

Before the
COPYRIGHT ROYALTY BOARD
in the Library of Congress
Washington, D.C. 20559

In re)
NOTICE AND RECORDKEEPING FOR) Docket No. RM 2008-7
USE OF SOUND RECORDINGS UNDER)
STATUTORY LICENSE)

**SUPPLEMENTAL COMMENTS
of HARVARD RADIO BROADCASTING COMPANY**

I. Introductory Statement

Harvard Radio Broadcasting Co., Inc., an eleemosynary Massachusetts corporation, and licensee of student-operated FM broadcast station WHRB (FM), Cambridge, Massachusetts (“WHRB”), offers these supplemental comments in response to the Board’s NOI, published in 74 Fed. Reg. No. 66, 15901 (April 8, 2009), soliciting further information as to the impact on small webcasters.

WHRB fully participated in the webcasting royalty hearings before the Board, “Webcasting II” (Dkt. 2005-1 CRB DTRA), submitted after oral argument in the U.S. Court of Appeals for the D.C. Circuit, Dkt. 07-1123, on March 19, 2009. WHRB also submitted comments in response to the Board’s NPRM, published in 73 Fed. Reg., No. 250, 79727 (December 30, 2008) soliciting comments regarding the requirements for recordkeeping and reporting of use of digital sound recordings under statutory license. In the course of the Webcasting II hearing WHRB presented testimony and documentary evidence as to the

distinctive characteristics of its non-profit webcasting operations and simulcast programming.¹ Its operations, particularly its all-volunteer-student staffing, are very distinctive in nature and bear little resemblance to larger commercial and larger non-commercial webcasters' operations and programming. For example, the testimony and exhibits described how station WHRB (FM) programmed an Orgy® of Wolfgang Amadeus Mozart's music during the exam period in the Spring of 2006. The station presented 250 hours of virtually every composition by this composer, drawing on many sources, including the station's record library and several institutional and individual record libraries. The music was accompanied by commentary from members of the student staff and Prof. Robert D. Levin, whose four-page essay written for WHRB describing the anomalies in the Köchel numbering system was posted on the station's website.

Most importantly, like other small, academically affiliated stations, WHRB continues to assemble its day-to-day programming with human DJs who play sound recordings from physical media such as vinyl records, cassettes, and CDs in real-time. While the cost of switching to fully-automated programming from a harddrive would be very high, the main reason WHRB and other non-commercial stations continue to use human DJs is due to programming philosophy and aesthetic choice. These stations have a rich heritage of featuring music that cannot be easily found or heard by listeners via other outlets.² The art of assembling this music in real-time is passed down by station members and cannot be replicated by automated means. The fact that stations like WHRB manually program physical media and plan to continue doing so for the

¹ Much of this testimony the Board accepted for use in the instant proceeding. *See* Determination and Order in Webcasting II, 72 Fed. Reg., No. 83, 24084, 24109-10 (May 1, 2007).

² Sisario, Ben, *College Radio Maintains Its Mojo*. The New York Times, December 7, 2008, sec. Arts / Television. <http://www.nytimes.com/2008/12/07/arts/television/07sisa.html>.

foreseeable future imposes substantial difficulties in reporting and recordkeeping as detailed in the body of the station's comments, filed in Docket No. RM 2008-7 on January 29, 2009.

Previously, the CRB also received in RM- 2005-2, *et seq.*, from WHRB and other college and high school webcasters, comments describing the peculiar burdens on stations with volunteer student staffs of applying recordkeeping and reporting requirements more suitable for larger operations with paid staffs.

WHRB's instant supplemental comments in response to the CRB's NOI address the following issues:

1. The Board should supplement the current process for completing promulgation of final regulations
2. The Board should consider alternative non-census reporting for noncommercial webcasters³ that qualify for the minimum performance royalty as set forth in 37 C.F.R. § § 380.3(a)(2)
3. Calculating the true cost of implementing a "technological solution" involves both the cost of the technology in addition to the ongoing human labor cost of utilizing the technology
4. The Board should consider the peculiar effects of the use of volunteer staff by noncommercial webcasters
5. WHRB offers information in response to the questions posed by the CRB:
 - a. Estimate of the additional cost burdens faced by SoundExchange to adopt census reporting for noncommercial webcasters
 - b. Definition of "automated playlist" technology
 - c. Percentage of broadcasters that do not use automated playlists
 - d. Impact on entities that do not use automated playlists
 - i. WHRB uses human-powered, manual programming as part of its educational mission and to substantially increase the diversity of

³ The term "noncommercial webcaster" is used as defined in 17 U.S.C. § Section 114(f)(5)(E)(i).

sound recordings it broadcasts and allow for more creative use of these sound recordings by DJs in real-time

- ii. The technologies WHRB uses to comply with current reporting requirements
 - iii. Changes that would be required of WHRB to comply with census reporting
 - iv. Is technology currently available to permit entities that do not use automated playlist to comply with census reporting? What is the cost (for both the technology and human operational labor) in utilizing these systems?
- e. Questions concerning the use of open-sourced licensed spreadsheet programs for reporting

II. The Board Should Augment the Current Process for completing final rulemaking by Creating a Standing Advisory Committee .

WHRB appreciates that the CRB has opened both this NOI comment period as well as a reply period scheduled to close on June 8th. We hope that this round of iterative commenting will allow the parties to find common ground and the CRB to locate areas of consensus on the specific items detailed in the NOI.

However, we reiterate our call for an in-person status conference to be held in Washington, DC at the conclusion of the reply period for all interested parties in this rulemaking proceeding.⁴ We strongly believe that real-time interaction between the parties is the best method to determine technical standards.

In its previous comments, WHRB has called on the CRB to form a standing committee with expertise in the technical aspects of digital media to aid in rulemaking proceedings such as the this instant proceeding.⁵ We continue to believe a committee of this type, organized under

⁴ WHRB comments in Docket No. RM 2008-7, filed January 29, 2009.

⁵ Ibid.

the principles adapted from the Federal Advisory Committee Act of 1972, as amended, 5 U.S.C. App. 2, would prove extremely helpful to the CRB in all rulemaking procedures which involve technical standards. However, we now expand our request to ask the CRB to facilitate the creation of a technical working group made up of members of SoundExchange/copyright owners and the services.

The purpose of this technical working group would be to review standards for the creation and delivery of reports of use. The group would meet on a regular basis, and parties would be represented by both legal and technical personnel. The technical working group would exist outside the purview of the CRB, but could assist the CRB in rulemaking by filing consensus comments. Such a group, based on a \$ 25 per annum surcharge by SoundEx, did meet informally and inconclusively in the prior license period. Establishment as a group with quasi-governmental status and stated reporting duties would be incentives for more effective functioning of such a group.

Currently, the major barrier to the formation of a technical working group is an inability to create negotiated technical standards in the absence of comprehensive royalty negotiations. Recordkeeping has been largely discussed by the parties only in conjunction with royalty rates, even though most of the technical standards⁶ are germane regardless of royalty regime. WHRB requests the CRB to allow a technical working group to periodically submit final regulations for recordkeeping which could be entered in the Federal Register for use under Sections 114 and 112 of the Copyright Act, title 17 of the United States Code. This procedure would allow the working group to focus on technical matters pertaining to recordkeeping while more contentious issues such as royalty rates could be handled via direct negotiations or rate proceedings. Long-term,

⁶ Obviously calculation of efficiency is related to rate levels.

WHRB believes a standing, technical working group consisting of both SoundExchange/ copyright owners and services will greatly reduce the industry's reliance on the CRB for resolving technical issues pertaining to technology and standards.

III. The Board Should Consider a More Practical Proposal for an Alternative to Census Recordkeeping for Noncommercial Webcasters

The statute is vague on the subject of recordkeeping. 17 U.S.C. §§ 114(f)(4)(A) and 112(e)(4) ask only that the Board “establish requirements by which copyright owners may receive reasonable notice of the use of their sound recordings.” Both the CRB and SoundExchange have recognized that under certain situations it is *reasonable* to exempt certain webcasters from census reporting.

For example, the Judges state: “To help mitigate possible impact on small entities, the Judges also seek possible alternatives to the proposed census provision.”⁷ SoundExchange concurs: “SoundExchange recognizes that there may be rare situations in which a service cannot today provide census reporting.”⁸

As WHRB proposed in previous comments,⁹ a proper test for reasonableness is a “balancing test” which requires a calculus comparing the burdens of an action with the possible outcomes.¹⁰ In the instant proceeding, the Judges have three costs to consider:

- The cost of the burdens faced by a noncommercial webcaster in complying with census reporting.
- The additional data processing costs faced by SoundExchange in processing census reports instead of sample-based reports

⁷ 74 Federal Register, No. 66, 15901, 15903 (April 8, 2009).

⁸ SoundExchange comments at 2 in Docket No. RM 2008-7, filed January 29, 2009.

⁹ WHRB comments at 7 in Docket No. RM 2008-7, filed January 29, 2009.

¹⁰ United States v. Carroll Towing Co., 159 F.2d 169 (2d. Cir. 1947).

- The injury (or loss) imposed on a theoretical copyright owner who might not receive royalties from a noncommercial webcaster if census reporting is not adopted.

Based on the questions posed in the NOI, we expect that the CRB will receive factual comments from the parties allowing it to quantify these net costs. From WHRB's cost perspective as a noncommercial webcaster that relies on human-based, real-time programming, we conclude that it is unreasonable to require both year-round census reporting and actual total performances (ATP) instead of aggregate tuning hours (ATH).

We propose the following narrow exemption be granted:

Proposed: Noncommercial webcasters¹¹ that qualify for the then-current minimum per channel or per station performance royalty as set forth in 37 CFR 380.3(a)(2)¹² shall be exempted from year-round census reporting provision and be allowed to continue to file any reports that are required utilizing the ATH methodology, to the extent feasible.

A. Revenue-based cutoff

WHRB does not believe a revenue-based cutoff is a useful way to distinguish this class of webcasters. Since noncommercial webcasters are often (but not always) associated with an educational institution or government entity, it can be difficult to accurately define gross revenues. Basing the cutoff on those stations which qualify for the minimum royalty rate (both as set today and in the future) ATH is a straightforward method to determine size of operation and need to report on a census basis. Given the varying organizations forms of the non-commercial webcasts, there is no uniform accounting definition of revenues or gross receipts. We note that

¹¹ As defined in Section 114(f)(5)(E).

¹² The minimum royalty is today set at \$ 500, but the exemption should apply to stations in this class that qualify for the minimum regardless of whether the specific amount changes under future rate proceedings.

even for corporations subject to GAAP, there are esoteric details involved in calculating gross receipts.

B. Profit vs. non-profit structure

As the statute and regulations already provide a comprehensive definition for “noncommercial webcasters,” we see no reason to define a new class of stations for this exemption.

IV. The true cost of a technology includes human labor cost for utilizing that technology

As we have noted in Section III, one basis for granting an exception on census-based reporting for noncommercial webcasters rests on the costs for this reporting. The Board should recognize that the costs which need to be calculated include both the technology (*e.g.*, hardware, software) used to coordinate the data, but also the human labor required to provide this data on a day-to-day basis.

From both statements by the CRB and comments by SoundExchange, it appears easy to forget that for stations which use manual human labor to broadcast sound recordings in real-time the major burden is brute force labor. For example, Sound Exchange states:

Although the large volume of data involved can make census reporting appear difficult, the type of data and the methodology for collecting and reporting it is exactly the same as in the case of sample reporting. Every bit of this information is in the possession of the webcaster, and they need only retain it through use of commercially available software in order to provide it. It is simply a question of how often to report that data.¹³

While SoundExchange is correct that commercial software exists (*e.g.* Microsoft Office Excel or Spintron) that helps facilitate data entry, these types of technology do not obviate the need for a

¹³ SoundExchange comments at 7-8 in Docket No. RM 2008-7, filed January 29, 2009.

human to manually transcribe metadata from each individual sound recording broadcast from a piece of physical media in real-time.

In addition, when formulating its NOI, the CRB asks:

Is technology currently available that would permit entities that do not use automated playlists to comply with the proposed census provisions? If so, what companies provide such capabilities and at what cost? If such technology is not currently available, what would be the costs of developing it?¹⁴

While it would greatly simplify matters if a magic software technology existed which could identify all sound recordings in real-time and automatically handle all recordkeeping tasks without human input, this is impossible. Therefore, the question which CRB should keep in mind when evaluating the merits of WHRB's proposed exemption is: For entities that do not use automated playlists, what is the combined cost in both technology and human labor to comply with proposed census provisions?

Of course the lack of adequate metadata, even on recent digital pressings by SoundEx members, would frustrate any automated technology. This is discussed in greater detail below and in my testimony in Webcaster II in the transcript for November 14, 2006 at 203f and 208f, as accompanied by Exhibits 159 and 160.

V. The Board should consider the peculiar effects of the use of volunteer staff by non-commercial webcasters.

Unlike commercial operations, noncommercial webcasters rely almost entirely on non-paid, volunteer student staff. In the cast of WHRB, there are no paid employees on staff. Therefore, when considering the actual cost of human labor, we must think in terms of both dollars but also impact on the entity, *i.e.*, on the webcaster itself.

¹⁴ 74 Federal Register, No. 66 at 15904 (April 8, 2009).

First, most educationally-affiliated stations have already saturated all available volunteer labor. Therefore, it is not possible to simply “dial-up” more volunteer labor. If recordkeeping tasks require additional human labor, WHRB would need to divert current volunteer labor from implementation of our primary educational purpose.

Given the scope of labor entailed in census reporting, it will not be possible to satisfy labor demand from volunteer resources alone. Bringing in paid labor from outside the station staff would obviously have a direct effect on the already limited monetary budget (and hence, the reason we represent labor costs throughout these comments in dollar figures). But, more importantly, the use of outside paid labor in a volunteer setting will have serious effects on morale that cannot be quantified in dollar terms. Here we point to the example of the incompatibility within suburban fire departments between the paid firemen and the volunteer firemen which leads to a toxic impact on the sociological climate of volunteer organizations.¹⁵

VI. Answers to direct questions in the NOI

The following section provides answers to questions asked specifically by the CRB in its NOI.

A. Question: We seek estimates from SoundExchange (and others) detailing the cost savings or additional burdens, if any, that copyright owners might expect if the census reporting provision were adopted.

While it is possible that some copyright owners may lose royalties under a sample-based reporting regime, this needs to be balanced with the additional costs imposed by such a regime. This is especially true in the case of additional costs faced by SoundExchange. For SoundExchange,

¹⁵ Compare historian Bruce Levine's *Half Slave and Half Free: The Roots of the Civil War* (Hill & Wane, rev. ed. 2005) for examples of effects of such economic differences within organizations.

every additional dollar spent parsing census reports from noncommercial webcasters is a dollar that cannot be distributed to a copyright owner.

While SoundExchange is to be commended on building from scratch a data-matching and royalty distribution system, even the best data processing operation will find that once the apparatus is in place, costs will scale with the volume of data ingested (*i.e.*, the cost spent processing the data will increase linearly with the amount of data). Therefore, for a single noncommercial webcaster this implies that SoundExchange would face data processing costs that are 650 % greater than for sample reporting.¹⁶

Understanding the absolute costs on a per noncommercial webcaster basis will require additional information from SoundExchange about their data processing costs. As a ballpark estimate for SoundExchange's data processing costs, we can use costs derived from work at MediaUnbound. MediaUnbound is described in my testimony in Webcaster II, transcript for November 14, 2006, at XL-197, -233-37. As CEO of MediaUnbound I have first-hand experience with the costs of matching nonstandardized metadata from clients' music catalogs with a core set of master lists of internal catalog metadata).

As an ancillary part of MediaUnbound's business, the firm must match client music metadata to a core set of internal music metadata. At a high-level, this work is very similar to that done by SoundExchange when it ingests a report of use from a webcaster. Over the course of doing this matching work for the previous nine years, MediaUnbound has found the following:

¹⁶ Under a sample-based regime, a noncommercial webcaster that broadcasts 24 hours/day would generate 56 days of reports. However, under a census-based reporting regime, this same webcaster would generate 365 days of reports. This implies that SoundExchange would receive 6.5 times more data. Since data processing costs scale with the amount of data, we conclude that SoundExchange's costs for this webcaster would increase 650%.

- **Human labor cost input.** All matching work requires some level of human quality assurance. For example, humans are required to determine whether unmatched items are mismatches or uniquely new items which need to be added to the master database. Even in data provided directly from sound recording owners, there are inconsistencies in spelling and metadata which cannot be handled in an automated fashion. Therefore, the cost of this human labor must be included in data processing costs. MediaUnbound estimates this cost to be at \$0.00325 per record.¹⁷ (assuming human labor at \$10/hour).
- **Computer processing comparative costs (at wholesale rates).** Of course, matching work also requires computer processing power. While specific algorithm choices and metadata catalog sizes can influence the amount of computer power required, MediaUnbound has found that utilizing a baseline server with 8GB RAM and 2 dual core processors of 1.5GHz, the firm can process 55,000 records per hour. While the cost of such a server may vary, Amazon's EC2 service will rent a machine of this type at an hourly cost of \$0.40.¹⁸ Therefore, our experience is that processing each record consumes \$0.0000073 of cost in computing resources.

Given these two findings, we can calculate the extra cost faced by SoundExchange in processing census reports instead of sample-based reports from a noncommercial webcaster such as WHRB. As WHRB has noted previously, the station broadcasts on average nine sound recordings per hour.¹⁹ Under a sample-based regime, SoundExchange would be required to process 1,344 broadcast hours of WHRB's programming logs which would be equal to 12,096 records.²⁰ Under a census-based regime, SoundExchange would be required to process 8,760 broadcast hours of WHRB's programming logs which would be equal to 78,840 records.²¹

¹⁷ This estimate assumes a human labor rate of \$ 10/hour. However, MediaUnbound has found that the speed at which the humans work does increase as the labor rate increases.

¹⁸ Amazon's Elastic Computing service is an industry standard source for utilizing instantaneous computing resources. Current prices can be found at <http://aws.amazon.com/ec2/#pricing>

¹⁹ WHRB comments in RM 2005-2, filed August 26, 2005.

²⁰ 1,344 hours multiplied by 9 works per hour = 12,096 records.

²¹ 8,760 hours multiplied by 9 works per hour = 78,840 records.

Therefore, we find that SoundExchange would need to process 70,080 additional records if WHRB were required to provide census instead of sample reporting. Given our cost estimates from above, we conclude that the additional annual cost-burden on SoundExchange is \$ 228.27 per station.²² Since stations like WHRB are only paying the minimum royalty of \$ 500 per year, we conclude that nearly 45 % of all royalties paid by noncommercial webcasters would be eaten up by data processing costs in a census-based reporting regime vs. sample-based reporting.

We welcome additional data from SoundExchange on its per record processing costs in order to update these calculations for their operations. If SoundExchange can provide its “processing cost per record” (where a record is the listing of a single sound recording performed by a webcaster), then we can very accurately project the additional amount of royalty dollars that would go to data processing instead of royalty distribution under a census-based reporting regime.

B. Definition of “automated playlist technology”

As noted by the CRB, the defining characteristic of those stations which face the largest burden in complying with census reporting is the use of human DJs who manually create programming from physical media.²³ The Judges have introduced the term “automated playlist technology” to refer to the process by which a manually operating station could transition its operations away from manual, human-powered programming.

The term “automated playlist technology” necessarily involves two distinct steps:

- **Digitizing sound recordings from physical media for storage on harddrives.** While technology exists to aid in this process, the largest cost is the human labor required to physically perform the task with an entire library of recordings. While

²² 70,080 multiplied by (\$ 0.00325 plus \$ 0.0000073) = \$ 228.27.

²³ 74 Federal Register, No. 66 at 15904 on April 8, 2009.

the digitization of CDs (often called “ripping”), can occur at speeds of up to 30x of sound recording duration, the digitization of LPs must occur in real-time (e.g. 1x).

WHRB currently estimates it owns approximately 75,000 pieces of media (12” LPs, 10” LPs, 7” 45’s, 12” 78’s, CDs, Cassette Tapes and Reels) housed in six libraries (Classical, Country, Folk, Jazz, Rock, and Urban Contemporary).²⁴ We estimate that 60% of these items are vinyl records with an average play length of 45 minutes. Therefore, if a single human were to do nothing but digitize WHRB vinyl recordings it would take her 2,025,000 minutes (or 3.85 years!) to complete the task.

- **Scheduling recordings and enacting playback via computer software.** Once all the sound recordings have been digitized, a software program can be used to create schedules (e.g. playlists) for broadcasting the sound recordings. This software program needs to have a high fault tolerance since any failure in the playback system will effectively take the station “off the air.”

C. What percentage of broadcasters do not use automated playlist technology?

While WHRB is not in a position to have direct survey data about the technologies used by all webcast stations, we can make the following conclusions:

- The vast majority of larger commercial webcasters webcast directly from harddrives on servers utilizing automated playlist technology. This is due mainly to the fact that commercial webcasters broadcast a much more narrow set of music than a noncommercial station such as WHRB..
- Based on filings by both noncommercial webcasters and technology providers such as RadioActivity.Fm and Tom Worster/Spinitron and the college stations with which I am familiar,²⁵ we conclude that the majority of noncommercial webcasters which also operate over-the-air radio stations do not utilize automated playlist technology.

²⁴ Footnote 5 in Comments of WHRB, RM 2002-1.

²⁵ As described in my testimony in Webcaster II on November 14, 2006, at XXL-208-12, 26166.

D. Questions for entities which do not use automated playlist technology

Question: Does manual programming occur as a matter of creative choice?

While the cost in both technology and human labor would be substantial for WHRB to switch entirely to an automated playlist system, the main reasons we choose to rely on manual programming is due to programming philosophy and aesthetic choice. There are compelling non-economic reasons why the station's programming and its educational mission would be impaired.

Manual programming occurs for the reasons as follows:

- **Breadth of content.** WHRB prides itself on playing music that cannot be heard anywhere else. In an age where the repertoire of most mainstream commercial artists can be purchased in digital format from Apple's iTunes Music Store, this means that WHRB is often playing music created by independent artists in limited pressings or lost gems hidden away in WHRB's library vaults that have been hand-collected over the past 70 years. WHRB could play only so much, if had to digitize music from non-digital sources.

For example, in January 2009, WHRB broadcast 14 hours of music from an artist named Tjoltjar, a "recording project" created by a person who calls himself The Reverend JR Preston and described as:

a stumbling mix of raw basement black metal, primitive thrash, and drunken 70's rock, loaded with all sorts of crazy psychedelic sounds, freaked out acid rock guitar leads, haunted house organs, and some of the weirdest, most bizarre vocals ever. (A reviewer for a zine in Malaysia a few years back wrote that the Reverend had a vocal style like "an evil Donald Duck," a comparison of which the Reverend explicitly approves.)²⁶

Most of these recordings do not exist in commercial form and have never been broadcast on a radio station anywhere in the world.

Furthermore, WHRB's programming philosophy attempts to never broadcast the same recording in a three year period. Therefore, we estimate that WHRB

²⁶ WHRB Program Guide, January-February 2009, available at <http://www.whrb.org/pg/JanFeb2009.pdf>.

broadcasts 78,840 unique sound recordings each year and nearly 236,520 unique sound recordings every three years.

Given the cost and labor involved in digitizing these sound recordings, it would not be practicable for WHRB to continue playing such an extreme diversity of music if we had to adopt automated playlist technology.

In addition, for WHRB to go to a completely digitalized library/automated playlist would also restrict announcers from bringing in their own material or borrowing from other sources, *e.g.*, Harvard's on-campus Loeb Library. The station sometimes relies heavily on such sources for both planned music orgies (as described in my testimony in Webcaster II) and spontaneous "Record Hospital," "TDS," and Blues programming.

- **Creativity in playlist creation.** WHRB firmly believes that the process of assembling playlists in real-time spawns a creativity lacking in automated playlist solutions. It is not possible to quantify via algorithms the methods used by human DJs to create interesting and engaging playlists. Instead, this is an art passed down from member-to-member during their time at WHRB. Such an approach to playback means the announcer is able to play physical records on the fly, over (on top of) each other, etc. It relates the music played to the dynamic content to which the listener is listening. In short, by its spontaneity it increases the value and interest in the programming.

When using automated playlist technology to create programming, the scheduler is not able to hear the programming in real-time. Instead, they rely on metadata or other formulaic rules (*e.g.*, don't put a fast song after a slow song, etc.) to create the programming. This is not the case with programming created by "human DJs" in real-time.

For example, WHRB has been airing the "Hillbilly at Harvard" program on Saturday mornings since the early 1960s. The hosts of the show (including "Cousin Lynn" Joiner who has hosted the show for nearly 50 years) announce and banter in-between each song that they play—a technique pioneered in the 1940s by AM radio. They often take calls from listeners for requests and comments which trigger mental associations that have them quickly pulling new records on the fly for broadcast. This type of human-heavy, live radio cannot be replicated by automated playlist technology.

Question: What technologies does WHRB use to comply with current reporting requirements?

WHRB has experience compiling reports of use for one or two weeks out of each calendar year, as this has been a requirement of our licenses with ASCAP and BMI for

the use of song compositions with our terrestrial FM transmissions. In the case of ASCAP and BMI, the stations complete handwritten logs of all songs transmitted during a given week. No technology is utilized to complete this procedure. Since it is difficult to record all appropriate metadata while simultaneously broadcasting in real-time, most of the manual labor to complete the report is accomplished by the DJ after her 2-3 hour on-air shift has ended. We estimate that an additional 12 minutes of labor is required for each one hour of real-time air produced. This one week of reporting on paper requires an estimated 33.6 hours of human labor which would be a cost of \$ 336.²⁷

For purposes of complying with the interim regulations on reports of use for sound recordings utilized in our webcast, WHRB uses web-based software provided by Spinitron.²⁸ Spinitron aids in the process of recording metadata in a digital format. However, Spinitron does not obviate the need for manual data entry by human DJs.

For two weeks in each calendar quarter, all DJs are required to enter information about all sound recordings they transmit into the Spinitron system. As with the paper logs required by ASCAP and BMI, the bulk of this data entry occurs after the DJs on-air shift has ended and on a workstation PC not located in the main on-air studio. To accomplish eight weeks of reporting generates a human labor cost of \$2,688 annually.

²⁷ In our previous comments (WHRB comments in RM 2005-2, filed August 26, 2005), WHRB detailed our finding that it takes a DJ on average 80 seconds to transcribe the metadata from a physical sound recording.

²⁸ For detailed information about Spinitron please see <http://spinitron.com/about.php> in addition to comments of Tom Worster/Spinitron in Docket No. RM 2008-7 on January 29, 2009.

Question: What changes would be required of WHRB to comply with census reporting?

Hypothetically, WHRB would have two methods to comply with census reporting: (1) Transition to a fully automated playlist system; or (2) Acquire in-studio hardware necessary for real-time data entry and provide the manual labor needed to transcribe metadata on all 78,840 sound recordings transmitted annually.²⁹

As noted above, due to WHRB's educational mission and programming philosophy, it is not possible for the station to transition to a fully automated playlist system. Therefore, the only option for providing census reporting would be via manual labor.

In addition, as WHRB noted in Docket No. RM 2008-7 on January 29, 2009, there is no accurate method for generating ATP-based reports when stations rely on manual data entry. This finding was echoed by a large number of entities participating in the proceeding.³⁰

The costs for providing census-based reporting with ATH calculations are presented in the next question.

²⁹ Of course, some metadata is simply unrecoverable from the physical recording, its label, and its jacket.

³⁰ For example, see Comments of Tom Worster/Spinitron; College Broadcasters Inc.; KTRU; etc in Docket No. RM 2008-7 on January 29, 2009. Specifically, see statement from RadioActivity “While the census reporting proposal is merely alarming because it increases workload and cost, the ATP metric isn’t actually calculable at this point in time.” (Docket No. RM 2008-7 on January 29, 2009).

Question: Is technology currently available to permit entities that do not use automated playlist to comply with census reporting? What is the cost (for both the technology and human operational labor) in utilizing these systems?

First, there is no purely technological solution that can allow a station with manual programming by DJs in real-time to comply with census reporting. While SoundExchange lists a large number of commercially-available software packages to allow fully-automated webcasters to comply with census reporting,³¹ these technologies are not applicable for manual programming.

To demonstrate this point, the example of Backbone Networks explicitly mentioned by SoundExchange as an example of technology that could facilitate census reports. Backbone Networks provides a software package which allows a stations to webcast sound recordings stored on a Mac computer.³² The description of their product is as follows:

The backboneServer is the internet radio broadcast streaming server that performs 24x7 automation of playlists, scheduling playlists, takes listener connections, and tracks program logs, listener usage and other administrative information. The OnAirStudio is used to create playlists, schedules and to manage the content of your internet radio station.

The OnAirDisplay is the DJ interface where you manually command automated playlists. It is your console for live broadcasts.³³

The Backbone Networks system is a method to create fully-automated programming from sound recordings already stored on the hard drive of a computer. It is not a method to facilitate reports for webcasters that are manually operated by human DJs in real-time.

³¹ See Comments of SoundExchange at 10 in Docket No. RM 2008-7.

³² See <http://www.backbone.com/features/features-dmca-fields.html> for details on Backbone Network's technology.

³³ Accessed at <http://www.backboneradio.com/faqs/>.

Claims from SoundExchange that a large number of technologies exist to facilitate the creation of census-based reports are entirely focused on stations which rely on fully-automated playlists. These technologies are not applicable to stations such as WHRB.

To calculate the costs of complying with census reporting utilizing ATH, we have two costs to consider: (1) Cost of additional hardware needed for in-studio use; (2) Cost of manual labor to accomplish data entry for all sound recordings transmitted.

- **Cost of hardware to comply with census reporting.** In its previous comments, WHRB stated that the cost of acquiring and installing hardware necessary to comply with census reporting would cost \$1159.³⁴
- **Cost of manual labor to accomplish data entry.** In its previous comments, WHRB stated that it would incur additional labor costs of \$11,865.60 annually to comply with census reporting instead of sample-based reporting.³⁵

Therefore, WHRB's total cost burden for adopting census reporting instead of sample reporting is \$ 13,024.60. That is a very substantial amount, related to the station's annual operating budget – about ten percent in some years.

Automated playlist technology does not advance the student staff members' education in broadcast programming, Automated programming is a crutch for the automaton announcer; it doesn't challenge him to sense and respond to the content in real time. In automated programming the announcer, who has recorded the continuity seriatim in a sterile environment, divorced from the musical content of the programming, makes no demand on the announcer to respond in real time as the listeners' listening experience progresses.

³⁴ See WHRB Comments at 13 in Docket No. RM 2008-7, filed January 29, 2009.

³⁵ Ibid.

E. Questions concerning the use of open-source licensed spreadsheet programs for reporting.

Since WHRB currently uses Spintron for recordkeeping purposes, it would not take advantage of the ability to use an open-source licensed spreadsheet program for reporting. However, for a hypothetical educationally-affiliated station which would adopt an open-sourced spreadsheet program such as OpenOffice instead of Microsoft Excel, the cost savings would be as follows:

- Microsoft Office Excel 2007 Academic version costs \$114.95.
- Software can be expected to depreciate over 3 years.
- The cost for OpenOffice is \$0.

Therefore, the station would realize an annual cost savings of \$38.31.

While the cost savings are useful, WHRB reiterates its statement that the adoption of OpenOffice would be useful because the OpenOffice is intended to be highly customizable and support interoperability through open standards. We look forward to hearing comments from other participants on the feasibility of utilizing this standard.

VII. Prayer

In response to the Board's request for participants to provide cost and savings information to determine whether it is reasonable to exempt certain webcasters from both census and ATP reporting, we have shown that an individual station will face additional costs of \$ 13,024.60 to comply with census reporting. Furthermore, we find that of the \$ 500 annual royalty payment made by WHRB, SoundExchange would spend an additional \$ 228.27 processing census data instead of sample-based reporting. This is simply not cost-effective, and it would simply be impracticable for many small educational webcasters. More importantly such a requirement would adversely affect the quality of WHRB's programming and its staff-

educational mission. The problem of recordings with incomplete or unreconstructable metadata is particularly acute for the genre of music recordings aired by many small educational, non-commercial webcasters.

Accordingly, WHRB urges the Board to adopt our proposal granting an exemption appropriately tailored to noncommercial webcasters which qualify for the minimum royalty payment from year-round census reporting and to allow continued use of ATH methodology for those quarterly reports of use that may be required.

Respectfully submitted,

HARVARD RADIO BROADCASTING CO., INC.

by  ppc
Michael Papish
Policy & Technology Advisor³⁶
papish@post.harvard.edu
Station WHRB (FM)
389 Harvard Street
Cambridge, MA 02138

May 26, 2009

Of counsel:³⁷

William Malone
James R. Hobson
Matthew K. Schettenhelm
MILLER & VAN EATON, PLLC
1155 Connecticut Avenue, N.W., Suite 1000
Washington, DC 20036-4306
(202) 785-0600
(202) 785-1234 (FAX)
info2@millervaneaton.com

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³⁶ Michael Papish is also CEO of MediaUnbound, Inc. (<http://www.mediaunbound.com>) a provider of media recommendation and personalization technology based in Cambridge, MA. MediaUnbound has no financial interest in the outcome of this Docket.

³⁷ Required to be served under P.L. 89-332, 5 U.S.C. § 500(f).