

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

_____	)	
In re	)	
	)	
Notice of Proposed Rulemaking	)	RM 2008-7
	)	
NOTICE AND RECORDKEEPING FOR USE OF	)	
SOUND RECORDINGS UNDER STATUTORY	)	
LICENSE	)	
_____	)	

**COMMENTS from TOM WORSTER and SPINIRON**

In response to the Copyright Royalty Board's Notice of Proposed Rulemaking (Dec 30, 2008, 37 CFR Part 370, Docket No. RM 2008-7), I submit the following comments.

**Introduction**

I am Tom Worster and I represent Spiniron, a business located in Boston, MA that, since 2003, has provided record keeping and reporting services to radio stations and webcasters including, among other services:

- A web-based user interface that DJs at client radio stations use to record the broadcast performances of music,
- A central database that stores performance logs (currently over 1.6 million),
- Web-based tools for generating compliance reports for the copyright societies,
- One such tool generates reports of use in the format specified in the interim record keeping and reporting regulations 71 FR 59010 (October 6, 2006) for delivery to SoundExchange.

Spiniron mostly serves non-commercial and educational radio stations. Many of these stations also provide a simultaneous webcast of their AM/FM program. My experience also includes, since 2000, being a volunteer DJ at WZBC Newton and involvement in the technical implementation of WZBC's simultaneous webcast.

## Summary of Comments

I describe in my comments, fundamental technical obstacles to reporting Actual Total Performances (ATP) for many radio stations with simultaneous webcasts.

I also argue that, for many radio stations with simultaneous webcasts, attempting to implement reporting of ATP will lead to:

1. generation of inaccurate usage data, the quality of which cannot readily be assessed and therefore the value of which must be questioned,
2. introduction of unfairness in the distribution of royalties to copyright holders, and
3. compliance concerns for stations when the accuracy of reports cannot be assured,

Census reporting will for some stations cause increase in data processing effort and cost out of line with the fee paid by webcasters with small audiences.

I explain how that combined introduction of census reporting of ATP will lead to generation of large volumes of inaccurate usage data.

These are my most serious concerns and I urge the CRB to make allowances for the specific class of webcasters whose operational situation prevents ATP data collection with acceptable accuracy.

I further argue that the regulations should specify that the Receiving Collective (currently SoundExchange, Inc.) provide confirmation of delivery of reports of use as part of the overall specification of delivery mechanisms.

I also provide answers to the proposed rulemaking's questions and point out one technical problem I foresee in the reassignment of category transmission code letters.

### **Actual Total Performances Reporting §370.4 (b) (3) and §370.4 (d) (2) (vi)**

Under the proposed regulations, many radio stations currently offering a simultaneous webcast of their AM/FM program will need to transition from Aggregate Tuning Hours (ATH) reporting to Actual Total Performances (ATP) reporting. Many of Spinitron's client stations fall into this category. There is a fundamental technical obstacle, which I explain in the following.

#### **Technical background**

Consider the class of radio stations at which human DJs play music manually, i.e. they use a mixing board, CD players, turntables etc. to produce an AM/FM program in real time, often while selecting music as they go, responding to requests and interacting with listeners online and by telephone, etc. This class of stations stands in contrast to integrated computerized webcasts that use a computer to feed a selection of audio data files into a webcast server.

Record keeping for the non-computerized station is a more-or-less manual process. The DJs log, either on paper or a computer, what was played and when. I call such a log a "manual performance log". Spinitron supports such manual performance logging with a web-based user

interface (among other input methods) and a centralized database. Nevertheless, the data entry is still, largely, manual for these stations.

Now consider such stations that also have a simultaneous webcast. They use an encoder to turn the AM/FM program signal into a digital stream, which is sent to a webcast server. Internet listeners connect to the webcast server to receive a copy of the stream. The webcast server knows how many listeners are connected at any given moment but the signal sent to the encoder and thence to the webcast server includes no data to identify the sound recordings in the stream or when they begin and end. Thus, the webcast server cannot determine performances (in the sense defined in §370.4 (b) (3)).

To produce an ATP report of use, the data of listener client connections to the webcast server must somehow be reconciled with the manual performance log by timestamp matching, and this presents problems.

For ATH reporting, the precise time that the performance of a recording started and stopped was not important; rather, the key performance data was that the performance happened within a broad interval of time, for which the manual performance log was sufficiently accurate. This was consistent with typical record keeping practices at radio stations and with reporting requirements for copyright compliance reporting for the broadcast service.

With the proposed ATP reporting, precise time keeping of the start and end of each performance is necessary. Although the proposed regulations do not require performance timestamps in reports of use, they cause the need for precise timekeeping in order to produce ATP reports.

In contrast to this specific class of webcasters stands the fully computerized, integrated webcaster (essentially a computer program feeding audio files into a webcast server), which, with sufficient integration of its sub-systems, may accurately reconcile performances with webcast listener count to produce ATP data. The point I want to emphasize is the **integration**, more specifically, integration of reliably accurate logging of time start and stop times of sound recording performances with client listener count. This integration is required for accurate ATP data collection but it is not available to manually-operated radio stations. The limitation is intrinsic to such stations' operations.

### **Inevitable inaccuracy in ATP reporting attempts**

For a non-computerized, manually-operated radio station with a simultaneous webcast that uses a manual performance logging system such as Spinitron, I can envisage processes that would attempt to generate ATP reports of use. Several serious issues become obvious:

1. The station must deliver the webcast logs to Spinitron so that Spinitron can attempt to match them to the manual performance log and produce the report of use. The delivery may present challenges for a station that has little skill in operating servers, outsources the servers or relies on volunteer help for server operation.
2. It is doubtful that we can presuppose that webcast logs in recognized standard formats including the necessary data will always be available.
3. The time-keeping at the webcast server and the radio station must be synchronized and accurate. This may be possible but will be error prone. Stations cannot assume that webcast

servers maintain synchronization to a reliable reference and they cannot easily verify that the clocks at an outsourced webcast provider are synchronized with their own.

4. DJs using a quartz wall clock rather than a GPS- or NTP-referenced clock may fall out of sync with the webcast server.
5. The exact start and stop time for each performance must be logged in the manual performance log. This is a requirement for entirely new procedures for radio station DJ staff that I do not believe is realistic.

Manual performance logs today typically include an approximate performance timestamp and this has been adequate for compliance with usage reporting of copyright recordings. Similarly, timestamps are not part of reports of use as specified in CRB regulations. Nevertheless, a requirement for precise timekeeping and record keeping follows from the ATP requirement.

For a busy DJ playing 20 songs an hour with all the other duties he or she performs (making announcements, operating equipment, playing PSAs, logging, monitoring, fielding listener comments and requests, etc.) it is not realistic to expect much more than an approximate timestamp. Precise start and stop times for each performance will not be available.

Hence, if one were to attempt to generate a report of use with ATP data by combining a manual performance log with the corresponding log from a webcast server, it could not be regarded as accurate. For many stations there will be no better ATP reporting procedure available.

### **Consequences of inaccurate reporting**

From the point of a station manager and of the copyright holders, accuracy is important. To station management it is a question of compliance. To copyright holders it is a matter of fairness.

The theoretical benefit of moving to ATP reporting ought to be a more fair distribution of royalties to copyright holders. In principal, this would clearly be a positive move. However, transitioning the kind of webcaster I have described from ATH to ATP reporting will introduce significant reporting inaccuracies. The proposed regulations thus lead to a new kind of unfairness in the distribution of royalties.

Furthermore, I submit that there is no way to assess the accuracy of ATP reports that depend on manual performance logs. The quality and usefulness of these reports cannot be known.

### **Conclusion of comments on ATP reporting**

I have argued that, owing to technical obstacles intrinsic to the operations of many manually-operated radio stations with simultaneous webcast and manual performance logs, accurate ATP data cannot practicably be produced. If the argument is acceptable, it follows that regulations should make allowances for these webcasters. CRB should avoid a change of regulations that predictably introduces significant inaccuracies that cannot properly be assessed or controlled.

### **Census Reporting**

For a radio station using Spintron's service (or something similar), transitioning to census reporting (taken separately from the issue of ATP reporting) may or may not present problems depending on whether or not that a station already records *all* its performances on Spintron. For

stations using Spinitron that have entered all their performances in the central Spinitron database, generating census reports should be automatic. Relative to the interim regulations, census reporting increases the volume of data in reports of use. Spinitron has no plans to impose additional fees for this.

However, by no means all our current client stations use Spinitron to capture all their performances. Some use station automation and keep records for those performances separately. There are several other reasons why not all performances are kept in the Spinitron central database. While stations can import performance records from other sources and computer programs into Spinitron's database, this is another manual process that will present difficulties in the implementation of census reporting.

Data processing efforts and costs should be weighed relative to the royalty revenue received by copyright holders. For this reasons I submit that the regulations should involve an ATH threshold for a webcast service, below which census reporting is optional.

### **Combination of Census and ATP Reporting**

The implementation of census reporting will increase the volume of report data several times over. It strikes me as unwise to make this requirement at the same time as introducing ATP reporting with, for the class of webcasters I have identified above, the associated accuracy problems. The combined result will be very large volumes of data, the quality and usability of which is essentially unknowable.

### **Confirmation of Receipt of Reports of Use**

Absent in the 2006 interim regulations and in the current proposal are procedures for confirmation of delivery of reports of use. This is important to any reporting station in order to be confident of compliance. As it stands, in email delivery, the sender may explicitly request a reply email though I understand these are not given by SoundExchange. In FTP, a technically competent reporter might verify that the file is on the SoundExchange FTP server but this does not amount to a confirmation from SoundExchange. I am not sure what would be a solution CD-ROM and floppy disk. Delivery to a SoundExchange web site could easily incorporate confirmation that could be saved by the reporting station for its records (analogous to conventional order confirmation in e-commerce).

Compliance is an important matter and without delivery confirmation, a station cannot document its compliance. In my view, the record keeping and reporting requirements should explicitly require that the receiving Collective provide confirmation of receipt of reports of use. The interim and new proposed regulations amount, in part, to a detailed specification of a protocol for communication of data from reporting webcasters to the Collective. To a communications engineer it would be clear that without confirmations this is an unreliable protocol.

### **General comments to Section V. B. on Delivery Methods**

While Spinitron supports all four current methods (email, FTP, CD-ROM and floppy disk), my judgment is that email is superior for both reporting staff and SoundExchange. Compared to email, CD-ROM and floppy disk incur additional cost, time and inconvenience to parties at both ends. For reporting stations, relative to email, FTP has the disadvantage of being technically

more difficult because far more people are competent in the use of email than they are in the use of FTP.

#### **Comments to Questions in Section V. A.**

*"What, if any, commercially available software has become available since the promulgation of the interim regulation in 2006 that could be used to compile records of use?"* Spinitron added the tool for output of report of use in the format defined in the interim regulations at the time of their promulgation.

*"Would such software produce records of use that are format compatible with SoundExchange's data processing system?"* Yes. Spinitron obtained explicit confirmation of compatibility from SoundExchange.

*"What are the costs associated with such software?"* The addition of SoundExchange-compatible report of use generation to Spinitron came at no extra charge. Since client stations have a variety of motives to use Spinitron besides report of use generation, it is not possible for me to assign a cost to this function in a way that would answer the question.

#### **Comments to Questions in Section V. B.**

*"Have technological developments or software improvements reduced the average estimated costs of creating and maintaining a Web site for receipt of records of use since the interim regulation was promulgated in 2006?"* In my view as an operator of a web service that includes web-based delivery of files, I do not believe these costs have changed significantly since 2006. They were never high.

*"Have data security methods improved since the promulgation of the interim regulation such that maintaining a Web site for receipt of records of use is now subject only to the same general level of risks as other methods of electronic delivery?"* Again, not a lot has changed since 2006. However, conventional data security methods that have been in widespread use in e-commerce since before 2006 are inexpensive and offer significantly greater security than any of the existing four delivery methods.

*"What are the current security concerns and how may they be addressed?"*

- Security of SoundExchange's servers. In this aspect, web-based delivery is no different from email or FTP delivery. All such networked computers need to be secured whether they are web servers, email or FTP. Common practice in the IT industry applies.
- Authentication of the identity of the source of the report of use. Spoofing the identity of reporting entity is not difficult with any of the existing four methods. I am uncertain how hard it is for SoundExchange to reliably detect such spoofing or how concerned with this risk the parties involved in these regulations may be. With web-based reporting, common practices in the IT industry (e.g. those used in e-commerce) for authentication of users may be used. These practices include a range of techniques that allow the operator to choose a level of authentication confidence appropriate to the task in hand. Some of the simplest and least costly techniques would offer more authentication confidence than the existing delivery methods.
- Confidentiality of the communication. This may not be of much concern if the data in the reports of use are not regarded as secret. If they were then email and FTP are well known as

inferior as they offer no protection against eavesdropping. Confidentiality of US Postal Service mail is better in that law protects it. Web services may use encryption (again, a common practice and inexpensive) to achieve confidentiality.

- Tampering with the communication. Web services that use encryption include mechanisms to prevent tampering. The other four methods are similarly vulnerable to tampering as they are to eavesdropping, respectively.
- Loss of communication. All the existing four methods are vulnerable to this and the solution is, as I mentioned above, confirmation from SoundExchange to the reporter that it received the report. Considering the efforts a radio station must make to comply with these regulations, I think they should have such confirmations.

*"Is there now commercially available software that could facilitate the electronic delivery of reports of use to a Web site and, if so, would the benefits of such software justify its costs?"* Such software is available, though this is not a new development. I do not know if the benefits justify the costs since email delivery is convenient and inexpensive. On the assumption that the level of security of the existing methods is adequate, and further assuming that SoundExchange would provide receipt confirmations (see comments above), then I would regard email delivery as adequate and that there is little gained from adding web delivery.

*"Is it more efficient for the Collective to develop a system to report and deliver the records of use and make that system available to the Services?"* I am not sure what is being asked here. Please clarify the question including some description of the hypothetical service in question.

*"What further improvements to the reporting regulations can be made in light of recent technological developments, newly available software or substantially reduced costs for certain delivery mechanism alternatives since the promulgation of the interim regulation?"*

Confirmation of receipt of reports should be required. This is technically simple and inexpensive. Delivery mechanisms cannot be regarded as reliable without them, nor can reporting webcasters document their compliance.

Otherwise, given the experience at Spinitron so far, the delivery methods themselves are not the big problem. The difficulties for radio stations in complying with the interim regulations lie instead in the accurate and complete collection and tabulation of the data required for reports of use, problems I already described.

#### **Comment to §370.4 (d) (2) (ii) on Category Transmission Codes**

I think it likely that the proposed redefinition of the semantics of the code letters D, E, F and G will lead to inaccurate reporting, especially during the transition period from the interim regulations. I would suggest not reassigning the code letters H, I, J and K from the interim regulations to D, E, F and G respectively. Instead the new regulations should explicitly obsolete the 2006 D, E, F and G codes, reserve those letters, state that they should not be used, and keep codes letters H, I, J and K with their semantics unchanged from 2006. This would make very clear what has changed since 2006 and that any station previously reporting under one of the obsolete codes must choose another one. Furthermore, it would be clear to SoundExchange that a report of use using, say, code letter G, indicates a report of use that has not transitioned to the

new regulations whereas with the current proposed regulations it would be ambiguous whether the report of use is accurate or is using an obsolete definition.

Wording along the lines of the following might work. Insert a new paragraph after §370.4 (d) (2) (ii) (C): "Category transmission codes (D), (E), (F) and (G) [which were defined for report of use in interim regulations 71 FR 59010 (October 6, 2006)] are obsolete, reserved by the CRB and shall not be used in report of use." After this, resume with the remaining four transmission category definitions but with code letters H, I, J, and K.

### **Conclusions**

Actual Total Performance (ATP) data is not available to webcasters without fully computerized tight integration of recording performance systems with webcast servers. Such integration is not possible to a many radio stations with a simultaneous webcast, for example those at which humans play the recordings and manually log performances. Attempts by such stations to produce ATP data from manual performance logs will produce inaccuracies to a degree that cannot later be properly assessed or controlled. This then introduces unfairness in the distribution of royalties. Regulations should allow such stations to continue to use ATH reporting.

Census reporting will increase the costs and burdens of compliance. In order to keep costs in line with royalty fee revenues, regulations should use a threshold ATH value for webcast services, below which census reporting would be optional.

Census reporting combined with a transition to ATP reporting will create large volumes of data of dubious quality and worth. Since a receiving Collective will not be able to determine the serviceability of data in a report of use, the regulations should be limited to procedures that can clearly be expected to be accurate.

Delivery methods are currently inadequate in that there is no requirement for confirmation of receipt for any of the existing methods. Reporting webcasters should be able to document their compliance, which they can only do if they have confirmations. The regulations should require the receiving Collective to issue such confirmations as part of the overall delivery mechanisms.

Changing the semantics of Category Transmission Code Letters D, E, F and G relative to interim regulations should be avoided.

I am pleased to make myself available to answer questions that might arise from my comments.

Respectfully submitted,  
January 29, 2009  
**Tom Worster, Spinitron**  
199 W Newton St Boston MA 02116  
Tel: 617 247 2624  
tom@spinitron.com