or (iii) a per play fee. [REDACTED]
[REDACTED]

In my opinion, it is essential to adopt this parallel rate structure for the compulsory license fee, because it is the only way to capture the willing buyers' and willing sellers' recognition of the uncertainty about marketplace developments over the next several years. [REDACTED]
[REDACTED]

The holders of the copyrights in sound recordings face significant uncertainty as to the way in which their sound recordings will be used. The number of plays, the popularity and vintage of the recordings played, and the value of the music services to the customers are all difficult to predict well in advance of the end point of the contract. [REDACTED]
[REDACTED]
[REDACTED]

Through the percentage of revenue, the record companies ensure that they will receive a share of royalties that properly compensates them for their valuable copyrighted material, [REDACTED] The per

play and per subscriber minima protect the record companies from significant use of their music that is priced at below-market prices to consumers (either because prices are not at a long run equilibrium or because a music service wants to attract consumers to its site with low prices so that it can earn a profit from the consumer in other ways, e.g., selling the consumer non-music products and services). For example, Yahoo! has priced its music services well below its competitors' rates in order to attract customers to its portal.¹² The per play and per subscriber components of the fee structure protect record companies in such situations.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Because [REDACTED]

[REDACTED] the business justification for this structure is so compelling, it should be adopted as the rate structure for the statutory license. It would not be proper to cherry-pick only one or two elements of the three-part rate structure without analyzing

¹² See interview with Dave Goldberg, a Vice President and GM at Yahoo!, Inc. from May 10, 2005 available at www.paidcontent.org/pc/arch/2005_05_10.shtml#013667. I understand that Yahoo! recently raised its prices to bring those prices in line with those of its competitors.

and potentially adjusting the applicable rates. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

In the sections that follow, I will discuss how to derive from the contracts in the interactive market the rate in the non-interactive market for each of the three elements of this fee structure, beginning with the per subscriber rate. The adjustments to the interactive market rates proposed below have meaning primarily in the context of this rate structure. If the Board were to select a different rate structure, different adjustments would be appropriate.

C. Derivation of a Per Subscriber Rate

Common sense suggests that if willing buyers and willing sellers agreed to a royalty rate in the market for interactive music services, and if the value to consumers of non-interactive services is, for example, 25% lower than the value to consumers of interactive music services, a market-based royalty rate for non-interactive services ought to be 25% of the royalty rate set in the interactive market. Common sense is, in this case, essentially correct. The economic theory which demonstrates the conditions under which this is true, however, requires some explanation. In the following sections, I will provide

that explanation and outline the adjustments I have made in order to derive royalty rates in the non-interactive market from the rates freely negotiated in the interactive market.

[REDACTED]

[REDACTED]

[REDACTED] I will begin by deriving the per subscriber rate for non-interactive services, and in later sections will separately derive the percentage of revenue rate and the per play rate.

1. Calculating the Ratio of License Fee to Consumer Price

We can observe in the market the subscription prices charged to consumers for interactive music services, and we can extract from the agreements between record companies and interactive music services the per subscriber royalty rate to which the parties in that market agreed. Simple math allows us to calculate the ratio between the amount of the average price charged to subscribers by music services, and the amount of the average per subscriber royalty paid by music services to record companies.

We also can observe in the market the average subscription price charged to consumers for subscriptions to non-interactive music services. If we assume that the ratio of subscription price to per subscriber royalty is the same in both the interactive and non-interactive markets, we can then calculate what the per subscriber royalty rate should be in the non-interactive market. For example, if the average subscription price paid by consumers for an interactive music service is \$9 per month, and the average per subscriber royalty paid to a record company is \$3 per subscriber (a 3-to-1 ratio), then we can predict that the per subscriber royalty that would be negotiated in the non-interactive

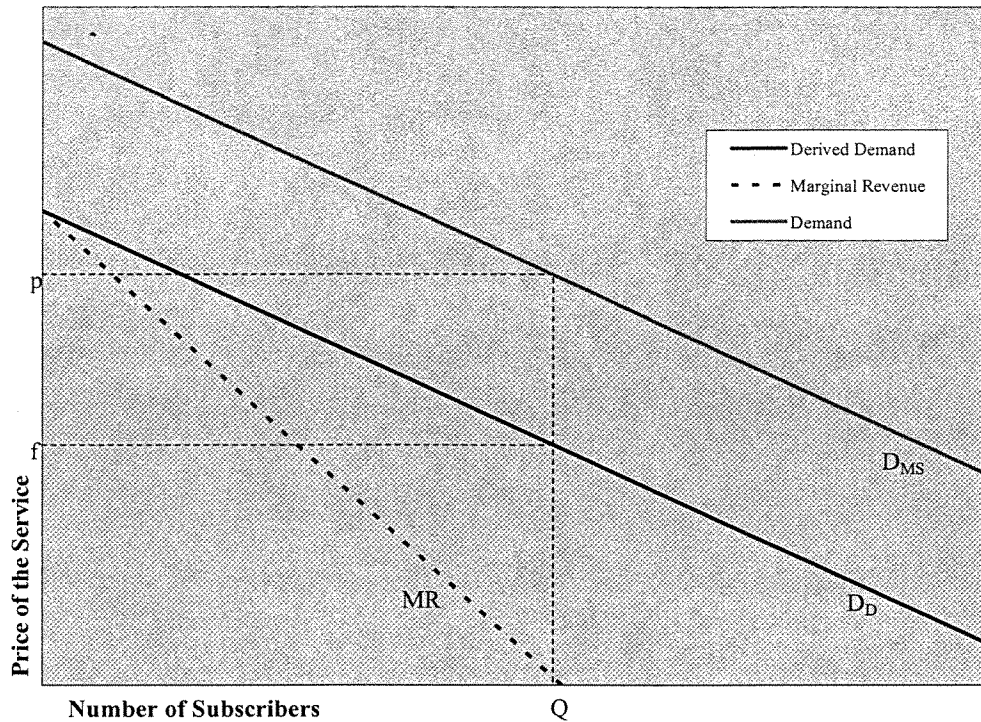
market would be \$1 per subscriber if the average monthly subscription price charged to consumers for non-interactive services is \$3 per month.

The key to this analysis, of course, is the assumption that the ratio of consumer price to royalty rate would be the same in both markets if the royalty rate were freely negotiated. I believe this assumption is correct because the sensitivity of demand to changes in price (i.e., demand elasticity) in both markets is likely to be very similar.

To understand why this is so requires a basic understanding of how prices are set for information goods in a free market. For these types of goods, or for other goods with very low marginal cost, prices are set as a function of demand and demand elasticity. Elasticity of demand refers to the effect that changing price has on the quantity sold. The more elastic the demand, the more the percentage of quantity sold diminishes as the percentage of price is raised.

In Figure 1, I have drawn the demand curve for the interactive music services, which is labeled as D_{MS} . I measure output in the industry as the number of subscribers. Therefore, the horizontal axis measures number of subscribers and the vertical axis measures monthly subscription price per subscriber. Demand is downward sloping, which is the nature of virtually all markets. (For exposition purposes, I am using a linear demand curve.)

Figure 1: Derived Demand Curve for Interactive Music Services



From the demand curve for interactive music services, one can derive the demand curve for copyrighted sound recordings. This type of demand curve is referred to in economics as a “derived demand,” because it is the demand for an input in a production process, and is derived from the underlying demand for the product or service sold to consumers. It is particularly apt in this context, because sound recordings are an essential and non-substitutable input for music services. In economic parlance, interactive music services have a “fixed-proportions production function,” meaning that every “unit” of output sold to a consumer requires a “unit” of input bought from the record companies.

As a consequence, music services cannot substitute away from the copyrighted music as its price increases.¹³

On Figure 1, the line beneath D_{MS} , which is labeled as D_D , is the derived demand for the copyright license. This is the demand by the music services for a license to play copyrighted music, where the license fee is paid on a per subscriber basis. I have drawn the derived demand curve parallel to the demand curve for music services for two reasons. First, as discussed above, sound recordings are a non-substitutable input for music services -- thus, a change of one unit in the demand for music services results in a change of one unit in the demand for copyrighted material. Second, I assume that any change in the copyright fee is passed on dollar-for-dollar to consumers. This is the normal assumption in a competitive market with constant average and marginal cost. The distance between the two demand curves is the amount that would cover the other production costs of the music services, including a reasonable profit margin. In other words, the demand by music services for copyrighted music is essentially the same as the

¹³ That consumer demand (and thus consumer price) should provide important information about the value of an underlying fixed factor also is a relatively basic concept. The value of interactive and non-interactive music services is a direct function of the music itself. This has been recognized in the context of licensing of musical works:

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. While in some instances there may be reason to approximate fair market value on the basis of something other than the prices paid by consumers, in the absence of factors suggesting a different measure the price willing buyers and willing sellers agree to in arm's length transactions appears to be the best measure.

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 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.

United States v. Broadcast Music, Inc., 316 F.3d 189, 195 (2d Cir. 2003) (footnote and citation omitted).

consumers' demand for music services using that work, less the music services' costs of production (other than the copyright fee itself) and a reasonable profit.

Thus, at any given level of output, the price point on the derived demand curve is the amount the music services are willing to pay for the license, while the price point on the demand curve for the music service is the amount that subscribers are willing to pay for the service. From these demand curves we can show how prices in the market will be set.

The line drawn in Figure 1, labeled as MR, is the marginal revenue curve of the derived demand curve. Marginal revenue is the change in revenue with respect to a change in output. As output increases, customers' willingness to pay declines, i.e., market price declines, and the revenue collected from all units sold in the market will fall. This is the reason why the marginal revenue curve is more steeply sloped than the demand curve. Standard economic theory shows that a firm will maximize profit at the level of output where marginal revenue equals marginal cost. In this market, there arguably is little or no marginal cost for the record companies associated with extending the copyright license to an additional subscriber. Therefore, the optimal price of the license from the copyright holder's standpoint is where marginal revenue is zero, i.e., where it crosses the horizontal axis. The level of output where this is achieved is labeled in Figure 1 as Q. Corresponding to this equilibrium level of output, the equilibrium license fee is labeled as "f." And the corresponding price that consumers will pay to the music service at this output level is labeled as "p."

If the same graph was drawn to depict optimum pricing of the copyright royalty fee in the market for non-interactive music services, the demand curves would appear

somewhat lower on the graph. I believe that it is reasonable to assume that the demand elasticity in the interactive and non-interactive markets would be very close in the relevant range of the demand curves.¹⁴ Thus, the consumer demand curve and the derived demand curve in the non-interactive market would have essentially the same relationship to each other as the corresponding demand curves in the interactive market. Setting the optimum price for the license fee and observing the resulting price to consumers based on these demand curves, in the same manner that I described above, would yield an equilibrium license fee and a corresponding consumer price that would be lower than the prices in the interactive market (because the demand curves are lower).

The conclusion that the ratio of license fee to consumer price is the same in both the interactive and non-interactive markets allows us to derive an appropriate market-based license fee for the non-interactive market. As shown in Table 1 of Appendix A, the average per subscriber copyright fee in the interactive market is [REDACTED] (corresponding to “P” on Figure 1). Furthermore, the average retail monthly subscription price is \$8.69 on a month-to-month contract and \$7.88 on an annual contract. See Table 2 in Appendix A. The average monthly subscription price, therefore, is \$8.29 per month (i.e., $(\$8.69 + \$7.88)/2 = \$8.29$) (corresponding to “p” on Figure 1). The ratio of the fee to the average

¹⁴ Although there are many factors that can influence demand in this market, it is reasonable that the two services, which are nearly identical in virtually all respects save one, would have similar demand elasticities. At bottom, the music services are selling the same sound recordings in both markets, and it is therefore entirely logical that demand elasticity is very similar. Confirming this, there is a great deal of evidence in the marketplace (based on agreements between the major record labels and a wide variety of digital music services) that record companies receive a similar (though not identical) percentage of the retail prices of services they sell this copyrighted material. That is further evidence that the demand elasticities of similar music services should be relatively close in value. Note that this assumption neither redounds to the benefit of the record company or to the services. If demand elasticity were to differ significantly between the two markets, it could increase the copyright fee or decrease it.

monthly subscription price is approximately [REDACTED].¹⁵ Knowing the ratio of license fee to consumer price is [REDACTED] in the interactive market, we can apply that same ratio to solve for the license fee in the non-interactive market if we know what subscription price is charged to consumers in the non-interactive market.

2. Calculating the Value of Interactivity

Subscription prices for non-interactive services exist in the current marketplace. However, those prices may reflect differences between interactive and non-interactive services beyond merely the presence or absence of interactivity. Factors such as sound quality and the number of channels offered might account for, or at least influence, the difference in the subscription rates observed in the market for interactive and non-interactive music services. For the purpose of this analysis, we want to use a subscription price that reflects only the absence of interactivity. It is the presence or absence of interactivity which determines whether the use of a copyrighted digital sound recording falls within the statutory license. And for that reason, the foregoing analysis of how prices would be set based on demand elasticity posited demand curves where the difference in demand resulted from the value of interactivity. Stated differently, if we are going to use the interactive market as our benchmark for setting fees in the non-interactive market, we should compare apples-to-apples -- that is, we should compare based on services that are highly similar except for interactivity.

I used two methods to compute the effect of non-interactivity on the demand (and therefore the price) for music subscriptions. First, I conducted an econometric analysis of demand in order to estimate the added value obtained by consumers from “interactivity.”

¹⁵ The correct number is actually [REDACTED] Decimals are carried throughout the calculations made in this paper, but are rounded in the text.

Second, I estimated the simple average difference in retail rates for the music services that offer service in both markets, i.e., a non-interactive, radio-type service and an interactive on-demand service. The results of the regression and the simple average provide an adjustment factor for transposing the market-determined interactive DAT copyright fees to the non-interactive market.

I used a hedonic demand model to isolate the value of interactivity to consumers of online music services. The nature of a hedonic model is to use

measures of the quality of a product as independent variables instead of measures of the market for that product... Hedonic models are most useful when the product being analyzed is heterogeneous in nature because we need to analyze *what causes products to be different and therefore to have different prices.*¹⁶

The model used data on different music services, and estimated the effects on prices of the several variables, including: the number of radio stations; interactivity; ability to download to portable device; and sound quality. The results of the model are summarized in Table 6.1 below.

¹⁶ A.H. Studenmund, *Using Econometrics*, Fourth Edition, 2001, at 404 (emphasis added).

Table 6.1. Regression of Subscription Price on Service Characteristics

Dependent Variable: Logarithm of Monthly Price

Variable	Coefficient	Standard Error	T-Value
Intercept	1.74	0.13	13.06
Log(No. Radio Stations)	-0.08	0.07	-1.17
Square of Log(No. of Radio Stations)	0.009	0.008	1.02
Interactivity	0.60	0.13	4.5
Download to Portable Device	0.48	0.19	2.57
Sound Quality	-0.34	0.38	-0.88

No. of Observations: 30

Adjusted R-Squared: 0.71

Note: Regression also included dummy variables for Digitally Imported's service and BellSouth's 1.99 Webtunes Gold service.

The key result is the coefficient on interactivity, 0.60, which is significant at the 99% confidence level. The interpretation of this coefficient is that interactivity raises the price of an online music service by 60% above the level of a non-interactive service that is identical in every other respect. An equivalent way of stating this result is that the ratio of the price of a non-interactive service to a comparable interactive service is 0.63.¹⁷

A simple "apples-to-apples" comparison of the major online music services' offerings yields a similar adjustment. As shown in Table 6.2, the simple average of the ratio of the prices of the non-interactive to the interactive options of the major music services is between 0.53 and 0.60 (depending on whether monthly or annual subscriptions are compared).

¹⁷ If the price of the non-interactive service were \$1.00, then the regression would predict that the price of the interactive service would be \$1.60. The ratio of the two prices $1.00 \div 1.60$ is 0.63.

Table 6.2. Comparison of the Subscription Price of Internet Radio vs. On-Demand Service

Row	Music Service	Monthly Subscription Price	Annual Subscription Price
(1)	Yahoo!'s LaunchCast Plus	\$3.99	\$2.99
(2)	Y! Music Unlimited	\$6.99	\$4.99
(3)	Ratio of (1) to (2)	0.57	0.60
(1)	MusicMatch Gold	\$4.95	\$2.95
(2)	MusicMatch On Demand	\$6.99	\$4.99
(3)	Ratio of (1) to (2)	0.71	0.59
(1)	Rhapsody Radio	\$4.99	\$3.33
(2)	Rhapsody Unlimited	\$9.99	\$8.33
(3)	Ratio of (1) to (2)	0.50	0.40
(1)	Radio Free Virgin Royal	4.95	NA
(2)	Virgin Digital	7.99	NA
(3)	Ratio of (1) to (2)	0.62	NA
	Average of Ratios	0.60	0.53

Notes:

LaunchCast includes customized features that may fall outside the compulsory license.

Source: Prices listed on the Internet for these services as of 10/21/05.

These two methods to determine the value of interactivity yield a factor ranging from .53 to .63 of the fees in the interactive market. I propose using an adjustment factor of .55, which is toward the lower end of this range. This adjustment factor should be interpreted as the amount by which the observed per subscriber fees for the interactive DAT market should be multiplied to yield the compulsory license fees for NI-DATs.

3. Calculating the Per Subscriber Fee

I can now recommend an appropriate compulsory license fee, on a per subscriber basis, for subscription non-interactive DAT services. I believe that it is appropriate to adjust the per subscriber fee in the interactive DAT market to a corresponding per subscriber fee in the non-interactive DAT market using the demand adjustment factor to determine the appropriate consumer subscription price in the non-interactive market and then applying the same ratio of license fee to subscription price that exists in the interactive DAT market.

As shown in Table 2 in Appendix A, the average retail monthly subscription price for subscription interactive DAT services is \$8.69 on a month-to-month contract and \$7.88 on an annual contract, yielding an overall average fee of \$8.29 per month. If we apply the adjustment factor calculated above of .55, the subscription price for a non-interactive service that is in all other respects comparable to the interactive services is \$4.56 per month. The analysis at the outset of this section showing that per subscriber license fees in the interactive market are [REDACTED] of the subscriber price yields a calculation that the fee which would be negotiated between a willing buyer and willing seller in the market for NI- DATs is [REDACTED]

This analysis is conservative in several respects. First, because I calculated the ratio of license fee to consumer price in the interactive market using per subscriber minima from a range of contracts entered into over a three-year period, rather than only the most recent contracts, the fee ratio will not reflect the fact that, in many cases, the per subscriber minima is increasing in more recent agreements. Second, the preceding analysis applies the [REDACTED] factor while assuming the subscription price in the non-

interactive market will remain unchanged. In reality, this is a very conservative assumption, because it is likely that the copyright fee increase will be passed on to consumers.¹⁸ Third, many of the interactive DAT services include, with the purchase price, access to non-interactive DAT services such as those at issue in this proceeding. To the extent that subscribers to the interactive DAT services use their non-interactive components extensively, the adjustment factor I have developed above may greatly understate the value of non-interactive services and the value of copyright licenses necessary to provide those non-interactive music services. In short, the ratio of the fee to the price used for this analysis may be too low, and the consumer subscription price used for this analysis may likewise be too low. A higher ratio applied to a higher consumer price would, of course, yield a higher per subscriber license fee.

D. Derivation of a Percentage of Revenue Rate

When it comes to setting the percentage fee for the non-interactive market, there are two choices. The first is to import the actual percentage of revenue fee observed in the contracts in the interactive market -- [REDACTED].] This would be reasonable, in my opinion. If, as I have said, the ratio of the license fee to the subscription price charged to consumers is the same in the interactive and non-interactive markets, the same percentage of revenue fee would be charged in both markets. That is because the actual amount paid on a percentage of revenue basis would be self-correcting, i.e., if the consumer demand for non-interactive music services is lower than the consumer demand for interactive services, the non-interactive music services will

¹⁸ For the reasons discussed in section VI.F.1 of my testimony, the prices charged to consumers in the market for non-interactive services may affect the prices charged in the market for interactive music services. An increase in the subscription price for non-interactive services may allow music services to raise subscription prices by some degree in the interactive market.

earn less revenue and the license fee paid to record companies, in absolute dollars, will decrease by a commensurate amount.

Thus, there is a good argument that the percentage of revenue applied in the interactive market should simply be adopted for the non-interactive market. A more conservative approach, however, would be to derive the percentage of revenue fee based on the ratio of the per subscription fees to the retail price. As stated above, the per subscriber license fee is [REDACTED] and the average monthly subscription price is \$4.56, resulting in a percentage of revenue of [REDACTED]. To be conservative, I propose using [REDACTED] for the percentage of revenue component of the compulsory license.

E. Derivation of a Per Play Rate

The third component in the fee structure is the price per play. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Applying the methodology employed earlier, it is appropriate to set the per play rate for the non-interactive market by maintaining in that market the same ratio of license fee to consumer subscription price that exists in the interactive market. Since I have

determined that value to consumers of a non-interactive service is 55% of the value of an interactive service, in order to maintain the same ratio of license fee to consumer subscription price employed in earlier sections of my testimony, [REDACTED]

There is an alternative market outcome, however. Evidence exists indicating that use of non-interactive services by subscribers or users is greater than the use made of interactive services. That is, users of non-interactive services may on average spend more time listening to music on the service, and therefore on average may listen to more “plays,” than subscribers to interactive services. If so, the per play fee could become the predominant basis for calculating license fees because (contrary to the experience in the interactive market) it might produce revenues higher than those that would be generated under the percentage of revenue or per subscriber fees.

Under these circumstances, it is possible that the music services might seek to negotiate a different per play rate in a free market. As I noted earlier, the per play fee and per subscriber fee protect the copyright owner in the event that the music service prices its services below market (*see* Section VI.B for a fuller discussion). In the non-interactive market, where many of the music services are non-subscription services, this protection must be supplied by the per play rate. [REDACTED]

[REDACTED]

[REDACTED]

Accordingly, to predict the per play rate that would be negotiated if the adjusted [REDACTED] play proved unacceptable to music services, my starting point is the per subscriber minimum derived for the non-interactive market. In this scenario, the per play rate should be equal to the per subscriber rate divided by the number of plays.

Live 365 reports that the average “active” listener uses its service 32 hours per month,¹⁹ and I have assumed even higher usage of 45 hours per month. This results in 697.5 plays per month at an average of 15.5 plays per hour -- substantially higher than the average number of plays per subscriber for the interactive music services. Interview by Eric J. Savitz with Rob Glaser, CEO, RealNetworks, Inc. (stating that the “average Rhapsody subscriber listens to over 200 songs a month”), in *Real Rivalry Comes to Online Music*, SmartMoney Magazine, June 15, 2005, available at <http://www.smartmoney.com/mag/ceo/index.cfm?story=july2005&src=&nav=RSS20&pageid=display-in-the-news.module&pageregion=itn-body>. [REDACTED]

[REDACTED]

[REDACTED]

Once again, I note that this is conservative. In my analysis I assumed that if -- because of the greater number of plays in the non-interactive market -- the record companies and music services negotiated a per play rate in a manner different than the way that rate was negotiated in the interactive market, the record companies would attempt to obtain the protection of a rate equivalent to the per subscriber rate. It is

¹⁹ See <http://www.streamingmedia.com/press/printversion.asp?id=2550>.

possible, however, that the record companies would seek to obtain a rate that equaled the effective per play rate they obtain in the interactive market [REDACTED] adjusted in the manner discussed above to account for the lower value of a non-interactive service and the greater number of plays in the non-interactive market. [REDACTED]

F. Substitutability for or Promotion of Other Services

The question of whether DATs are net substitutes or complements for other sales of recorded music is raised explicitly in the statute governing this proceeding. Among the considerations that a willing seller would take into account in setting license fees in the marketplace is “whether use of the service may substitute for or may promote the sale of phonorecords or otherwise may interfere with or may enhance the sound recording copyright owner’s streams of revenue from its sound recordings.”²⁰

In the discussion above I assumed that the copyright holder would maximize profits in each market (interactive and non-interactive) independent of the effects of the fee on any other markets where the copyright holder receives revenues. We must now consider the effect of relaxing this assumption. First, I will examine the issue of interdependence across the two DAT markets. Second, I will examine the effect of DAT markets on sales of CDs.

1. Substitutability for or Promotion of other Music Services

Consumers are presented with a wide array of competing music services in the marketplace. They will make their choices based on the characteristics and prices

²⁰ 17 U.S.C. § 114(f)(2)(B)

charged for the services. It is reasonable to expect that lowering the price of one type of service, e.g., a non-interactive service, will cause some customers to switch away from a substitute service, such as an interactive service. In technical terms the cross-elasticity of demand for these two services should be positive. This means the two services are substitutes for each other.

The implication of substitutability of these two services is that the current compulsory license for NI-DATs has constrained the copyright fees charged to the music services providing interactive DATs. Under the current compulsory license, the low copyright fee permits subscription-based non-interactive services to charge less than they otherwise would. This in turn pulls down the rate that can be charged for interactive services which, at least to some degree, will compete with the subscription-based non-interactive services. Referring back to Figure 1, this means that the demand curve for the interactive services has been shifted down by the artificially low compulsory license fee for non-interactive services. The absolute level of our benchmark copyright license fees therefore is artificially lower than it otherwise would be, and the absolute level of the fees recommended for the compulsory license is conservatively lower than it ought to be in a free market.

Moreover, as discussed above, if indeed there is a positive cross-elasticity between interactive and non-interactive DATs, the non-interactive DATs will cannibalize some of the higher margin interactive sales. That is, some consumers who otherwise would subscribe to an interactive service will subscribe instead to a non-interactive service, to the detriment of the record companies, which earn higher license fees from

interactive services. As a result, in a free market a copyright owner would increase the price demanded for non-interactive DATs.

I have not, however, sought to quantify either the negative effect that the non-interactive market has on prices in the interactive market, or the effect the non-interactive market has on diverting sales from the more lucrative (for the record companies) interactive market. Again, therefore, the estimates I am providing are conservative.

2. Substitutability for or Promotion of CD Sales

With respect to the interplay between Internet music services and sales of CDs, non-interactive DATs have been analogized to terrestrial radio, which has long been assumed to be complementary to CD sales (i.e., with promotional effects dominating). The simple reasoning is that listeners learn about new music on the radio and then buy the music on phonorecords. In other words, radio exposes listeners to new music, which some claim results in increased sales of new CDs.

There are many questionable assumptions in that claim, and there is scholarship that challenges it directly. The flaws in the argument are several. First, it ignores the impact of radio on the amount of time that consumers spend listening to recorded music.²¹ Radio and recorded music compete for the listener's time, and the less time spent listening to CDs, the fewer CDs will be sold. This will have the effect of offsetting some, all, or even exceeding any possible promotional effects from exposure to new music. Moreover, it has also been pointed out that the increased exposure to music on radio does not necessarily have a positive impact on sales, and thus doesn't necessarily work to offset the substitution effect. The reason is that learning more about a product

²¹ Stan J. Liebowitz, *The Elusive Symbiosis: The Impact of Radio on the Record Industry*, Review of Economic Research on Copyright Issues, 2004, vol. 1(1) pp. 93-118.

prior to purchase may make the consumer a better and wiser consumer, which may allow him to purchase fewer, but more desirable, CDs. In his attempt to test whether terrestrial radio is a net complement or substitute for record sales, Professor Liebowitz found that radio play does not benefit overall record sales.

Second, that radio play, combined with a wide variety of other focused promotion efforts, may help sell some sound recordings does not mean that, overall, radio play increases the sale of recorded music. Where, as here, we are dealing with a blanket license, the individual effects on particular songs which are in heavy rotation on over-the-air radio says nothing about the effect on all music -- which is likely to be purchased less when consumers have other listening options.

Third, as was true in the last webcaster proceeding, even if one were to assume that over-the-air radio overall increased record sales, it is an enormous unsupported leap to claim that webcasting is also promotional. The wide number of niche stations and the different experience of webcasting suggests that there are strong reasons to believe that non-interactive webcasting supplants rather than enhances CD purchases. I note that Wall Street analysts have recognized this effect in the context of satellite radio, finding that the future of the music industry is threatened by the many programming options offered by competitors such as XM and Sirius, that such services cannibalize record sales, and that the music industry's continued viability depends on getting fair market rates in proceedings such as this.²²

Finally, one can simply look at the alternatives to see how webcasting likely affects other revenue streams for the record companies. Time spent listening to NI-DATs must be coming from one of several alternative uses of time: (1) listening to CDs; (2)

²² SX Exhibit 210 DP at 35-40 (Citibank analyst report on Warner Music Group).

listening to interactive DATs; (3) listening to terrestrial radio; (4) other activities, e.g., watching TV. Of these four alternatives, only the fourth may lead to increased CD sales through the exposure effect. Substitution for time spent listening to CDs or interactive DATs will be costly to the copyright holder. Time spent listening to radio is unlikely to make much of a difference in terms of exposure to music if one were to assume a similar promotional effect between the two. Therefore, I would expect that increased listening to NI-DATs would not lead to an increase in CD sales.

In any event, the relevant empirical issue for the benchmark approach is not whether non-interactive DATs are substitutes or complements to CD sales. Rather, all that matters is whether non-interactive and interactive DATs affect CD sales differently. Where interactive music services are concerned, the question of whether such services are promotional or substitutional with respect to CD sales has already been answered by the market -- that is, when the parties negotiated a license fee, they presumably took into account the likely impact of that license on CD sales. If the impact of non-interactive services on CD sales is the same as the impact of interactive music services, no adjustment to the rates proposed above would be necessary, because that impact was already accounted for in the give and take between willing buyer and willing seller. If there is a *different* promotional or substitutional effect on CD sales in the non-interactive market, compared to our benchmark interactive market, an adjustment may be appropriate.

I have seen no evidence to suggest that there is any difference between these two markets with respect to their promotional or substitutional effects. One might argue that the on-demand characteristics of interactive DATs will lead to greater substitution for

recorded music than would be expected for non-interactive DATs. And one might argue, to the contrary, that non-interactive music services tend to substitute for CD sales to a greater degree than interactive services because subscribers to non-interactive services spend relatively more time listening to those services (thus reducing the amount of time available to listen to CDs). Although I have found no empirical support for either position, I have been asked to provide a sensitivity analysis to show the maximum possible effect on rates that would result if interactive services substituted for CD sales to a greater degree than non-interactive services.

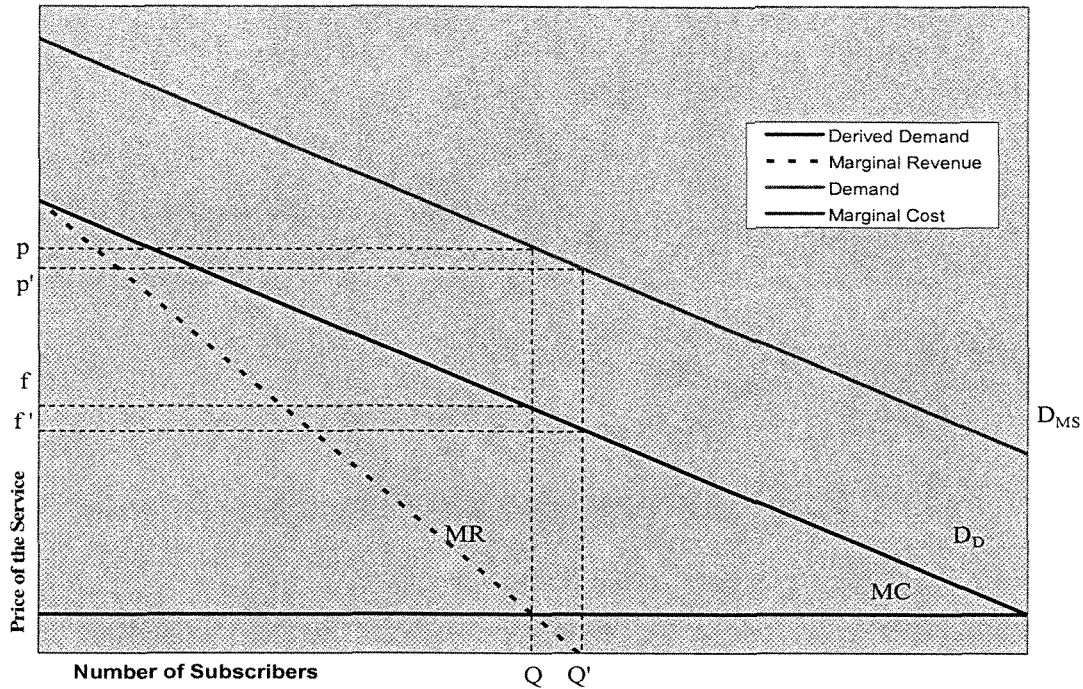
The model depicted in Figure 1 can be adjusted to take account of the possibility that interactive music services may substitute for CD sales to a greater degree than non-interactive music services. I will show this adjustment assuming that, for the average consumer, subscribing to an interactive DAT will decrease the consumer's purchases of CDs by two CDs per year. Further assuming that the margin on a CD is \$5.60, this yields a loss of \$11.20 in annual profit from the effect of interactive DAT subscription on CD sales.

The loss in CD sales can be treated analytically as an increase in the marginal cost of the copyright holder of providing (or licensing) interactive DAT services, i.e., each additional interactive music service subscriber will "cost" the copyright holder lost sales and profits from CDs. This increase in marginal cost will change the equilibrium conditions in the market. Prices will increase and total license fees (or profits to the copyright holder) will decrease. Using the neutral assumption of a linear demand curve, it is possible to show that prices will increase by 47¢/month/subscriber and the fee will increase by 47¢/month/subscriber.

The next step in our sensitivity analysis is to remove the effect of lost CD sales from the observed copyright fees charged for interactive DATs. This will allow us to estimate what benchmark fees would be charged, were it not for the assumed differential substitution effect. These adjusted benchmark fees will then be used to estimate the compulsory license fees for non-interactive DATs making the same adjustments as before for non-interactivity.

In order to quantify the effect of CD substitution on the benchmark rates, we must assign numerical values to the model. I have selected the average monthly retail rate of \$8.29. As shown in Figure 2 below, we can adjust for the effect of CD substitution by observing that the optimal fee with substitution (the hypothesized current situation) would be obtained where marginal revenue equals the marginal cost, where marginal cost is now \$.93 per subscriber per month reflecting the lost profits on CD sales. The equilibrium price and fee are labeled in Figure 2 as “p” and “f.” [REDACTED]

Figure 2: Copyright Fees Given Lost Profits from Substitution Away from
CDs



To remove the substitution effect, we now need to show what the copyright fee would have been if marginal cost were zero, instead of \$.93 per month. Removal of the substitution effect will restore us to a situation where marginal cost to the copyright holder is zero. This will now yield a new equilibrium where the fee has declined by 47¢ per month and the retail price has fallen by 47¢ per month. As shown in Figure 2, the new fee f^* will be [REDACTED] the new retail price p^* will be \$7.82. The ratio of the new per subscriber license fee to the old per subscriber license fee is 0.84 [REDACTED]

The percentage of revenue and per play components of the fee structure should be adjusted by the same ratio -- .84 -- to reflect the impact that the substitution of two CDs per year resulting from subscription to an interactive service might have on license fees.

The results of these adjustments, using the most conservative numbers from sections VI.C, D and E of this testimony, are shown in Table 6.3 below.

Table 6.3: Adjustment of License Fees for Effect on CD Sales

	Non-Interactive Unadjusted	Non-Interactive Adjusted
Copyright Fee as "Greater of" Formula		
Percent of Revenue	36%	30%
Dollar/Month	\$1.63	\$1.37
Per Play	0.234¢	0.197¢

G. Application of the Rates Derived from Subscription Services to Ad-Supported Services

To this point, I have focused on subscription services, finding that such services are the best benchmark to use for deriving the proper rate. These services demonstrate what consumers are willing to pay and, because of the existence of free, ad-supported services, are likely priced below what consumers would pay if there was not a free alternative. For that reason, using them again is a conservative assumption.

I believe that the basic rate structure discussed above should be applied to all music services -- subscription and non-subscription -- that use copyrighted music under the compulsory license. There are a number of reasons for this conclusion.

First, the best evidence from the marketplace of the value that consumers attach to a good or service is the price they are willing to pay for the service in the free market. Indirect measures, such as the advertising revenue collected by non-subscription services, are likely to underestimate the true value of the music in the marketplace.

Second, it is by no means the case that ad-supported webcasters are, or will remain, the poor cousins to subscription services. Revenues from advertising (or bundled services) are likely to increase over time as these business models develop in the market. For example, it was recently reported that Google's ability to achieve scale efficiencies with its growing online advertising network may allow it to introduce "free service" offerings that will challenge a number of traditional fee-based models. Google has made remarkable gains over the past year in increasing the revenue it generates each time it shows ads to consumers, and similar gains can be expected of music services. Indeed, the marketplace for Internet radio is populated by those who believe that ad-supported models ultimately will prove the better business model. I note that Yahoo! -- one of the largest and most sophisticated players in the market -- has said publicly that it believes that ad-supported models are likely to be the most profitable. Paul Maloney, *Yahoo! Launch's Goldberg Sees Ad-Supported Version as Future*, Radio & Internet Newsletter, Feb. 14, 2003, <http://www.kurthanson.com/archive/news/021403/index.asp> ("Yahoo! Music's Dave Goldberg says the future for his company's Internet radio business is with the ad-supported channels, and its listener-influence 'rating' systems.").

Third, even if, in the long run, ad-supported services prove less profitable than subscription services, that does not mean that a copyright fee should be set in order to accommodate the ad-supported model. In a free market, the owner of the intellectual property, e.g., the record companies, would set a fee based on the highest-valued use of its property, rather than sell at a lower price to an alternative delivery mechanism that would undermine sales of the higher-priced service option. Moreover, it is not practical to set different rates for different business models. The market is fluid and rapidly

evolving based on a number of different business models. There is no clear boundary between the subscription and non-subscription services. Rather, music services may earn revenue by combining subscriptions with advertising, as well as sales of other goods and services promoted by the website or portal offering the music service. In short, the record companies in a free market would set a rate targeted at the most profitable segment of the music service business. If this meant that inefficient or less-profitable businesses did not survive, that is not a bad outcome from the standpoint of economic efficiency, nor is it an indication that the compulsory fee has caused an outcome that is different from what happens in the free market. Rather, markets should be expected to yield an industry structure that supports only the most efficient firms.

Fourth, setting similar fees for subscription and non-subscription services simply preserves the status quo, where the same per stream rate applies to both business models (although subscription services currently have alternative calculations available to them). I see no compelling economic reason to change the status quo in this regard.

Fifth, although the majority of listeners use free non-interactive services, subscription services do make up a significant part of overall listening. Many people obtain non-interactive webcasting services bundled with other subscription services such as AOL. The fact that these services are bundled does not detract from the validity of using their unbundled prices to determine their value.

For all of these reasons, I believe that the rates I propose based on my analysis of subscription services should apply to both subscription and non-subscription services (with the exception of the per subscriber rate).

VII. Additional Information From Other Marketplace Agreements

A review of a number of other marketplace agreements, as well as publicly available data, suggest that the copyright fees derived above are within the range of reasonableness of what a willing buyer and willing seller would agree to in the marketplace. I discuss each of these in turn.

Licenses for Music Videos: Music videos are one of the only areas in which record companies are able to negotiate licenses that include both interactive and non-interactive streaming. These services are very similar to interactive and non-interactive DATs, except that they involve music videos, rather than simply music. They do provide, however, a useful benchmark for seeing what a willing buyer and willing seller would negotiate in the marketplace and how they would value interactive streaming relative to non-interactive streaming.

Although there are a variety of different agreements with different rate calculations, as described in the statements of Mark Eisenberg at 25; Lawrence Kenswil at 17-18; Stephen Bryan at 20-21; Ken Parks at 15, [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]²³

These agreements show two things. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

²³ Music video services are generally ad-supported, [REDACTED].

[REDACTED]

PRO Royalties: Also as discussed above, I do not believe that one can use the amounts paid for music publishing for non-interactive DATs as a benchmark for setting the copyright fee for sound recordings. The differences between the value that the market places on blanket licenses for sound recordings and music publishing licenses are simply too great.

Nonetheless, the *ratio* of the rate that music publishers are paid for interactive services vs. non-interactive services is somewhat more instructive. As a ratio, some of the effects of the different values that the market places on sound recordings and musical works drops out and we are left with more of a measure of the value of interactivity. On a percentage of revenue basis, the music publishers receive approximately 5.1% of revenue for non-interactive DAT services. As noted above, there is a dispute about the amount that music publishers will be paid for interactive services. *See* footnote 7. Nonetheless, the only agreement of which I am aware is consistent with a mid-point between the reported dispute between interactive services and music publishers -- approximately 10% of revenue.

[REDACTED]
[REDACTED]
[REDACTED]

Clip Sampling: Clip samples are the 30-second samples provided to users considering the purchase of a sound recording. They are highly promotional for record sales (they can only be used in situations where there is an express offer of a sound recording for sale), and they are in no way substitutional for CD sales or other sources of record industry revenue.

As described in the statements of Mark Eisenberg at 23-24; Lawrence Kenswil at 19-20; Stephen Bryan at 11-12; Ken Parks at 15-16, where a company makes a business off of clip sampling, purporting to promote sound recordings, record companies nonetheless are paid a percentage of revenue (sometimes in a greater of formulation with a per play floor). The percentage of revenue generally ranges from [REDACTED]. In my opinion, the percentage of revenue that record companies should receive for non-interactive DATs (in conjunction with a per play floor and a per subscriber minimum) cannot possibly be less than [REDACTED]. No matter how promotional webcasters might claim their services to be, they could not be more promotional (and less substitutional) than clip samples.

VIII. MOBILE SERVICES SHOULD PAY A PREMIUM

Several new services have recently been offered or announced that provide streaming of music on cellular phones and other mobile devices. For example, Sprint now offers unlimited access to 20 commercial-free channels of SIRIUS Music on its multimedia handsets for \$6.95 per month. This is a major evolution in how music

licensed under the compulsory license at issue in this proceeding is being used. As stated by the two partners involved in the Sprint/SIRIUS deal, “Sirius Music broadens Sprint’s portfolio of music offerings and puts content from the biggest names in music right in the hands of millions of Sprint customers nationwide.”²⁴

These new mobile services appear to command a premium in the marketplace. As shown in the table below, all but one of the services is priced at or above \$5.95 per month. By comparison, a substantial percentage of the non-mobile services are available at a lower price. Notwithstanding the higher price, the typical mobile service offers fewer channels than the non-mobile service, and the music is carried at lower bit rate.

Service	Monthly Price	No. of Stations
Mobzilla	\$ 3.98	30
Music Choice	\$ 5.95	6
MSpot Radio	\$ 5.95	13
MSpot Music Radio	\$ 5.95	17
Sirius Sprint	\$ 6.95	20
Rhapsody Radio	\$ 6.95	100

I believe that the unique positioning in the marketplace of mobile music services means that the recommended license fees I derived in Section VI based on non-mobile services should be adjusted for mobile services. The previous comparison between consumers’ valuation of interactive and non-interactive DATs only applies to stationary music services. To the extent that consumers attach a value to mobility, then appropriate comparison should be between *mobile* interactive services and *mobile* non-interactive services. Since there are no mobile interactive services (i.e., interactive services that can

²⁴ <http://www.shareholder.com/sirius/ReleaseDetail.cfm?ReleaseID=172838&cat=&newsroom=>

be accessed over a wireless network), and thus there is insufficient information to perform this valuation, I recommend instead that the fees derived in Section VI apply only to uses of the compulsory license for stationary services. I propose that services available to consumers over wireless networks that utilize the blanket compulsory license pay an adjustment above the stationary rate.

I would prefer to expand the hedonic regression to derive a measure of the added value of mobility; however, the data is not rich enough to provide meaningful hedonic measurements. Therefore I propose a premium based on two significant pieces of evidence from this nascent marketplace. First, the best apples-to-apples measurement of the value of mobility is the difference between the prices of the two Rhapsody radio services, which are virtually identical with the exception of mobility. The monthly price of the stationary Rhapsody Radio service is \$4.99. The monthly price of the Rhapsody Mobile Radio Service is \$6.95. The mobility premium is 39%.

A second basis for setting a premium license fee is to compare the median subscription rate on mobile Internet radio services (\$5.95) to the median subscription rate on stationary Internet radio services (\$4.99).²⁵ The mobile premium derived from the ratio of the two medians is 19%.

Because I presently have no further data, I can say only that a premium between 19% and 39% would be in the range of reasonableness, but market evidence is compelling that some premium for portability is appropriate.

²⁵ I reject comparing the mean of the subscription prices of the two types of services, because the mean price of the stationary services is skewed by a small number of observations in the tail of the distribution. These observations do not appear to be particularly relevant to a measurement of how much value consumers attach to mobility.

IX. CONCLUSION

The market for interactive music services provides a significant number of contracts, freely negotiated between willing buyers and willing sellers, that establish a compelling benchmark by which to set the rates for non-interactive digital audio transmissions in this proceeding. [REDACTED]

[REDACTED] Further, adjusting those rates to account for the absence of interactivity and other relevant factors, I believe that the appropriate rates are the greater of 36% of revenue, \$1.63 per subscriber, or 0.234¢ per play if the rates are not adjusted for any differential substitution effect, and 30% of revenue, \$1.37 per subscriber, and 0.197¢ per play if a substitution adjustment is employed.

Appendix A

Data on Contract Terms and Retail Subscription Prices for DAT Music Services.

Table 1. Key Terms of Current Contracts Between Studios and Tethered Interactive DAT Music Services.²⁶

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

²⁶ [REDACTED]

²⁷ This column identifies the date of the agreement that set the primary terms. Sometimes this was the date of the original agreement, other times it was the date of an amendment to the original agreement.

Table 2. Current Retail Prices for Tethered Subscription Interactive DATs

Service	Monthly Retail Price	Monthly Retail Price with Annual Contract
Y! Music Unlimited	\$6.99	\$4.99
Musicmatch On Demand	\$6.99	\$4.99
Rhapsody Unlimited	\$9.99	\$8.33
Napster Membership	\$9.95	\$9.95
MusicNow	\$9.95	\$9.95
AOL - MusicNet	\$8.95	\$8.95
Virgin Digital	\$7.99	\$7.99
Average	\$8.69	\$7.88

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

Michael D. Pelcovits
Michael D. Pelcovits

Date: 10-31-05

Exhibit Sponsored by Michael Pelcovits

210 DP	Citigroup research report on Warner Music Group (Sept. 22, 2005)
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