

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

<i>In the Matter of:</i> Digital Audio Broadcasting Systems And Their Impact on the Terrestrial Radio Broadcast Service	MM Docket No. 99-325
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**REPLY COMMENTS OF
THE ELECTRONIC FRONTIER FOUNDATION
AND THE BRENNAN CENTER FOR JUSTICE FREE
EXPRESSION POLICY PROJECT**

In our June 16, 2004 comments filed in the above-captioned docket,¹ the Electronic Frontier Foundation (“EFF”) and Brennan Center for Justice (“Brennan Center”) urged the Commission to reject the Recording Industry Association of America’s (“RIAA”) effort to interfere with noncommercial home recording of digital radio broadcasts.

The RIAA, in contrast, has now asked the Commission to impose pervasive regulations on digital radio broadcasters and receiver manufacturers.² In attempting to justify its request, the RIAA misstates the relevant copyright law principles governing noncommercial home recording, misdescribes the capabilities of iBiquity’s IBOC radio technology, and resorts to unsupported speculation in predicting that the “sky will surely be falling soon.”

¹ See Comments of the Electronic Frontier Foundation and the Brennan Center for Justice, MM 99-325, filed June 16, 2004 (hereafter, “EFF/BC Comments”).

² See Comments of the Recording Industry Association of America, Inc., MM 99-325, filed June 16, 2004 (hereafter, “RIAA Comments”).

In short, the RIAA seeks intrusive federal regulation for a broadcast medium in its infancy, on technologies that do not yet exist, to restrict perfectly legal activities, all in the name of addressing an as-yet nonexistent threat. Its proposal should be rejected by the Commission.

As anticipated, the object of the RIAA's ire appears to be an as-yet-nonexistent product: a digital radio receiver that records digital radio (i.e., IBOC) broadcasts; disaggregates the recordings into individual songs; creates "wish lists" to enable archiving of songs by artists; and exports recordings to other devices for archiving or "space shifting." In our prior comments, we dubbed this mythical "TiVo for digital radio" a "DAB receiver/recorder."

We agree with the RIAA that a DAB receiver/recorder with the capabilities described could be built with current technologies. In fact, we imagine that such a product could prove quite popular, potentially speeding consumer adoption of digital broadcast radio technologies.³

For the reasons set forth in our June 16, 2004 comments, as well as the additional reasons set forth herein, we squarely disagree with the RIAA that intrusive Commission regulation of DAB receiver/recorders is justified.

I. Copyright policy militates strongly against the RIAA's proposed regulation of DAB receiver/recorders.

The RIAA Comments contain a one-sided, inaccurate description of the goals of copyright policy. In fact, copyright policy strongly disfavors a Commission-imposed design mandate intended to prop up the existing business models of the four major record labels for whom the RIAA speaks.

First, both Congress and the courts have repeatedly made it clear that the primary purpose of copyright is *not* to enrich creators or the industries that distribute their works. Rather, the primary goal of copyright has always been to benefit the public.⁴ In establishing exclusive rights in

³ We remain mystified, however, by the RIAA's confident predictions that these as-yet-nonexistent devices will up-end the entire music industry, wipe out analog broadcasting, and decimate the legitimate digital download market. Those dire predictions appear to be based on pure speculation, given the current nonexistence of DAB receiver/recorders.

⁴ See, e.g., *Sony v. Universal City Studios*, 464 U.S. 417, 431-32 (1984) ("The sole interest of the United States and the primary object in

favor of creators, Congress has consistently avoided enshrining in law any particular entertainment industry business model.⁵ This recognizes the fact that, over the long run, copyright owners are better off when entertainment industry business models are subject to the forces of competition. In fact, market forces and new technologies have repeatedly wiped out old business models in the entertainment industry, only to replace them with new approaches that have enhanced the value of copyrighted works.

Second, contrary to the RIAA's proposal for DAB receiver/recorders, copyright policy has long disfavored federal regulatory intrusion into questions of device design. The reach of copyright law into technology design has long been limited by the Supreme Court's 1984 ruling in *Sony v. Universal City Studios*, where the Court announced that copyright's secondary principles will not intrude into design decisions so long as the device in question is "capable of substantial noninfringing uses."⁶

In the years since the *Sony* ruling, Congress has approved technology mandates in the copyright context on only two occasions, imposing limited obligations on makers of analog video cassette recorders and on makers of digital audio recording devices.⁷ The history of copyright policy thus speaks very clearly—design mandates are very much the exception, not the rule.

Moreover, on the two occasions where technology mandates have been adopted in service of copyright policy, Congress moved only after extensive and detailed consideration of the problem. In neither case did Congress delegate the creation of the regulatory regime to an administrative entity. In both cases, Congress acted only after industry consensus had been achieved.

conferring the monopoly...lie in the general benefits derived by the public from the labors of authors.").

⁵ See *Teleprompter Corp. v. CBS Inc.*, 415 U.S. 394, 414 n.15 (1974) ("While securing compensation to holders of copyright was an essential purpose of that Act, freezing existing economic arrangements for doing so was not.").

⁶ See *Sony v. Universal*, 464 U.S. at 442.

⁷ See 17 U.S.C. § 1201(k) (Macrovision mandate for analog video cassette recorders); 17 U.S.C. § 1001 *et seq.* (SCMS mandate for digital audio recording devices).

The record here could not be more different. Here, the RIAA urges the Commission to break with copyright policy, imposing a new set of design mandates without express congressional guidance and in the absence of any consensus among effected parties. In fact, as discussed below, the RIAA proposal would actually supplant and disrupt the copyright policies that Congress has already announced for digital home recording.

II. Congress has specifically approved noncommercial home recording and home recording technologies.

The RIAA's biased and blinkered account of "copyright policy" cannot obscure the fact that copyright law expressly approves of digital audio home recording devices (including devices like the DAB receiver/recorder) and their noncommercial use by consumers.⁸ There is no copyright policy "gap" here for the Commission to fill, even if the Commission had the jurisdiction to do so. Where Congress has legislated with specificity, it is not for the Commission to countermand its legislative scheme.

As to the RIAA's view that DAB receiver/recorders represent a new and unique threat to the interests of major record labels, this argument is simply addressed to the wrong branch of government. While Congress may not have had DAB receiver/recorders specifically in mind when it passed the AHRA, the statutory scheme includes that category of devices. Until Congress revisits the statute in light of new technology developments, it is not for the Commission to substitute its regulatory judgments in place of directly applicable provisions of the U.S. Code.

A. The AHRA specifically addresses DAB receiver/recorders.

Congress has already crafted a statutory scheme that addresses the issue of noncommercial home recording of digital audio. As discussed in our June 16, 2004 comments, a DAB receiver/recorder could certainly qualify as a "digital audio recording device" (DARD) within the meaning of the AHRA.⁹ The RIAA's counter-arguments to distinguish or downplay the importance of the AHRA are simply unavailing.

⁸ See EFF/BC Comments, at p. 6-11.

⁹ See EFF/BC Comments, at p. 7-8. We are not suggesting that *all* DAB receiver/recorders would necessarily qualify as DARDs. But because there are currently no DAB receiver/recorders on the market, we are puzzled by

First, Congress in the AHRA expressly contemplated that digital recording technologies would be used to record digital broadcast transmissions, much as analog recording technologies had long been used to record analog broadcasts. The statutory scheme expressly anticipated digital recordings of digital transmissions.¹⁰ An examination of the relevant legislative history further bears this out.¹¹

Second, contrary to the RIAA Comments, the AHRA is not limited solely to digital audio tape (“DAT”) technologies. Nothing in the statutory definitions adopted by Congress limit the statutory scheme to tape-based technologies, as demonstrated by the fact that the now-common CD recorders fall comfortably within the statute’s ambit. Several next-generation digital audio recorders that rip CDs to internal hard drives also fall within the statute’s terms.¹²

Third, the RIAA badly misstates the law when it suggests that any digital recording device that employs a hard drive is somehow precluded

the RIAA’s confident prediction that “it is unlikely that the AHRA would apply to many, or any, of the DAB receiver/recorders.” *See* RIAA Comments at p. 68.

The statutory scheme makes it clear that Congress intended to give device designers a choice—either build a DARD and enjoy the immunities provided by the AHRA, or eschew the AHRA and rely on the general copyright principles announced in the *Sony* case. The RIAA, in contrast, urges the Commission to upset this statutory scheme with a mandatory approach that not only eliminates the choice Congress presented to designers, but in fact imposes a more restrictive regime than the AHRA.

¹⁰ *See* 17 U.S.C. § 1001(1) (addressing “digital transmission” in definition of DARD); *RIAA v. Diamond Multimedia Systems*, 180 F.3d 1072, 1079-81 (9th Cir. 1999) (finding that DARDs include devices that make digital audio recordings from a “broadcast station”).

¹¹ *See RIAA v. Diamond*, 180 F.3d at 1080-81 (citing legislative history).

¹² Examples of AHRA-compliant products that rip audio CDs to internal hard drives include Yamaha’s MusicCAST Digital Audio Music Server, Denon’s NS-S1000 Network Multimedia Server; TDK’s DA-9000 CDRW Jukebox. For a discussion of the SCMS implementation in Yamaha’s MusicCAST product, *see* http://www.audioholics.com/productreviews/avhardware/yamaha_music_cast_7.html.

from being a DARD.¹³ Under the AHRA, there is nothing talismanic about the storage of music on a hard drive.

The important question, according to the Ninth Circuit in *RIAA v. Diamond Multimedia*, is where a recording device gets its music *from*.¹⁴ In order to qualify as a DARD, according to the statute, a device must be designed for the primary purpose of making “digital audio copied recordings,” which in turn are defined as copies of “digital musical recordings.”¹⁵ Such “digital audio copied recordings” can be made either from (1) material objects that include only sounds (e.g., CDs, DATs) or (2) digital transmissions (including DAB).¹⁶

Excluded from “digital musical recording,” however, are material objects that include computer programs (such as hard drives contained in general purpose computers).¹⁷ So, if a device makes its recordings *from* a hard drive contained in a general purpose computer, it falls outside the scope of the AHRA. Most portable MP3 players fall into this category because they transfer music from a general purpose computer rather than directly from CDs or digital broadcasts. Accordingly, because most MP3 players are not able to make recordings directly from CDs or digital broadcast transmissions, they fall outside the AHRA.¹⁸

DAB receiver/recorders, in contrast, would be making their recordings directly from digital broadcast transmissions, and thus could qualify as DARDs.¹⁹ The fact that a DAB receiver/recorder might store

¹³ There are a variety of AHRA-compliant home audio recorders on the market that rip CDs to a hard drive contained in the device. *See, e.g.,*

¹⁴ *See RIAA v. Diamond Multimedia Systems*, 180 F.3d 1072 (9th Cir. 1999).

¹⁵ *See* 17 U.S.C. § 1001(3) (DARD is a device designed for the primary purpose of making “digital audio copied recording” for private use); 17 U.S.C. § 1001(1) (a “digital audio copied recording” is a reproduction of a “digital musical recording”).

¹⁶ *See* 17 U.S.C. § 1001(5)(A).

¹⁷ *See* 17 U.S.C. § 1001(5)(B).

¹⁸ *See RIAA v. Diamond*, 180 F.3d at 1078 (“[T]he Rio does not reproduce files from something that falls within the plain language of the basic *definition* of a digital musical recording.”) (emphasis in original).

¹⁹ *See* 17 U.S.C. 1001(1) (a “digital audio copied recording” can be made

those recordings to a hard drive (or nonvolatile flash memory) is irrelevant to the AHRA analysis.

The RIAA's claim that SCMS-compliance would be difficult for the maker of a DAB receiver/recorder is also unfounded. There are a number of ways that manufacturers of DAB receiver/recorders could comply with the serial copying standards required by the AHRA. For example, the manufacturer could choose to omit digital outputs altogether (a solution that might prove popular for many car-based products), which would appear to make SCMS compliance a moot point.²⁰ In the alternative, a manufacturer could petition the Secretary of Commerce to verify that its technology satisfies the AHRA's serial copy requirements.²¹ In any event, to the extent the serial copy requirements must be updated in light of new technologies, Congress has expressly delegated that question to the Secretary of Commerce.²²

In sum, there is nothing in the AHRA that suggests that a DAB receiver/recorder would be unable to meet the statutory requirements for qualifying as a DARD. Adopting the RIAA's proposed design mandate for such devices would, consequently, interfere with the statutory scheme specifically established by Congress to address this category of digital audio recorders.

B. Copyright law permits noncommercial home recording of broadcast programming.

As discussed at length in our June 16, 2004 comments, Congress in the AHRA expressly approved noncommercial home taping of music from digital broadcast sources, declaring that music fans could not be sued for infringement when making recordings using AHRA-compliant devices or media.²³ This is true irrespective of whether the recordings are

from either a "digital musical recording" or indirectly from a broadcast transmission of one).

²⁰ See *RIAA v. Diamond Multimedia Systems*, 29 F.Supp.2d 624, 632 (C.D. Cal. 1998) (SCMS compliance is futile where a device has no digital outputs), *aff'd on other grounds*, 180 F.3d 1072 (9th Cir. 1999).

²¹ See 17 U.S.C. § 1002(b).

²² See *id.*

²³ See EFF/BC Comments at p. 8-11.

disaggregated into individual songs, archived for repeated listening, or selected by use of a “wishlist” that compiles tracks from favorite artists.

Furthermore, contrary to the RIAA’s contentions, the AHRA expressly includes a mechanism to compensate rightsholders for noncommercial home taping activities. The AHRA imposes a levy on all AHRA-compliant devices and media, a levy that in turn is distributed to rightsholders.²⁴ When it comes to AHRA-compliant devices and media, consumers have already paid for the right to make noncommercial home recordings from digital broadcast sources, including DAB.

Most importantly, noncommercial home recording of digital radio broadcasts may well qualify as fair use, even if done using non-AHRA-compliant devices. The Supreme Court has already expressly approved of noncommercial “time-shifting” of broadcast television content.²⁵ The RIAA cannot point to any case law that forecloses the same result for “time-shifting” or “space-shifting” in the DAB context. Congress has expressly left fair use questions to the courts for case-by-case determination.²⁶ While some kinds of home recording may well violate copyright law, others kinds will not. The RIAA can point to no delegation of congressional authority that would empower the Commission to make these decisions on a medium-wide basis.

C. The DPRA and DMCA provide no support for the RIAA proposal.

The RIAA’s emphasis on the Digital Performance Rights in Sound Recordings Act (“DPRA”) and Digital Millennium Copyright Act (“DMCA”)²⁷ as indicators of congressional views on copyright policy is particularly misplaced, as those statutes specifically undermine the RIAA’s arguments for a design mandates on DAB receiver/recorders.

The DPRA, as later amended by the DMCA, created a limited exclusive right in the digital public performance of sound recordings. But any discussion of these statutes in the context of DAB must begin by noting the obvious: the statutes specifically *exempt* DAB broadcasters

²⁴ See, e.g., 17 U.S.C. §§ 1003-1007.

²⁵ See *Sony v. Universal*, 464 U.S. at 455.

²⁶ See 17 U.S.C. § 107.

²⁷ See RIAA Comments at p. 37-41.

from the digital performance right they created.²⁸ As discussed in detail in the June 16, 2004 comments of the Home Recording Rights Coalition, this demonstrates that Congress in enacting the DPRA had no intention of changing the prior copyright rules as they apply to digital radio broadcasting.²⁹ Instead, the DPRA was primarily concerned with creating a new public performance right applicable to webcasters and subscription satellite audio broadcasters.

There is also nothing in the DPRA or DMCA to suggest that Congress meant to change the copyright law applicable to noncommercial home recording. Such recording implicates the *reproduction* right, which the DPRA left unchanged, not the digital *public performance* right in sound recordings.

Moreover, the DMCA's provisions relating to webcasting actually reinforce the clear, long-standing congressional antipathy to design mandates in copyright policy-making, as well as congressional acceptance of noncommercial home recording. So, while Congress took steps to regulate the playlists of noninteractive webcasters,³⁰ it did not impose any design mandate on devices that might record those webcasts. Today, there is a wide array of lawful software products that enable the recording (and subsequent automated disaggregation) of webcast content.³¹ Similarly, while Congress forbade such webcasters from actively encouraging home recording, it did not require webcasters to make any effort to *discourage or impair* home recording.³²

²⁸ See 17 U.S.C. § 114(d)(1)(A).

²⁹ See Comments of the Home Recording Rights Coalition, MM 99-325, filed June 16, 2004, at p. 4-5.

³⁰ See, e.g., 17 U.S.C. § 114(j)(13) (defining the permissible “sound recording performance complement”).

³¹ See EFF/BC Comments at p. 14 (listing software products including Streamripper, RadioLover, and StationRipper).

³² See 114(d)(2)(C)(vi) (in order to qualify for compulsory license, webcaster may not take “affirmative steps” to encourage recording, but is not required to employ any copy protection mechanisms). This explains why webcasters may choose to use any streaming audio format they choose, including MP3, irrespective of whether the format includes any “content protection” features.

In summary, nothing in the DPRA or DMCA suggests any congressional approval for a Commission-administered regulatory regime aimed at restricting home recording of digital radio broadcasts.

D. The copyright policies embodied in the *Sony* ruling also militate against the RIAA proposal.

The RIAA Comments tellingly ignore perhaps the most important “copyright policy” relevant to the Commission’s NOI—the staple article of commerce doctrine announced by the Supreme Court in *Sony v. Universal City Studios*. This ruling, intact after twenty years, makes it clear that copyright law should not be interpreted to extend the exclusive rights of copyright owners into the domain of technology design.

In fact, if a device maker opts to design a DAB receiver/recorder that falls outside the scope of the AHRA, there is good reason to believe that such a device would be perfectly lawful under the *Sony* ruling.³³ This judicial statement of copyright policy, uncontradicted by intervening legislation, makes it clear that it is the RIAA proposal that is at odds with copyright policy, not the hypothetical DAB receiver/recorder.

III. In light of the many alternative sources for home recording, there is no justification for singling out DAB receiver/recorders for Commission regulation.

As detailed in our June 16, 2004 comments, consumers are already able, or will soon be able, to make digital audio recordings from a variety of broadcast media that will serve as functionally perfect substitutes for those made by a DAB receiver/recorder. In effect, the RIAA is asking that the Commission single out DAB receiver/recorders for regulation when the very same music can be recorded from other broadcast media in much the same way.

New technologies make it (or will soon make it) possible for consumers to make digital recordings from any of the following broadcast sources:

Analog FM Broadcasts: already, technologies exist that enable digital archiving of FM broadcasts and facilitate the automatic disaggregation of those broadcasts into individual songs. As discussed

³³ Of course, many DAB receiver/recorder makers may opt for designs within the scope of the AHRA, in order to avoid the expense of defending against a recording industry suit testing the boundaries of the *Sony* staple article of commerce defense.

further below, the sound quality obtained from such recordings is equivalent to those made from DAB broadcasts.

Webcasts: many software products are available that can capture and disaggregate songs from webcasts. For most listeners, those recordings are likely to be adequate substitutes for recordings obtained from DAB broadcasts.

Cable Music Services: since the filing of our June 16, 2004 comments, two technology companies have independently informed us that they have developed working prototypes for home recording devices that will digitally record, archive and disaggregate songs from subscription cable music channels like DMX and MusicChoice.³⁴ Both companies are now in the process of negotiating relationships that will enable widespread distribution in the consumer market. The sound quality from these sources is equivalent or superior to that obtained from DAB recordings.

Each of these sources already provides, or will soon provide, consumers with all the capabilities that the RIAA appears to fear. Accordingly, action by the Commission to single out DAB receiver/recorders for extensive regulation will likely prove futile, succeeding only in slowing adoption of DAB in the marketplace.

A. The RIAA is mistaken when it claims that improved sound quality makes digital radio broadcasts unique.

While the RIAA has emphasized the “CD-quality” of recordings made from digital radio broadcasts,³⁵ empirical testing by EFF refutes these claims. EFF has made field recordings comparing the audio quality of digital and analog broadcast signals recorded simultaneously from the same broadcaster. The two cannot reliably be distinguished on the basis of sound quality.³⁶ Based on this experience, EFF again reiterates that songs

³⁴ These companies, both small start-ups, could be subjected to reprisals from the recording industry if identified prematurely. Accordingly, EFF will omit their names here, but would be happy to discuss their technologies further in *ex parte* presentations with the Commission.

³⁵ See RIAA Comments at p. 25 (DAB receiver/recorders will give consumers “libraries of CD-quality music”); at p. 33 n.115 (“[D]igital broadcasting provides a far superior audio quality than [sic] analog....”)

³⁶ EFF will present these recordings to the Commission in *ex parte* meetings so that Commission staff can listen to the recordings and form their own conclusions. The songs recorded were Pink Floyd’s “Run Like

digitally recorded from analog FM transmissions are no more (nor less) a threat to the music industry than those recorded from digital radio transmissions. Sound quality provides no basis for imposing different regulations on DAB receiver/recorders.

A comparison of recordings from digital radio broadcasts also give the lie to the RIAA's assertion that these recordings will routinely provide superior sound quality as compared to files downloaded from public P2P networks. In order to assess the accuracy of this statement, EFF ran searches on common P2P file sharing networks in order to ascertain what level of fidelity was available to quality-conscious music fans. MP3 remains by far the most common encoding format, and it is common to find encoding rates of 192 kbps, which is twice the maximum data rate available from iBiquity's IBOC digital radio broadcast technology. In order to further test the RIAA's assertion, we compared a 192 kbps MP3 version of the songs with those we had recorded from the analog and digital radio broadcasts. We found no significant sound quality difference between the MP3 versions and the radio recordings.³⁷

B. There is no relevant “metadata” gap.

In its comments, the RIAA also argues that “digital radio is different” because the accompanying metadata can be used automatically to disaggregate digital radio recordings into individual songs. The RIAA is simply incorrect—metadata is neither required for disaggregation, nor is digital radio unique in providing such metadata.

As the RIAA itself has made clear in other contexts, new technologies permit accurate song identification even in the absence of metadata. For example, the RIAA has been touting the ability of acoustic fingerprinting technologies, like that offered by Audible Magic, to accurately identify songs by analyzing the acoustic properties of a digital file.³⁸ This technology, available today, could be employed to disaggregate

Hell” and Ronnie James Dio’s “Rainbow in the Dark.”

³⁷ As discussed in the note above, EFF will provide these samples to Commission staffers in order to allow them to decide for themselves.

³⁸ See John Borland, *File Swap Killer Grabs Attention*, CNET News, Mar. 3, 2004 (available at <http://news.com.com/File-swap+%27killer%27+grabs+attention/2100-1025_3-5168505.html>) (describing RIAA showcasing Audible Magic’s acoustic fingerprinting technology to Washington policymakers as a solution for peer-to-peer file sharing).

songs from digital recordings, whether derived from analog radio, webcasts, cable music services, digital radio broadcasts or other sources.³⁹ Acoustic fingerprinting technologies demonstrate that while metadata may make post-recording disaggregation easier in some circumstances, it is certainly not required.

More importantly, the existence of metadata is not unique to digital radio broadcasts. As pointed out in our earlier comments, both analog FM broadcasts and Internet webcasts often include metadata that can be used for post-recording disaggregation.⁴⁰ It has also been brought to our attention that cable music services (such as DMX Music and Music Choice) provide metadata, including artist, album, and title information, on the video channel that accompanies the audio program. This metadata has already been used by at least two technology companies to disaggregate digital recordings of cable music service programming.⁴¹

IV. The Commission lacks the jurisdiction to impose content protection regulations on digital radio broadcasters and device manufacturers.

The EFF and Brennan Center agree with the Home Recording Rights Coalition, Public Knowledge, Consumers Union and the Consumer Federation of America that, without additional congressional guidance, the Commission lacks the jurisdiction to promulgate the regulations proposed by the RIAA. We hereby incorporate by reference the jurisdiction arguments made by those parties.⁴²

³⁹ See <<http://www.audiblemagic.com>>.

⁴⁰ See EFF/BC Comment at p. 13-14.

⁴¹ See n. 34 above. Metadata is presented as text displays on the video channel. In order to accomplish disaggregation, the recorder performs the equivalent of optical character recognition, parsing the text displayed in the video channel. A variety of other techniques are then used to divide the songs accurately.

⁴² See Comments of the Home Recording Rights Coalition, MM 99-325, filed June 16, 2004, at p. 7-11; Reply Comments of the Home Recording Rights Coalition, MM 99-325, filed Aug. 2, 2004, at p. 14-21; Comments of Public Knowledge, Consumers Union and the Consumer Federation of America, MM 99-325, filed June 16, 2004, at p. 3-5.

V. Conclusion.

For the reasons set forth above, EFF and the Brennan Center respectfully urge the Commission to reject the regulations proposed in the RIAA Comments.

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