

*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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**COMMENTS OF  
THE ELECTRONIC FRONTIER FOUNDATION  
AND THE BRENNAN CENTER FOR JUSTICE FREE  
EXPRESSION POLICY PROJECT**

In its April 15, 2004 Further Notice of Proposed Rulemaking and Notice of Inquiry in the above-captioned docket (“NOI”), the Commission asked whether it should impose content protection regulations on digital audio broadcasters or technologies in response to the potential threat that home recording might pose to the recording industry.<sup>1</sup> The Recording Industry Association of America (“RIAA”), in particular, endorses an FCC-imposed technology mandate to that end.<sup>2</sup> The Electronic Frontier

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<sup>1</sup> Further Notice of Proposed Rulemaking and Notice of Inquiry, FCC 04-99 (adopted April 15, 2004; released April 20, 2004) at para. 67-69 (available at <[http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/FCC-04-99A4.pdf](http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-04-99A4.pdf)>).

<sup>2</sup> See Letter to Mary Beth Murphy, Chief, Policy Division, Media Bureau, FCC, from Theodore Frank, Arnold & Porter, counsel for RIAA, dated Oct. 2, 2003 (available at <[http://gullfoss2.fcc.gov/prod/ecfs/retrieve.cgi?native\\_or\\_pdf=pdf&id\\_document=6516089142](http://gullfoss2.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6516089142)>); Letter to Gary Shapiro, Consumer Electronics Association, from Cary Sherman, President, RIAA, dated Apr. 14, 2004 (available at <<http://cryptome.org/RIAA-CEA.pdf>>).

Foundation (“EFF”) and Brennan Center for Justice (“Brennan Center”) urge the Commission to reject the RIAA proposal.

## **I. Statement of Interest.**

Founded in 1990, EFF is a member-supported nonprofit organization devoted to protecting civil liberties and free expression in technology, law, policy and standards. With over 12,000 dues-paying members and over 55,000 mailing-list subscribers, EFF leads the global and national effort to ensure that fundamental liberties are respected in the digital environment. EFF has participated extensively in the Commission’s recent “broadcast flag” proceeding, wherein the Commission considered whether to adopt a “content protection” mandate for digital television technologies.

Founded in 1995, the Brennan Center for Justice at New York University School of Law unites thinkers and advocates in pursuit of a vision of inclusive and effective democracy. Its mission is to develop and implement an innovative, nonpartisan agenda of scholarship, public education, and legal action that promotes equality and human dignity, while safeguarding fundamental freedoms. In 2004, the Free Expression Policy Project (FEPP) joined the Brennan Center. FEPP's goals are to provide research, analysis, and advocacy on difficult free expression issues, including the delicate balance between copyright control and the public domain. In the present case, FEPP is concerned about the potential for harm caused by the recording industry's overly zealous advocacy of technological measures that limit fair use and other important free expression safety valves within the copyright system.

## **II. The Commission should reject content protection technology mandates for digital audio broadcasters and technologies.**

In urging the Commission to regulate home recording from digital audio broadcasts, the RIAA seeks a technology mandate<sup>3</sup> for a broadcast

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<sup>3</sup> Although the RIAA has not yet come forward with a specific regulatory proposal, a technology mandate or encrypt-at-the-source mandate appear to be the most likely approaches for those interested in eliminating the kind of digital audio recorder about which the RIAA frets in its Oct. 2, 2003 letter to the Commission. In that letter, in fact, the RIAA proposes that digital audio broadcasters be required to encrypt transmissions. *See* Letter to Mary Beth Murphy from Theodore Frank, *supra* n.2. Thanks to the Digital Millennium Copyright Act (DMCA), however, such an encrypt-at-the-source mandate would operate as a *de facto* technology

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 to its member record companies.

As justification, the RIAA offers only its fears that innovators may soon provide radio listeners with the audio equivalent of the TiVo personal video recorder—a device that will allow listeners to selectively record, “time-shift,” and “space-shift” digital audio broadcasts.<sup>4</sup> In seeking to ban (or at minimum severely constrain the capabilities of) potential next-generation audio recorders, the RIAA is asking the Commission to take from the public rights already guaranteed to it under the Copyright Act.

In considering the RIAA proposal, the Commission should begin with two plain facts:

- **It is legal to sell digital audio recorders.** Both the Supreme Court and Congress have explicitly approved the development, manufacture and distribution of devices that enable digital home recording of audio programming. The Supreme Court’s 1984 *Sony v. Universal City Studios* ruling makes it clear that distribution of such devices does not violate the Copyright Act.<sup>5</sup> In 1992, moreover, Congress specifically addressed and approved a subset of digital audio recording devices in the Audio Home Recording Act (AHRA).<sup>6</sup>
- **It is legal to use digital audio recorders.** It is perfectly legal in many circumstances to engage in home recording of audio programming, whether from analog broadcasts, digital broadcasts, compact discs or otherwise. This is plain both under the AHRA’s “home taping exception” and as a matter of fair use.

If the manufacture and use of digital home recording devices are perfectly lawful under existing copyright laws, then the RIAA proposal

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mandate, as no one would be entitled to decrypt such a transmission (or offer devices capable of such decryption) without “the authority of the copyright owner” of the works contained in the transmission. *See* 17 U.S.C. § 1201(a)(3)(A).

<sup>4</sup> *See* Letter to Mary Beth Murphy from Theodore Frank, *supra* n.2.

<sup>5</sup> *See* 464 U.S. 417, 456 (1984).

<sup>6</sup> *See* 17 U.S.C. §§ 1001-10.

cannot be justified as a matter of *copyright*. The RIAA proposal should thus be recognized for what it is: an attempt to persuade the Commission to *overturn* the copyright policy determinations of Congress and the courts. Both Congress and the courts have already spoken to the copyright questions raised by digital home taping. It is not for the Commission to rewrite these express policy determinations in favor of the recording industry.

The Commission has specifically asked “(1) does a problem exist that requires governmental intervention; and (2) to what extent can, and should, the Commission involve itself in this matter.”<sup>7</sup> The answer to each question is simple and the same: no. The reasons are straightforward:

- In rejecting the so-called “Hollings Bill,” Congress has specifically rejected FCC-imposed technology mandates as a sensible approach to new digital media technologies.
- The RIAA proposal is not about “content protection” to prevent piracy, but rather restricting otherwise lawful noncommercial home recording, contradicting the considered policy determinations of Congress and the courts.
- The RIAA proposal has nothing to do with Internet redistribution.
- There is no evidence that noncommercial home recording from digital audio broadcasts is harming the recording industry.
- The lack of “content protection” is not hampering adoption or deployment of digital audio broadcast technologies today.

EFF and the Brennan Center respectfully urge the Commission to reject firmly any suggestion that it impose “content protection” regulations on digital audio broadcasters or technologies.

**A. Congress has already rejected FCC-imposed “content protection” technology mandates.**

Congress has already rejected the path the RIAA is now asking the Commission to tread. In 2002, at the behest of entertainment industry interests, Senator Fritz Hollings introduced legislation that echoes the RIAA proposal: it provided that each new digital media technology be accompanied, *at its birth*, by a content protection technology mandate

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<sup>7</sup> NOI at para. 69.

crafted by the FCC.<sup>8</sup> The measure did not pass and has not been reintroduced in the current Congress. The RIAA is now asking the Commission to do what Congress was unwilling to authorize.

Even more remarkable is the RIAA's own 180-degree turnabout on this issue. In January 2003, the RIAA signed an agreement with representatives of the technology sector<sup>9</sup> in which it rejected technology mandates, stating:

Technology and record companies believe that technical protection measures dictated by the government (legislation or regulations mandating how these technologies should be designed, function and deployed, and what devices must do to respond to them) are not practical. The imposition of technical mandates is not the best way to serve the long-term interests of record companies, technology companies, and consumers. Technology can play an important role in providing safeguards against theft and piracy. The role of government, if needed at all, should be limited to enforcing compliance with voluntarily developed functional specifications reflecting consensus among affected interests.<sup>10</sup>

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<sup>8</sup> The bill was originally known as the "Security Systems Standards and Certification Act" ("SSSCA") and was extensively covered in the press. *See, e.g.,* Declan McCullagh, *Hollywood Loves Hollings' Bill*, *Wired News* (Sept. 11, 2001) (<<http://www.wired.com/news/politics/0,1283,46671,00.html>>). The bill was ultimately renamed and introduced as the Consumer Broadband and Digital Television Promotion Act ("CBDTPA"), S. 2048, 107th Cong., 2d Sess. (introduced Mar. 21, 2002).

<sup>9</sup> *See* Joint RIAA, CSPP, BSA Press Release, "Recording, Technology Industries Reach Groundbreaking Agreement on Approach to Digital Content Issues" (Jan. 14, 2003) (available at <<http://global.bsa.org/usa/press/newsreleases/2003-01-14.1418.phtml>>).

<sup>10</sup> *See* "Technology and Record Company Policy Principles Issued Jointly by Business Software Alliance, Computer Systems Policy Project & Recording Industry Association of America" (available at <[http://www.bsa.org/usa/policyres/7\\_principles.pdf](http://www.bsa.org/usa/policyres/7_principles.pdf)>)

In rejecting Sen. Hollings' proposed legislation, it appears that Congress was inclined to agree with the RIAA's January 2003 view of technology mandates. And Congress' unwillingness to delegate to the Commission the general task of "content protection" mandates is all the more telling where digital audio recording technologies are concerned, as Congress itself has already specifically *authorized* digital audio recording in the AHRA.

**B. The RIAA proposal would restrict otherwise lawful digital home recording, contradicting the legal regime established by Congress and the courts.**

The publicly disclosed RIAA letters addressing the topic raised by the NOI make it clear that its proposal is aimed primarily at impeding what it sees as next-generation home audio recording technologies. The RIAA describes the specter that haunts it as follows:

- "...the ability of listeners to download selected material to hard drives built into their digital receivers..."<sup>11</sup>
- "...the digital receivers will be capable of scanning the airwaves for selected music and other programming and recording it without any intervention by the listeners...not only in listener's homes, but also in their cars."<sup>12</sup>
- "Digital radio receivers will be able to parse digital broadcasts on a song by song basis..."<sup>13</sup>
- "...the next generation of digital radio receivers would grant the unfettered ability...to automatically copy and disaggregate from a broadcast particular recordings of the user's choice..."<sup>14</sup>
- "These devices could also permit listeners to transfer songs to other devices for individual or serial copying and distribution over the Internet."<sup>15</sup>

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<sup>11</sup> Letter to Mary Beth Murphy from Theodore Frank, *supra* n.2.

<sup>12</sup> *Id.*

<sup>13</sup> *Id.*

<sup>14</sup> Letter to Gary Shapiro from Cary Sherman, *supra* n.2.

<sup>15</sup> *Id.*

We have ample experience with a device that allows you to record material automatically to an on-board hard drive; disaggregate programming so that you can access what you want, when you want to; create “wish lists” to enable recording of material from your favorite artists; and export recordings to other devices for archiving or “space shifting.” That device, recently embraced by Chairman Powell as “God’s Machine,” is called TiVo .

What the RIAA is asking the Commission to preemptively regulate is an as-yet-nonexistent TiVo for digital audio broadcasts. In fact, this hypothetical new product is so new that there is not yet a name for the product category. We will refer to it as the “DAB receiver/recorder.”

**C. Making and selling a DAB receiver/recorder would be perfectly legal.**

Despite the fact that it does not yet exist, both Congress and the courts have already spoken on the appropriate copyright treatment for devices such as the DAB receiver/recorder. Under existing copyright law, it is perfectly legal to develop, manufacture and distribute a DAB receiver/recorder.

Many DAB receiver/recorders will likely qualify as “digital audio recording devices” (DARDs) within the meaning of the AHRA.<sup>16</sup> For these devices, Congress has explicitly laid out the relevant ground rules in Chapter 10 of the Copyright Act. So long as the manufacturer pays the appropriate statutory levy and implements the Serial Copy Management System (SCMS), there can be no copyright objection to the distribution of a DAB receiver/recorder.<sup>17</sup> In fact, the “Technical Reference Document” accompanying the AHRA contemplate digital recorders capable of recording from digital audio broadcasts.<sup>18</sup>

The specific DAB receiver/recorder imagined by the RIAA appears to fall squarely within the definition of a “digital audio recording

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<sup>16</sup> See 17 U.S.C. § 1001(3).

<sup>17</sup> See 17 U.S.C. § 1008.

<sup>18</sup> Technical Reference Document for the Audio Home Recording Act of 1992, reprinted in H.R. Rep. 102-780(I) (1992), at 46-47 (including “receivers of digitally encoded audio transmissions” in “category code white list” products, from which one generation of recording is always permitted).

device” (DARD): “any machine or device of a type commonly distributed to individuals for use by individuals, whether or not included with or as part of some other machine or device, the digital recording function of which is designed or marketed for the primary purpose of, and that is capable of, making a digital audio copied recording for private use.”<sup>19</sup> A DAB receiver/recorder, to the extent it includes both a tuner and internal hard drive meant for recording, would appear to fall within this definition.<sup>20</sup>

Other kinds of DAB receiver/recorders can be imagined that might fall outside of the scope of the DARD definition. For example, a vendor might sell a digital audio broadcast tuner card for use with personal computers. To the extent such a card lacked on-board recording capabilities, it would not be a DARD, even if the end-user could combine the tuner card with general-purpose audio recording software to create a digital recorder. With respect to these non-AHRA recording devices, the Supreme Court’s ruling in *Sony v. Universal City Studios* makes it clear that distribution of these devices does not violate copyright law so long as they are “capable of substantial noninfringing uses.”<sup>21</sup>

**D. Using a DAB receiver/recorder to record digital audio broadcasts is perfectly legal.**

This brings us to the next question: what does copyright law have to say about the *use* of these hypothetical DAB receiver/recorders by the digital audio broadcast audience? Current copyright law makes it clear that

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<sup>19</sup> See 17 U.S.C. § 1001(3).

<sup>20</sup> To the extent there are some ambiguities in applying the language of the AHRA to any particular DAB receiver/recorder, the courts are the appropriate place to resolve them. In fact, the RIAA has already resorted to litigation to clarify the application of the AHRA to one new digital audio device, the portable MP3 player. See *RIAA v. Diamond Multimedia Systems*, 180 F.3d 1072 (9th Cir. 1999).

<sup>21</sup> See 464 U.S. at 442. A DAB receiver/recorder not sheltered by the AHRA would likely satisfy this test. DAB receiver/recorders would be capable of many noninfringing uses, including the recording of material authorized by copyright owners for recording, the recording of public domain material, and the recording of performances that have not been “fixed” within the meaning of the Copyright Act.



recording digital audio broadcasts for noncommercial purposes is perfectly legal in a wide variety of circumstances.

Here, again, both Congress and the courts have spoken directly to the recording activities made possible by the hypothetical DAB receiver/recorder imagined by the RIAA. In fact, in passing the AHRA in 1992, Congress expressly sought to address the nettlesome issue of “home taping,” including home recording of (then analog) audio broadcasts.<sup>22</sup> In response, Congress crafted what has come to be known as the “home taping exception”:

No action may be brought under [the Copyright Act] alleging infringement of copyright based on the manufacture, importation, or distribution of a digital audio recording device, a digital audio recording medium, an analog recording device, or an analog recording medium, or based on *the noncommercial use by a consumer of such a device or medium for making digital musical recordings or analog musical recordings.*<sup>23</sup>

Accordingly, to the extent a DAB receiver/recorder qualifies as a DARD under the AHRA, the public is entitled to use it to record digital audio broadcasts for noncommercial purposes without fear of copyright infringement liability. This is true irrespective of whether the recordings are “disaggregated” into songs, “archived” for repeated listening, or selected with a “wishlist” that only records tracks by your favorite artists.<sup>24</sup>

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<sup>22</sup> See 138 Cong. Rec. H9033 (Sep. 22, 1992) (statement of Rep. Brooks) (“H.R. 3204 [AHRA] removes the legal cloud over home copying of prerecorded music in the most proconsumer way possible: It gives consumers a complete exemption for noncommercial home copying of both digital and analog music. . .”); S. Rep. 102-294 at 51 (1992) (“A central purpose of the Audio Home Recording Act of 1991 is conclusively to resolve this debate, both in the analog and digital areas, thereby creating an atmosphere of certainty to pave the way for the development and availability to consumers of new digital recording technologies and new musical recordings.”).

<sup>23</sup> See 17 U.S.C. § 1008 (emphasis added).

<sup>24</sup> Of course, if the owner of the DAB receiver/recorder, after having made the recording with the DARD, were to subsequently manipulate or

To the extent that certain forms of DAB receiver/recorders might not qualify as a DARD under the AHRA, many uses of such devices would simply be noninfringing, including:

- Recording where the copyright owner has explicitly or implicitly authorized the recording (this seems likely with respect to news, public service, educational, religious and noncommercial programming).
- Recording where the programming is the public domain.
- Recording where the broadcast is of a performance that has not been “fixed” within the meaning of the Copyright Act, and thus is not protectible.
- Recording of governmental works not protected under the Copyright Act.

Moreover, existing judicial fair use precedents expressly approve of some additional uses, and future fair use jurisprudence may well permit others. For example, noncommercial personal recording of broadcasts for “time-shifting” purposes was specifically approved by the Supreme Court in the *Sony v. Universal City Studios* case.<sup>25</sup> While that case dealt with time-shifting of broadcast television content, the holding would control at least some analogous uses of a DAB receiver/recorder. For example, were a listener to set her DAB receiver/recorder to record a particular radio program for later listening, listen to it once without skipping any commercials, and then promptly delete the recording, it is hard to conceive how the RIAA could distinguish this circumstance from the one that faced the Supreme Court in *Sony v. Universal City Studios*. This activity, the commenters submit, would certainly be fair use within the holding of that case.<sup>26</sup>

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redistribute the recording so as to violate one of the copyright owner’s exclusive rights, the full array of copyright remedies would be available against her. None of the private activities listed, however, would appear to exceed the scope of the AHRA’s “home taping” exception.

<sup>25</sup> See *Sony v. Universal City Studios*, 464 U.S. at 447-55.

<sup>26</sup> At least one court has also concluded that private, noncommercial “space-shifting” of digital audio recordings is consistent with the purposes of the AHRA. See *RIAA v. Diamond Multimedia Systems*, 180 F.3d at 1079.

The RIAA will certainly contend that the *Sony* case should be read as extending that far and no further. EFF and the Brennan Center take a different view, and would argue that fair use extends beyond this narrow “time shifting” context. Rather than engaging in yet another indeterminate debate about the proper scope of fair use as applied to digital media, for purposes of this NOI it is enough to make two observations: (1) under existing fair use precedents, at least some kinds of time-shifting of digital audio broadcasts would be noninfringing; and (2) to the extent other uses of DAB receiver/recorders raise unresolved fair use questions, Congress has expressly left those questions to the courts, not the Commission.<sup>27</sup>

Finally, it must be emphasized that digital audio broadcasts include far more than just music produced by the RIAA-member companies. Today, pursuant to FCC regulations, digital audio broadcasters are required to broadcast digitally a duplicate of their analog broadcast program.<sup>28</sup> An unfettered marketplace for DAB receiver/recorders could thus provide listeners with greater and more convenient access to a wide variety of broadcast content, including educational, political, news, public service, religious, governmental and “talk radio” programming. Accordingly, the Commission should be especially leery of any technology mandate that responds to the anxieties of the RIAA in a way that stifles new technologies that might benefit listeners interested in something other than major-label music programming.<sup>29</sup>

**E. Equivalent home recording capability is already available from analog radio and webcasts.**

The RIAA proposal is further undermined by the fact that technologies already exist that provide functionally-identical capabilities

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<sup>27</sup> See 17 U.S.C. § 107.

<sup>28</sup> See NOI at para. 9 (“During interim IBOC operations, stations must broadcast the same main channel program material in both analog and digital modes.”).

<sup>29</sup> Before rendering any decision in favor of regulating DAB receiver/recorders, the Commission should at minimum make independent efforts to gather and consider evidence regarding the current and future mix of programming made available via digital audio broadcasts. It should then affirmatively canvas the views of relevant content providers other than the RIAA-member companies regarding their views on DAB receiver/recorders.

to consumers with respect to analog audio broadcasts and webcasts. 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.

Consumers have a wide array of technologies available to them for recording analog AM and FM audio broadcasts. Although millions of Americans have taped music from the radio since the introduction of the audio cassette recorder, today's technologies offer consumers capabilities that are effectively identical to those offered by the hypothetical DAB receiver/recorder, including:

**Digital archiving:** Today, FM tuner cards for the PC can be purchased for less than \$10 and set to automatically record broadcasts to a hard drive, thereby converting them from analog to digital form.<sup>30</sup> Stand-alone FM receivers could similarly add a hard drive to record the analog broadcast content. Once recorded, these broadcasts can be kept, manipulated, and exported to other digital devices just as recordings from a DAB receiver/recorder might be.

**Sound quality:** Today, recordings made from analog FM are effectively indistinguishable in audio quality from digital audio broadcasts. Thus, digital recordings of music from either source will be indistinguishable to most listeners. The digital audio encoding codecs used in IBOC digital audio broadcasting have a maximum data rate of 96 kbps.<sup>31</sup> This requires that music be aggressively compressed prior to broadcast, sacrificing quality. While iBiquity's IBOC marketing literature promises "CD-quality sound," it would be more accurate to describe it as "mp3 quality sound" (the typical mp3 music files found on peer-to-peer file sharing networks are encoded at a data rate of 128 kbps). Digital recordings of FM analog broadcasts taken from a well-engineered FM tuner should equal or exceed the quality of recordings taken from IBOC receivers.

**Song-by-song disaggregation:** Once recorded to hard drive, analog FM content can easily be edited into individual songs using free

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<sup>30</sup> Commonly available examples include the Cadet FM recorder (purchased recently for \$8) and Hauppauge WinTV-Go (available from Amazon.com for \$47.99).

<sup>31</sup> See NOI at para. 18 ("The FM system can be scaled from 96 kbps to 84 kbps or 64 kbps to obtain 12 to 32 kbps for other services.")

audio editing software. While to the best of our knowledge tools that would automate this process are not yet widely available, there is no shortage of metadata that could be used to automate the process. For example, an increasing number of broadcasters are using the Radio Data System (“RDS”) to transmit artist and title information along with their analog broadcasts.<sup>32</sup> This metadata could be used to identify and separate the songs contained in a recording. Many broadcasters also publish after-the-fact playlists that could be used to disaggregate recorded content.<sup>33</sup> Finally, time-coded, after-the-fact playlists can be purchased from commercial sources and used to automatically disaggregate recordings into individual songs.<sup>34</sup>

In other words, the technology available to record analog audio broadcasts is such that it cannot credibly be maintained that “digital is different.” Pursuant to FCC regulations, radio stations today broadcast exactly the same programming over both their analog and digital transmitters.<sup>35</sup> Once digitized using an inexpensive AM/FM tuner card, the analog content (at least where FM is concerned) becomes effectively indistinguishable from a recording of the digital signal. The only potentially distinguishing feature is the ease with which metadata can be used to automatically disaggregate recordings into individual songs. As noted above, new analog broadcast technologies, such as RDS and after-the-fact playlists, may well close that gap, as well.

Any “metadata gap” between the hypothetical DAB recorder/receiver and existing home recording technologies disappears altogether in the context of webcasts. Consumers can today legally obtain

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<sup>32</sup> For general information regarding RDS, *see* How Stuff Works website, “How is my radio able to display the station’s call letters?” (<<http://electronics.howstuffworks.com/question323.htm>>). The RDSList website (<<http://www.rdslist.com/>>) lists over 600 U.S. radio stations that are currently using RDS.

<sup>33</sup> Examples include the influential Santa Monica public radio station KCRW, which publishes time-coded after-the-fact playlists, including title, artist and album information, at <<http://www.kcrw.org/music/playlist/playlists.html>>.

<sup>34</sup> The best known of these sources is Mediabase 24-7, <<http://www.mediabase.com/>>.

<sup>35</sup> *See* NOI at para. 9.

a variety of software tools to record webcasts and automatically disaggregate them into individual songs. The resulting files can easily be the equal of digital audio broadcasts in quality, depending on the bitrate chosen by the webcaster. Once recorded and disaggregated, the files can be manipulated and exported just as easily as files created by a DAB receiver/recorder.

For example, thousands of music webcasters transmit their streams in streaming mp3 format along with embedded artist and title metadata.<sup>36</sup> Listeners can use “stream ripper” software, such as Streamripper,<sup>37</sup> RadioLover,<sup>38</sup> and StationRipper,<sup>39</sup> to record and automatically perform song-by-song disaggregation of the webcasts. If the webcaster in question has chosen to encode its mp3 stream at a bit rate of at least 128 kbps, the resulting recordings would be equivalent in audio quality to the recordings created by any DAB receiver/recorder.

In light of these alternatives, lawfully available to consumers today, there is no justification for singling out DAB receiver/recorders for a Commission-imposed technology mandate. Why should consumers be left with fewer home recording capabilities when they record from their local FM radio station’s digital broadcast signal than from the same station’s analog signal or web simulcast? Such a disparity of functionality can only hamper the adoption of digital broadcast technologies by consumers, while providing no meaningful “protection” to copyright owners.

**F. The RIAA proposal has nothing to do with Internet redistribution.**

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<sup>36</sup> Shoutcast.com provides several thousand such webcasts at <<http://www.shoutcast.com/>>.

<sup>37</sup> Streamripper is a free, open source software product for Windows, Mac OS X, and Linux that automatically records and disaggregates streaming mp3 webcasts, *see* <<http://streamripper.sourceforge.net/about.php>>.

<sup>38</sup> Radiolover is a \$15 software product for Mac OS X that automatically records and disaggregates iTunes radio and mp3 streaming webcasts, *see* <<http://www.bitcartel.com/radiolover/>>.

<sup>39</sup> StationRipper is a free software product for Windows that allows users to record and disaggregate as many as 300 streaming webcasts simultaneously, *see* <<http://www.ratajik.com/StationRipper/>>.

The RIAA suggests that regulation of otherwise lawful DAB receiver/recorders is necessary lest the public “redistribute recordings widely, whether on the Internet or digital media.”<sup>40</sup> This alarmist rhetoric conflates future DAB receiver/recorder technologies with peer-to-peer (P2P) file sharing. The notion is that, despite the fact that many uses of DAB receiver/recorders are perfectly legal, every recorder should be locked down, every member of the public treated as a potential infringer. This suggestion cannot withstand even the most cursory scrutiny.

As an initial matter, there is no evidence that the major label music circulating on P2P networks comes from broadcast sources (whether digital, satellite, analog or otherwise). This is unsurprising, as would-be file-sharers have a ready alternate source for music files—audio CDs. So long as the music played by digital audio broadcasters is commercially available on CD and from other sources,<sup>41</sup> the existence of DAB receiver/recorders will be largely irrelevant to the availability of such music on P2P networks.

That leaves only two possibilities where radio may offer something that is not already available on CD: (1) songs pre-released to radio prior to their commercial release on CD, and (2) radio-exclusive material (such as “in studio” live performances). For both of these categories, DAB receiver/recorders create no threat beyond that posed by existing devices capable of recording analog broadcasts or webcasts of the same content.

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<sup>40</sup> See Letter to Gary Shapiro from Cary Sherman, *supra* n.2.

<sup>41</sup> The deployment of so-called “digital rights management” (DRM) technologies by RIAA-member companies is not likely to prevent the leakage of new material into P2P networks. Every CD copy-protection system has been quickly broken, *see, e.g.*, J. Alex Halderman, “Analysis of the MediaMax CD3 Copy-Prevention System” (Oct. 6, 2003) (available at <<http://www.cs.princeton.edu/~jhalderm/cd3/>>), as has the DRM used in authorized download services, *see, e.g.*, John Borland, *Program points way to iTunes DRM hack*, CNET News (Nov. 24, 2003) (available at <<http://news.com.com/2100-1027-5111426.html>>). In fact, according to P2P monitoring service BigChampagne, every track released “exclusively” to Apple’s iTunes Music Store has been available on P2P networks within *minutes* of release. *See* Remarks of Eric Garland, Computers, Freedom & Privacy 2004, Berkeley, CA, April 22, 2004 (recording available at <[http://www.cmcgc.com/cfp2004/422\\_Plenary\\_8.mp3](http://www.cmcgc.com/cfp2004/422_Plenary_8.mp3)>).

As computer networking experts have been pointing out for several years, in a P2P network environment, once one copy is posted to the network, it is quickly duplicated so as to become available to all users.<sup>42</sup> In other words, all it takes is “one leak.” Where pre-release and radio exclusive material is concerned, there are plenty of motivated fans who will record and upload such material to P2P networks almost immediately. In fact, radio industry insiders are among the most notorious “leakers” when it comes to P2P file sharing. Recent experience with a variety of well-known bands makes this clear—many highly anticipated albums are now available on P2P networks in their entirety long before they appear in stores or on radio.<sup>43</sup> There is no evidence that DAB receiver/recorders are likely to exacerbate this reality in any way,<sup>44</sup> nor that regulations on DAB receiver/recorders are likely to make any perceptible dent in the problem.

**G. The Commission should refuse to countenance a technology mandate in the absence of evidence of actual or imminent harm traceable to home recording of digital radio.**

Before considering a federal technology mandate on digital audio broadcasters or technologies, the Commission should insist that supporters of such a mandate demonstrate that home recording of digital audio broadcasts is causing real harm. While the RIAA is long on dire warnings regarding the effect that DAB receiver/recorders will have on the revenues of its member companies, this should properly be seen as the latest installment on the “home recording is killing music” sloganeering of the

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<sup>42</sup> See, e.g., Peter Biddle, Paul England, Marcus Peinado, and Bryan Willman, “The Darknet and the Future of Content Distribution,” paper delivered to the 2002 ACM Workshop on Digital Rights Management, Washington, DC (Nov. 18, 2002) (available at <<http://crypto.stanford.edu/DRM2002/darknet5.doc>>).

<sup>43</sup> See, e.g., MTV News, “Wilco Downloaders Out To Prove They're Not Freeloaders,” Apr. 5, 2004 (Wilco fans have been downloading the forthcoming album, not due in stores until June 2004, from P2P networks since March 2004, shortly after advance CDs were shipped to radio stations) (available at <[http://www.mtv.com/news/articles/1486181/20040405/wilco\\_1.jhtml](http://www.mtv.com/news/articles/1486181/20040405/wilco_1.jhtml)>).

<sup>44</sup> To the extent many expect DAB receiver/recorders to be especially popular in automobiles, they are both physically and technologically remote from the personal computers involved in P2P file sharing.



home-taping fight. In the years since that slogan first appeared, the RIAA has it has failed to demonstrate that personal home recording of music from the radio (whether satellite, digital or analog) is harming music sales.<sup>45</sup> Accordingly, the Commission should be skeptical when the RIAA again claims that a home recording technology will bring the sky crashing down on its member companies.

Congress has already considered the evidence regarding the market impact of home recording and has crafted a legislative response in the AHRA.<sup>46</sup> The debate regarding the market impact of home taping on the recording industry reached its crescendo during Congressional consideration of the AHRA. After commissioning its own studies on the matter, as well as considering various studies submitted by the recording industry, Congress was not persuaded by the RIAA's dire predictions regarding home recording, including home taping of music from the radio. *Congress even considered the future threat that might be posed by the recording of digital broadcast technologies.*<sup>47</sup> After considering the evidence, Congress adopted a narrow technology mandate and levy aimed at adequately compensating the recording industry for home recording activities.

As discussed above, a DAB receiver/recorder would likely qualify as a DARD under the AHRA, and it would thus be subject to the terms of the compromise struck by Congress to address home recording. While the RIAA may today be dissatisfied with the legislative bargain it struck on home recording some dozen years ago, it is not for the Commission to overturn the legislative enactments of Congress.

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<sup>45</sup> In fact, there has been some suggestion that even the file-sharing occurring on the P2P networks has failed to harm the sales of the RIAA companies. See Felix Oberholzer & Koleman Strumpf, "The Effect of File-Sharing on Record Sales: An Empirical Analysis," working paper (2004) (available at <[http://www.unc.edu/~cigar/papers/FileSharing\\_March2004.pdf](http://www.unc.edu/~cigar/papers/FileSharing_March2004.pdf)>).

<sup>46</sup> See U.S. Congress, Office of Technology Assessment, *Copyright and Home Copying: Technology Challenges the Law*, OTA-CIT-422 (1989); H. Rep. No. 102-873(II) (1992); S. Rep. No. 102-294 (1992); 138 Cong. Rec. H9029-37 (Sep. 22, 1992).

<sup>47</sup> See Report of the Register of Copyrights on Copyright Implications of Digital Audio Transmission Services, October 1991 (prepared for Congress at the request of Sen. Deconcini, sponsor of the AHRA).

## **H. The RIAA proposal would do nothing to promote digital audio broadcasting.**

Not only is there no copyright problem that needs solving here, but there is also no broadcasting problem here. The lack of “content protection” regulation is not hampering or impeding the adoption or deployment of digital audio broadcasting in any way.

In this regard, the contrast between the instant proceeding and the Commission’s recently adopted digital television “broadcast flag” mandate could not be more stark. During the “broadcast flag” proceeding, supporters of the “broadcast flag” maintained that a mandate was necessary to encourage DTV adoption. As the Commission notes in the NOI, however, there are no plans to phase out analog broadcasting, in contrast to the digital television transition.<sup>48</sup> There is no suggestion here that content providers are withholding premium content due to a lack of “content protection,” in contrast to the claims made during the “broadcast flag” proceedings. In fact, the RIAA companies are not legally entitled to withhold content from digital audio broadcasters; as the RIAA points out in its letter to the CEA, copyright owners have no legal right to prevent a broadcaster from playing any commercially-available CD on the air.<sup>49</sup>

The imposition of an FCC “content protection” mandate would almost certainly *slow* the adoption of digital audio broadcasting, rather than accelerate it. Broadcasters and hardware vendors would be required to re-engineer products to the specifications imposed by the Commission (or the RIAA, if the Commission were to impose an encrypt-at-the-source requirement on broadcasters), rather than the demands of the marketplace. This would likely result in product delays and disruptions to broadcasters’ digital rollout plans. The extent to which exciting new “record” functions were delayed or eliminated entirely due to regulations would make the new technologies less compelling to the public, slowing adoption.

## **III. Conclusion.**

For the reasons set forth above, EFF and the Brennan Center respectfully urge the Commission to reject any “content protection” regulatory mandate on digital audio broadcasters or technologies.

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<sup>48</sup> See NOI at para. 16.

<sup>49</sup> See Letter to Gary Shapiro from Cary Sherman, *supra* n.2.

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