



United States Copyright Office

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TO: James H. Billington
The Librarian of Congress

DATE: November 17, 2006

FROM: Marybeth Peters
Register of Copyrights

SUBJECT: Recommendation of the Register of Copyrights in RM 2005-11;
Rulemaking on Exemptions from Prohibition on Circumvention of
Copyright Protection Systems for Access Control Technologies

I am pleased to present my recommendation relating to the rulemaking on exemptions from the prohibition on circumvention of technological measures that control access to copyrighted works. This document constitutes my formal recommendation, as required pursuant to 17 U.S.C. § 1201(a)(1)(C).

Outline of the Recommendation

I. Background

- A. *Legislative Requirements for Rulemaking Proceeding*
- B. *Responsibilities of Register of Copyrights and Librarian of Congress*
- C. *The Purpose and Focus of the Rulemaking*
 - 1. *Purpose of the Rulemaking*
 - 2. *The Necessary Showing*
 - 3. *Determination of "Class of Works"*
- D. *Consultation with the Assistant Secretary for Communications and Information*

II. Solicitation of Public Comments and Hearings

III. Discussion

- A. *The Exempted Classes*
 - 1. Audiovisual works included in the educational library of a college or university's film or media studies department, when circumvention is accomplished for the purpose of making compilations of portions of those works for educational use in the classroom by media studies or film professors.
 - 2. Computer programs and video games distributed in formats that have become obsolete and that require the original media or hardware as a condition of access, when circumvention is accomplished for the purpose of preservation or archival reproduction of published digital works by a library or archive. A format shall be considered obsolete if the machine or system necessary to render perceptible a work stored in that format is no longer manufactured or is no longer reasonably available in the commercial marketplace.
 - 3. Computer programs protected by dongles that prevent access due to malfunction or

damage and which are obsolete. A dongle shall be considered obsolete if it is no longer manufactured or if a replacement or repair is no longer reasonably available in the commercial marketplace.

4. Literary works distributed in ebook format when all existing ebook editions of the work (including digital text editions made available by authorized entities) contain access controls that prevent the enabling either of the book's read-aloud function or of screen readers that render the text into a specialized format.
5. Computer programs in the form of firmware that enable wireless telephone handsets to connect to a wireless telephone communication network, when circumvention is accomplished for the sole purpose of lawfully connecting to a wireless telephone communication network.
6. Sound recordings, and audiovisual works associated with those sound recordings, distributed in compact disc format and protected by technological protection measures that control access to lawfully purchased works and create or exploit security flaws or vulnerabilities that compromise the security of personal computers, when circumvention is accomplished solely for the purpose of good faith testing, investigating, or correcting such security flaws or vulnerabilities.

B. Other Exemptions Considered, But Not Recommended

1. Compilations consisting of lists of Internet locations blocked by commercially marketed filtering software applications that are intended to prevent access to domains, websites or portions of websites, but not including lists of Internet locations blocked by software applications that operate exclusively to protect against damage to a computer or a computer network or lists of Internet locations blocked by software applications that operate exclusively to prevent receipt of email.
2. Space-shifting.
3. DVDs that cannot be viewed on Linux operating systems.
4. Region Coded DVDs.
5. Computer programs protected by mechanisms that restrict their full operation to a particular platform or operating system.
6. Computer games and software with Copy Protections that prevent legitimate users installing and using games and programs.
7. Literary works distributed in electronic audio format by libraries.
8. All works and fair use works.
9. All works protected by access controls that prevent the creation of back-up copies.
10. Audiovisual works and sound recordings protected by a broadcast flag.
11. Miscellaneous.

IV. Proposed Regulatory Text

Recommendation of the Register of Copyrights

I. Background

A. *Legislative Requirements for Rulemaking Proceeding*

The Digital Millennium Copyright Act (“DMCA”), Pub. L. No. 105-304 (1998), was enacted to comply with the WIPO Copyright Treaty (WCT) and WIPO Performances and Phonograms Treaty (WPPT). It established “a wide range of rules that will govern not only copyright owners in the marketplace for electronic commerce, but also consumers, manufacturers, distributors, libraries, educators, and on-line service providers” and “define[d] whether consumers and businesses may engage in certain conduct, or use certain devices, in the course of transacting electronic commerce.”¹

Title I of the Act, which added a new Chapter 12 to Title 17 U.S.C., prohibits circumvention of technological measures employed by or on behalf of copyright owners to protect their works (“access controls”). Specifically, § 1201(a)(1)(A)² provides, in part, that “No person shall circumvent a technological measure that effectively controls access to a work protected under this title.” In order to ensure that the public will have continued ability to engage in noninfringing uses of copyrighted works, such as fair use,³ subparagraph (B) limits this prohibition. It provides that the prohibition against circumvention “shall not apply to persons who are users of a copyrighted work which is in a particular class of works, if such persons are, or are likely to be in the succeeding three-year period, adversely affected by virtue of such prohibition in their ability to make noninfringing uses of that particular class of works under this title” as determined in a rulemaking proceeding. The rulemaking proceeding is conducted by the Register of Copyrights, who is to provide notice of the rulemaking, seek comments from the public, consult with the Assistant Secretary for Communications and Information of the Department of Commerce, and recommend final regulations to the Librarian of Congress.⁴ The regulations, to be issued by the Librarian of Congress, announce “any class of copyrighted works for which the Librarian has determined, pursuant to the rulemaking conducted under subparagraph (C), that noninfringing uses by persons who are users of a copyrighted work are, or are likely to be, adversely affected, and the prohibition contained in subparagraph (A) shall not apply to such users with respect to such class

¹ Report of the House Committee on Commerce on the Digital Millennium Copyright Act of 1998, H.R. Rep. No. 105-551, pt. 2, at 22 (1998) (“Commerce Comm. Report”).

² All statutory references hereinafter are to sections of Title 17, United States Code.

³ See Commerce Comm. Report at 25-26, 35.

⁴ Report of the Committee of Conference on the Digital Millennium Copyright Act, H.R. Conf. Rep. No. 105-796, at 64 (1998) (“Conf. Report”).

of works for the ensuing 3-year period.”⁵

This is the third § 1201 rulemaking. The first rulemaking culminated in the Librarian’s announcement on October 27, 2000, that announced noninfringing users of two classes of works would not be subject to the prohibition against circumvention of access controls. The second rulemaking concluded three years ago, on October 28, 2003, with the announcement by the Librarian, on the recommendation of the Register, that the prohibition against circumvention would not apply to persons who engage in noninfringing uses of the following four classes of copyrighted works:

(1) Compilations consisting of lists of Internet locations blocked by commercially marketed filtering software applications that are intended to prevent access to domains, websites or portions of websites, but not including lists of Internet locations blocked by software applications that operate exclusively to protect against damage to a computer or computer network or lists of Internet locations blocked by software applications that operate exclusively to prevent receipt of email.

(2) Computer programs protected by dongles that prevent access due to malfunction or damage and which are obsolete.

(3) Computer programs and video games distributed in formats that have become obsolete and which require the original media or hardware as a condition of access. A format shall be considered obsolete if the machine or system necessary to render perceptible a work stored in that format is no longer manufactured or is no longer reasonably available in the commercial marketplace.

(4) Literary works distributed in ebook format when all existing ebook editions of the work (including digital text editions made available by authorized entities) contain access controls that prevent the enabling of the ebook’s read-aloud function and that prevent the enabling of screen readers to render the text into a specialized format.⁶

The regulations announced by the Librarian were effective for the period commencing

⁵ § 1201(a)(1)(D).

⁶ The announcement was published in the Federal Register on October 31, 2003. Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, 68 Fed. Reg. at 62,011 (Oct. 31, 2003). The Recommendation of the Register of Copyrights in RM 2002-4; Rulemaking on Exemptions from Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies. October 27, 2003. (“2003 Recommendation of the Register of Copyrights”) and the entire record of the 2003 rulemaking may be found at <http://www.copyright.gov/1201/2003/index.html>.

October 28, 2003. Exemptions to the prohibition on circumvention were to remain in force for a three-year period and expire at the end of that period.⁷ The Librarian is required to make a determination on potential new exemptions every three years.

B. Responsibilities of Register of Copyrights and Librarian of Congress.

As noted above, the prohibition against circumvention is subject to triennial review by the Register of Copyrights and the Librarian of Congress in order to permit a determination on whether users of particular classes of copyrighted works are, or in the next three years are likely to be, adversely affected by the prohibition in their ability to make noninfringing uses of copyrighted works. The primary responsibility of the Register and the Librarian in this rulemaking proceeding is to assess whether the implementation of access control measures is diminishing the ability of individuals to use copyrighted works in ways that are otherwise lawful.⁸ As examples of technological protection measures in effect today, the Commerce Committee offered the use of “password codes” to control authorized access to computer programs and encryption or scrambling of cable programming, videocassettes, and CD-ROMs.⁹ Congress intended that the Register solicit input that would enable consideration of a broad range of current or likely future adverse impacts. The nature of the inquiry for the rulemaking process as a whole is delineated in the statutory areas to be examined, as set forth in section 1201(a)(1)(C):

- (i) The availability for use of copyrighted works;
- (ii) The availability for use of works for nonprofit archival, preservation, and educational purposes;
- (iii) The impact that the prohibition on the circumvention of technological measures applied to copyrighted works has on criticism, comment, news reporting, teaching, scholarship, or research;
- (iv) The effect of circumvention of technological measures on the market for or value of copyrighted works; and
- (v) Such other factors as the Librarian considers appropriate. These factors to be considered in the rulemaking process require the Register to carefully balance the availability of works for use, the effect of the prohibition on particular uses and the effect of circumvention on copyrighted works.

⁷ On October 30, 2006, on the recommendation of the Register and because the current rulemaking proceeding had not yet been concluded, the Librarian announced that the designations of the existing classes of works were being extended on an interim basis pending the conclusion of this rulemaking proceeding. 71 Fed. Reg. 63,247 (Oct. 30, 2006).

⁸ Commerce Comm. Report, at 37.

⁹ *Id.*

C. The Purpose and Focus of the Rulemaking

1. Purpose of the Rulemaking

As originally drafted, § 1201(a)(1) consisted of only one sentence--what is now the first sentence of § 1201(a)(1): “No person shall circumvent a technological protection measure that effectively controls access to a work protected under this title.”¹⁰ Section 1201(a)(2), like the provision finally enacted, prohibited the manufacture, importation, offering to the public, providing or otherwise trafficking in any technology, product, service, device, or component to circumvent access control measures. Section 1201(a) thus addressed “access control” measures, prohibiting both the conduct of circumventing those measures and devices that circumvent them. Thus, § 1201(a) prohibits both the conduct of circumventing access control measures and trafficking in products, services and devices that circumvent access control measures. In addition to § 1201(a)(1)'s prohibition on circumvention of access control measures, § 1201 also addressed circumvention of a different type of technological measure. Section 1201(b) prohibits the manufacture, importation, offering to the public, providing or otherwise trafficking in any technology, product, service, device, or component to circumvent protection afforded by a technological measure that effectively protects a right of a copyright owner under title 17 in a copyrighted work. The type of technological measure addressed in § 1201(b) includes copy-control measures and other measures that control uses of works that would infringe the exclusive rights of the copyright owner. They will frequently be referred to herein as copy controls. But unlike § 1201(a), which prohibits both the conduct of circumvention and devices that circumvent, § 1201(b) does not prohibit the conduct of circumventing copy control measures. The prohibition in § 1201(b) extends only to devices that circumvent copy control measures. The decision not to prohibit the conduct of circumventing copy controls was made, in part, because it would penalize some noninfringing conduct such as fair use.

In the House of Representatives, the DMCA was sequentially referred to the Committee on Commerce after it was reported out of the Judiciary Committee. The Commerce Committee was concerned that section 1201, in its original form, might undermine Congress's commitment to fair use.¹¹ While acknowledging that the growth and development of the Internet has had a significant positive impact on the access of students, researchers, consumers, and the public at large to information and that a “plethora of information, most of it embodied in materials subject to copyright protection, is available to individuals, often for free, that just a few years ago could have been located and acquired only through the expenditure of considerable time, resources, and money,¹² the Committee was concerned that “marketplace realities may someday dictate a different

¹⁰ See Report of the Senate Committee on the Judiciary on the Digital Millennium Copyright Act of 1998, S. Rep. No. 195-190 (1998) (“Senate Commerce Comm. Report”).

¹¹ Commerce Comm. Report at 35.

¹² *Id.*

outcome, resulting in less access, rather than more, to copyrighted materials that are important to education, scholarship, and other socially vital endeavors.¹³ Possible measures that might lead to such an outcome included the elimination of print or other hard-copy versions, permanent encryption of all electronic copies and adoption of business models that restrict distribution and availability of works. The Committee concluded that “[i]n this scenario, it could be appropriate to modify the flat prohibition against the circumvention of effective technological measures that control access to copyrighted materials, in order to ensure that access for lawful purposes is not unjustifiably diminished.”¹⁴ In order to address such possible developments, the Commerce Committee proposed a modification of § 1201 which it characterized as a “‘fail-safe’ mechanism.”¹⁵ In the words of the Committee Report, “This mechanism would monitor developments in the marketplace for copyrighted materials, and allow the enforceability of the prohibition against the act of circumvention to be selectively waived, for limited time periods, if necessary to prevent a diminution in the availability to individual users of a particular category of copyrighted materials.¹⁶ The “fail-safe” mechanism is this rulemaking. In its final form as enacted by Congress, slightly modified from the mechanism that appeared in the version of the DMCA reported out of the Commerce Committee, the Register is to conduct a rulemaking proceeding and, after consulting with the Assistant Secretary for Communications and Information of the Department of Commerce, recommend to the Librarian whether he should conclude that “persons who are users of a copyrighted work are, or are likely to be in the succeeding 3-year period, adversely affected by the prohibition under [§ 1201(a)(1)(A)] in their ability to make noninfringing uses under [Title 17] of a particular class of copyrighted works.¹⁷ “The Librarian shall publish any class of copyrighted works for which the Librarian has determined, pursuant to the rulemaking conducted under subparagraph (C), that noninfringing uses by persons who are users of a copyrighted work are, or are likely to be, adversely affected, and the prohibition contained in subparagraph (A) shall not apply to such users with respect to such class of works for the ensuing 3-year period.”¹⁸

The Commerce Committee offered additional guidance as to the task of the Register and the Librarian in this rulemaking. “The goal of the proceeding is to assess whether the implementation of technological protection measures that effectively control access to copyrighted works is adversely affecting the ability of individual users to make lawful uses of copyrighted works The primary goal of the rulemaking proceeding is to assess whether the prevalence of these technological protections, with respect to particular categories of copyrighted materials, is

¹³ *Id.* at 36.

¹⁴ *Id.*

¹⁵ *Id.*

¹⁶ *Id.*

¹⁷ § 1201(a)(1)(C).

¹⁸ § 1201(a)(1)(D).

diminishing the ability of individuals to use these works in ways that are otherwise lawful.”¹⁹ Thus, the task of this rulemaking appears to be to determine whether the availability and use of access control measures has already diminished or is about to diminish the ability of the public to engage in the lawful uses of copyrighted works that the public had traditionally been able to make prior to the enactment of the DMCA. As the Commerce Committee Report stated, in examining the factors set forth in section 1201(a)(1)(C), the focus must be on “whether the implementation of technological protection measures (such as encryption or scrambling) has caused adverse impact on the ability of users to make lawful uses.”²⁰

2. *The Necessary Showing*

In the first § 1201 rulemaking, the Register concluded, based on a review of the statutory text and the legislative history, that a determination to exempt a class of works from the prohibition on circumvention must be based on a showing that the prohibition has or is likely to have a substantial adverse effect on noninfringing uses of a particular class of works.²¹ The required showing of a “substantial” adverse effect is drawn from the legislative history, where the requirement is variously stated as substantial adverse impact, distinct, verifiable, and measurable impacts, and more than de minimis impacts.”²² Similarly, for proof of “likely” adverse effects on noninfringing uses, the Register found that a proponent must prove by a preponderance of the evidence that the harm alleged is more likely than not; a proponent may not rely on speculation alone to sustain a prima facie case of likely adverse effects on noninfringing uses.²³ The Register also emphasized the requirement of showing a causal nexus between the prohibition on circumvention and the alleged harm. Adverse impacts that are the result of factors other than the prohibition are not within the scope of this rulemaking.²⁴

In each rulemaking proceeding, proposed exemptions are reviewed *de novo*. The existence of a previous exemption creates no presumption for consideration of a new exemption, but rather

¹⁹ Commerce Comm. Report, at 37. Accord Section-By-Section Analysis of H.R. 2281 As Passed by the United States House of Representatives on August 4, 1998. House Comm. on the Judiciary, 105th Cong., (Comm. Print 1998) (“Manager’s Report”), at 6.

²⁰ *Commerce Comm. Report*, at 2.

²¹ Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, 2000 Recommendation of the Register of Copyrights, 65 Fed. Reg. 64,556, 64,558 (Oct. 27, 2000) (“2000 Recommendation of the Register of Copyrights”).

²² For a more extended discussion of this requirement see the Notice of Inquiry published at the outset of this proceeding, 70 Fed. Reg. at 57,526, 57,528 (Oct. 3, 2005).

²³ *See id.*

²⁴ 2000 Recommendation of the Register of Copyrights, 65 Fed. Reg. at 64,559 (Oct. 27, 2000).

the proponent of such an exemption must make a prima facie case in each three-year period.²⁵

3. *Determination of “Class of Works”*

A major focus of the first rulemaking proceeding was how a “class” of works is to be defined. The Register determined that the statutory language requires that the Librarian identify a “class of works” based upon attributes of the works themselves, and not by reference to some external criteria such as the intended use or users of the works. The Register also found that the legislative history appears to leave no other alternative than to interpret the statute as requiring a “class” to be defined primarily, if not exclusively, by reference to attributes of the works themselves. The Commerce Committee Report addressed the issue of determining a class of works:

The issue of defining the scope or boundaries of a “particular class” of copyrighted works as to which the implementation of technological protection measures has been shown to have had an adverse impact is an important one to be determined during the rulemaking proceedings. In assessing whether users of copyrighted works have been, or are likely to be adversely affected, the Secretary shall assess users' ability to make lawful uses of works “within each particular class of copyrighted works specified in the rulemaking.” The Committee intends that the “particular class of copyrighted works” be a narrow and focused subset of the broad categories of works of authorship than [sic] is identified in section 102 of the Copyright Act (17 U.S.C. § 102).²⁶

Because the term “category” of works has a well-understood meaning in the copyright law, referring to the categories set forth in section 102, the Register concluded that the starting point for any definition of a “particular class” of works in this rulemaking must be one of the section 102 categories. The illustrative list of categories appearing in section 102 of Title 17 is only a starting point for this decision and a “class” will generally constitute some subset of a section 102 category. Crafting the appropriate scope of a “class” is one of the major functions of the rulemaking proceeding. The scope of any class will necessarily be determined by the evidence of the present or likely adverse effects on noninfringing uses. The determination of the appropriate scope of a “class of works” recommended for exemption will also take into account the adverse effects an exemption may have on the market for or value of copyrighted works. While starting with a section 102 category of works, or a subcategory thereof, the description of a “particular class” of works ordinarily should be further refined by reference to other factors that assist in ensuring that the scope of the class addresses the scope of the harm to noninfringing uses. For example, the class might be defined in part by reference to the medium on which the

²⁵ 2000 Recommendation of the Register of Copyrights, 65 Fed. Reg. at 64,563 (Oct. 27, 2000).

²⁶ Commerce Comm. Report, at 38.

works are distributed, or even to the access control measures applied to them. But classifying a work solely by reference to the medium on which the work appears, or the access control measures applied to the work, would be beyond the scope of what “particular class of work” is intended to be.²⁷

In previous rulemakings, the Register also concluded that it is not permissible to classify a work by reference to the type of user or use (*e.g.*, libraries, or scholarly research).²⁸ However, in the current proceeding the Register has concluded, based upon the record before her, that in appropriate circumstances a “class of works” that is defined initially by reference to a section 102 category of works or a subcategory thereof, may additionally be refined not only by reference to the medium on which the works are distributed or the access control measures applied to them, but also by reference to the particular type of use and/or user to which the exemption shall be applicable. Because the reasons for the Register’s refinement of the previous standard can best be understood in the context of the current record, an explanation is deferred to the discussion of the first class of works which the Register recommends for exemption.²⁹

D. Consultation with the Assistant Secretary for Communications and Information

Section 1201(a)(1)(C) requires the Register of Copyrights to consult with the Assistant Secretary for Communications and Information of the Department of Commerce and report and comment on the Assistant Secretary’s views in the making of the recommendation to the Librarian of Congress.

Early in the course of the proceeding, the Register of Copyrights met with the Assistant Secretary at the Department of Commerce. The Assistant Secretary, who is also the Administrator of the National Telecommunications and Information Administration (NTIA), was briefed on the rulemaking process established by the Register and was invited to provide input as early as possible so that such information could be fully considered by the Register in the course of this rulemaking proceeding. Throughout the course of the proceeding, the Register kept the Assistant Secretary apprized of developments. When, after the conclusion of the hearings, the Register had reached tentative conclusions with respect to the proposed classes of works to be exempted, she shared those conclusions with the Assistant Secretary and solicited his views.

The Assistant Secretary formally communicated his views in two letters, each of which addressed the same particular proposal relating to computer programs in the form of firmware that enable wireless telephone handsets to connect to a wireless telephone

²⁷ See 2003 Recommendation of the Register of Copyrights, at 11-13.

²⁸ See, *e.g.*, *id.*

²⁹ See the discussion below in Section III.A.1.

communication network. Because the letters related to that particular proposal, they are addressed below in the discussion of that proposal.³⁰

II. Solicitation of Public Comments and Hearings

On October 3, 2005, the Register initiated this rulemaking proceeding pursuant to § 1201(a)(1)(C) with publication of a Notice of Inquiry.³¹ The Notice of Inquiry requested written comments from all interested parties, including representatives of educational institutions, libraries and archives, scholars, researchers, copyright owners and other members of the public. The Notice devoted a great deal of attention to setting out the legislative parameters and the scope of the rulemaking based on the determinations made in the first rulemaking. The Register was determined to make the comments she received publicly available as quickly as possible in order to elicit a broad range of public participation; therefore, as in the 2003 rulemaking, the Notice stated a preference for submission of comments in electronic format and created a web-based form to facilitate comment submission.³²

During the initial comment period that ended on December 1, 2005, the Copyright Office received 74 written comments, all of which were posted on the Office's website.³³ Parties submitting comments during this period were asked to specify a class or classes of works proposed for exemption and to provide the factual and/or legal basis for each proposed exemption along with summaries of their arguments. Many of the initial comments contained similar or overlapping proposals.

During the reply comment period which ended on February 2, 2006, commenters were requested to provide either support or opposition to the proposals for exemption introduced in the initial comment period and to provide factual and/or legal arguments in support of their position. The Office received a total of 35 reply comments in response to the initial proposals for exemption, all of which were posted on the Copyright Office website.³⁴

On February 23, 2006, the Register published a notice that public hearings would be conducted at Stanford University in Palo Alto, California and at the Library of Congress in Washington, DC in March and April. Persons wishing to testify were asked to submit their requests to testify by March 10, 2006. The Register conducted public hearings on four separate days: at Stanford University on March 23, 2006, and at the Library of Congress on

³⁰ See Section III.A.5.

³¹ 70 Fed. Reg. at 57,526 (Oct. 3, 2005).

³² 70 Fed. Reg. at 57,530 (Oct. 3, 2005).

³³ <http://www.copyright.gov/1201/2006/comments/index.html>.

³⁴ <http://www.copyright.gov/1201/2006/reply/>.

March 29, March 31, and April 3, 2006.³⁵ Eighteen witnesses, representing proponents and opponents of proposed classes of works, testified on seven proposed classes. The transcripts of the hearings were posted on the Copyright Office website.³⁶

Following the hearings, the Copyright Office sent questions to certain witnesses participating in the hearings to clarify certain statements made during the hearings or to respond to questions resulting from particular testimony at the hearings. The post-hearing questions from the Copyright Office and the responses from the witnesses have been posted on the Copyright Office website.³⁷

III. Discussion

A. *The Exempted Classes*

1. **Audiovisual works included in the educational library of a college or university's film or media studies department, when circumvention is accomplished for the purpose of making compilations of portions of those works for educational use in the classroom by media studies or film professors.**

In this rulemaking proceeding, as in the prior proceedings, proponents of exemptions to the prohibition on circumvention of access controls raised concerns regarding the Content Scrambling System (CSS) on DVDs containing motion pictures and other audiovisual works. In prior rulemakings and in judicial opinions, it has been established that CSS is a technological measure that protects access to motion pictures and other audiovisual works contained on DVDs for commercial distribution. CSS is an algorithm that is deployed on the content of most commercially distributed motion pictures on DVDs. In order to lawfully access the content with the authority of the copyright owner, users must purchase an authorized player that contains an authorized decryption device licensed from the DVD Copy Control Association (DVD-CCA). In order to manufacture and distribute an authorized player, manufacturers must abide by the terms of one or more DVD-CCA licenses. One of

³⁵ The Register had set aside additional days for hearings; but after reviewing the requests to testify, it was determined that only four days of hearings were needed.

³⁶ <http://www.copyright.gov/1201/2006/index.html>.

³⁷ <http://www.copyright.gov/1201/2006/posthearing>.

In referring to the comments and hearing materials, the following abbreviations and conventions are used: C- Initial Comment, R - Reply Comment, and T-Transcript. Comment numbers correspond to the number in the indices of comments found at <http://www.copyright.gov/1201/2006/comments/index.html> and <http://www.copyright.gov/1201/2006/reply/>. References to the transcripts include the name of the witness, the date of the testimony and the pages of the transcript.

those terms is that DVD players may not include a digital output.

CSS was the subject of prior proposals for exemptions, but, for a number of reasons, the evidence in support of an exemption to enable lawful circumvention of CSS on DVDs was found to be insufficient. In some cases, proponents did not prove that the use was noninfringing.³⁸ In other cases, the proponent of the exemption failed to demonstrate why alternative unprotected formats, such as VHS videocassettes, could not accommodate the particular use desired, or why making analog copies in various ways would be insufficient for the intended purpose.³⁹ In still other cases, the proponent was unable to show why the effects of CSS on a particular noninfringing use were more than a mere inconvenience to the user, *e.g.*, the user would prefer to use or copy the digital work or access the work on a particular operating system. Finally, some proponents failed to prove that the adverse consequences of CSS on particular users outweighed the benefits that CSS provided to copyright owners and the public by encouraging the distribution of motion pictures and audiovisual works in digital format.

In contrast to the earlier proposals, a more compelling proposal was submitted in this proceeding by three professors from the University of Pennsylvania's Cinema Studies Program and Annenberg School of Communication professors, who proposed the following class of works: "Audiovisual works included in the educational library of a college or university's film or media studies department and that are protected by technological measures that prevent their educational use."⁴⁰ They asserted that in order to teach their classes effectively, they need to be able to create compilations of portions of motion pictures distributed on DVDs protected by CSS for purposes of classroom performance. They also asserted that in order to show pedagogically necessary, high quality content in a reasonably efficient manner, they must circumvent CSS in order to extract the portions of motion pictures or audiovisual works necessary for their pedagogical purposes.

The proponents of this exemption demonstrated that the reproduction and public performance of short portions of motion pictures or other audiovisual works in the course of face-to-face teaching activities of a film or media studies course would generally constitute a noninfringing use. Without question, a motion picture (or individual images from a motion

³⁸ See, *e.g.*, 2003 Recommendation of the Register of Copyrights, at 103–108 (request for an exemption to enable making backup copies of motion pictures distributed on DVDs).

³⁹ See, *e.g.*, 2003 Recommendation of the Register of Copyrights, at 116.

⁴⁰ C5. The same comment also proposed a second class: "Derivative and collective works which contain audiovisual works that are in the public domain and that are protected by technological measures that prevent their educational use," which the proponents wished to use for pedagogical purposes in the same way that they wished to use the works in the first proposed class. Because the Register recommends an exemption for works in the first proposed class and because film and media studies professors can use that exemption with respect to all works in the second class, there is no need to address the second class further.

picture) may be performed or displayed in the course of face-to-face teaching activities in a classroom of a not-for-profit academic institution. 17 U.S.C. § 110(1). It was also demonstrated that in many cases, the reproduction of portions of motion pictures or other audiovisual works for classroom use by a film or media studies professor would constitute fair use. Further, proponents asserted in comments, and demonstrated at the hearing, that alternative formats such as VHS videocassettes would not, in some cases, satisfy the professors' pedagogical purpose.

Opponents of the exemption, while conceding that the reproduction of portions of motion pictures and other audiovisual works by professors may often fall within fair use and that the public performance of these portions for educational purposes in the classroom falls within the exemption in section 110(1) of the Copyright Act, maintained that circumvention was not necessary to achieve the uses desired by professors.⁴¹

First, opponents asserted that there is a commercially available DVD player that meets the needs of professors. They demonstrated that the Pioneer Corporation manufactures and distributes two DVD players, the DVD-V5000 and the DVD-V7400, both of which offer a barcode command stack feature that allows users to select beginning and end frames of specific clips of motion pictures on DVDs and save them to the player's memory for later playback.⁴²

Opponents of the exemption noted that permission for use of clips is often granted by Warner Brothers for educational and non-profit uses, but that in 2005, there were no requests received by Warner Brothers seeking permission to circumvent in order to make a clip or requests for a high quality clip. It was further argued that the development of the next generation of optical media will likely incorporate protection systems other than CSS, such as the Advanced Access Content System ("AACs"), which could allow managed copies of motion pictures to be made, *i.e.*, copies that cannot be further disseminated beyond a personal or family environment to the general public.⁴³

Opponents of an exemption also pointed out that portions of motion pictures could be recorded by other means that do not entail circumvention, for example, by video recording the screen display of a monitor with a digital video camera. The Motion Picture Association of

⁴¹ T Metalitz 4/3/06, at 71, R11, at 28.

⁴² R1, at 6-7.

⁴³ R18, at 7 and Aistars 4/3/06, at 38-39. According to a witness from Time Warner Inc., AACs has "been developed with the spirit of trying to enable a lot of business models and consumer offerings that we've seen demand for in the marketplace" and "will facilitate new uses including the making of managed copies within one's home." The witness suggested that "we might want to explore a little bit further to see how the ability of making managed copies might address some of the educational uses that have been identified as well." Aistars 4/3/06, at 39.

America (MPAA) presented a demonstration of clips recorded in this manner with a standard consumer digital video camera.

In addition to observing that it is possible to make a video recording of the screen display, opponents noted that the vast majority of works that professors wanted to use were available in unprotected formats, such as VHS, and that it is therefore not necessary to circumvent access controls in order to engage in noninfringing uses of these works. Opponents also noted that fair use, as codified in the Copyright Act, does not guarantee copying by the optimum method or in the identical format as the original.⁴⁴ Given the alternative versions of these works that are available to users, opponents argued that an exemption was unnecessary. Further, opponents argued that an exemption would blur the bright line against circumvention and lead to public confusion.⁴⁵

Finally, opponents noted that while the particular use sought to be made by professors may constitute a noninfringing use, an exemption for a “class of works” would necessarily exempt a much broader range of uses, given the interpretation in prior rulemakings of the statutory meaning of how a class may be defined. Because a class must be based primarily on attributes of the work itself and not the nature of the use or the user, opponents argued that an exemption based on the professors’ intended use would extend to any noninfringing use. Further, they believed that such an exemption would create confusion about the circumstances in which circumvention was appropriate.

The Register has carefully reviewed all of the evidence and testimony in this proceeding and has determined that the evidence warrants an exemption. Critical to the recommendation in support of an exemption, however, is a clarification of the interpretation of the proper scope of what may be a “class of works.” If Section 1201(a)(1)(B)-(D) could not be construed to provide the authority to tailor a “class” in the manner discussed below, difficult choices would have to be made between (1) recognizing an exemption for a particular class of works that would permit circumvention for a broad range of uses, even though the case had been made for only a narrow noninfringing use, and (2) refusing to recognize an exemption for a class because the adverse consequences of a broadly defined class would outweigh the prohibition's adverse effects to a narrow noninfringing use. Thus, it is appropriate to begin with the analysis of how a “class of works” can be defined.

The question of how a “class” of works is defined has been a central issue in this rulemaking proceeding since its inception. In its legislative report on the DMCA, the House Commerce Committee stated, “The issue of defining the scope or boundaries of a ‘particular class’ of copyrighted works as to which the implementation of technological protection measures has been shown to have had an adverse impact is an important one to be determined

⁴⁴ T Attaway 4/3/06, at 58, citing *Universal City Studios, Inc. v. Corley*, 273 F.3d 429, 459 (2d Cir. 2001).

⁴⁵ T Attaway 4/3/06, at 75-76.

during the rulemaking proceedings The Committee intends that the ‘particular class of copyrighted works’ be a narrow *and focused* subset of the broad categories of works of authorship identified in section 102.” (emphasis added).⁴⁶ Similarly, The House Manager’s Report stated, “Deciding the scope or boundaries of a ‘particular class’ of copyrighted works as to which the prohibition contained in section 1201(a)(1) has been shown to have had an adverse impact is an important issue to be determined during the rulemaking proceedings. The illustrative list of categories appearing in section 102 of Title 17 is only a starting point for this decision.”⁴⁷

In the 2000 rulemaking, it was determined that the starting point for defining a “class” must be the section 102 categories of works.⁴⁸ “A rigid adherence to defining ‘class’ solely by reference to section 102 categories or even to inherent attributes of the works themselves might lead to unjust results in light of the fact that the entire ‘class’ must be exempted from section 1201(a)(1)’s anticircumvention provision if the required adverse impact is demonstrated Limiting the class to ‘motion pictures distributed on DVD’s,’ or more narrowly to ‘motion pictures distributed on DVD’s using the content scrambling system of access control’ would be a more just and permissible classification. Such a classification would begin by reference to attributes of the works themselves, but could then be narrowed by reference to the medium on which the works are distributed, or even to the access control measure applied to them.”⁴⁹

The 2000 recommendation went on to state that “classifying a work *solely* by reference to the medium on which the work appears, or the access control measures applied to the work, seems to be beyond the scope of what ‘particular class of work’ is intended to be.” And classifying a work by reference to the type of user or use (*e.g.*, libraries or scholarly research) seems totally impermissible when administering a statute that requires the Librarian to create exemptions based on a ‘particular class of works.’”⁵⁰

To be sure, the 2003 recommendation contained similar language, but went on to say that “it is not permissible to classify a work by reference to the type of user or use (*e.g.*, libraries, or scholarly research).”⁵¹ While that conclusion was reasonable at the time in light

⁴⁶ Commerce Comm. Report, at 38.

⁴⁷ Manager’s Report, at 7.

⁴⁸ Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, *2000 Recommendation of the Register of Copyrights*, 65 Fed. Reg. 64,556, 64,560 (Oct. 27, 2000).

⁴⁹ *Id.*

⁵⁰ *Id.*

⁵¹ *2003 Recommendation of the Register of Copyrights*, at 12-13.

of the record in that particular rulemaking, the case made by the University of Pennsylvania professors has presented an occasion for reexamination of that general statement.⁵²

When defining a class by reference to the nature of the use or user was considered in previous rulemakings, the context for such consideration was significant. Based on the proposals made in the past rulemaking proceedings, proponents had failed to satisfy certain threshold requirements that would have necessitated consideration of whether a class that was primarily defined by reference to a section 102 category of works could be further narrowed by reference to the use or user. Many proponents suggested classes of multiple or broad categories of works that were *solely* or *primarily* defined by reference to the use or users, *e.g.*, fair use works, per se educational fair use works or material that cannot be archived or preserved. Such proposed classifications did not constitute narrowly focused subsets of categories of works. Instead, these proposals sought to define a “class” *primarily* or *solely* by reference to the intended use or user. It remains a sound conclusion that a “class” that is solely or primarily defined by reference to a particular use or a particular user is inconsistent with the legislative language and intent. Further, the evidence provided in prior proceedings did not sufficiently implicate the question of whether a class should be *refined* (but not initially *defined*) by reference to a particular type of use or user.

Nevertheless, the legislative history instructs the Register to carefully consider the appropriateness of the scope of a “class” in the context of each rulemaking proceeding in light of the particular facts presented in each proceeding. Thus, even though a “class” must begin, as its starting point, by reference to one of the categories of authorship enumerated in section 102, or a subset thereof, the ways in which that primary classification should be further delineated depends on the specific facts demonstrated in the proceeding. A “class” must be properly tailored not only to address the harm demonstrated, but also to limit the adverse consequences that may result from the creation of an exempted class. The ability to carefully craft a “class” that is neither too broad nor too narrow requires the availability of all of the necessary tools to achieve this goal. Given the facts demonstrated by the film professor proponents of the exemption and the legitimate concerns expressed by the opponents of the proposed exemption, it makes sense that a class may, in appropriate cases, be additionally refined by reference to the particular type of use and/or user.

The plain language of the statute supports this conclusion and resolves some of the vexing questions that have arisen in prior rulemaking proceedings related to the proper

⁵² The interpretation of “particular class of works” applied herein is made in response to new factual situations presented in this rulemaking proceeding, and thus may represent an evolution from the approach taken in past rulemakings. Such reexamination is entirely appropriate in the context of this rulemaking. Indeed, “Agencies are free to change course as their expertise and experience may suggest or require, but when they do so they must provide a ‘reasoned analysis indicating that prior policies and standards are being deliberately changed, not casually ignored.’” *Ramaprakash, v. Federal Aviation Administration*, 346 F.3d 1121, 1124 (D.C. Cir. 2003). The reasoned analysis establishing that the approach taken in this rulemaking is the product of careful deliberation, and not “casual ignorance” of the prior rulemakings, is provided herein.

meaning of Section 1201(a)(1)(D). That subsection states:

The Librarian shall publish any class of copyrighted works for which the Librarian has determined, pursuant to the rulemaking conducted under subparagraph (C), that noninfringing uses by persons who are users of a copyrighted work are, or are likely to be, adversely affected, and the prohibition contained in subparagraph (A) shall not apply to such users with respect to such class of works for the ensuing 3-year period.⁵³

The proper meaning of this subsection was opaque in the context of the facts presented in prior rulemakings. If an exemption issued for a particular class, questions arose as to whether *any user* would be entitled to circumvent as a result of the exemption, or whether only *noninfringing* users who met the qualifications of the class would be entitled to circumvent. To whom does “such users” refer? All users of copyrighted works? Noninfringing users of copyrighted works? Although the latter option seemed preferable to the former, *any* noninfringing use was not the basis, or proximate cause, for an exemption. Although a showing that the prohibition is adversely affecting or likely to adversely affect a noninfringing use is a threshold requirement for proponents of an exemption, such a showing is not the end of the analysis. In many cases, there are alternatives to circumvention that will enable noninfringing uses.

Typically, the impetus for an exemption is the demonstration of sufficient evidence proving that *a particular noninfringing use*, one that warrants an exemption, has been adversely affected by the prohibition, *e.g.*, the noninfringing use cannot be accomplished without circumvention. Thus, the application of an exemption to *all* noninfringing uses or users will in many cases be broader than is justified by the evidence.⁵⁴

Reading the language of § 1201(a)(1)(D) in light of the realities of the current proposal informs an interpretation of § 1201(a)(1)(D) that is more consistent with the legislative history of the proper scope of a class of works. It states: “and the prohibition contained in subparagraph (A) shall not apply *to such users with respect to such class of works* for the ensuing 3-year period.” What is potentially misleading about that phrase is that a “class of works” could be interpreted as being separate and distinct from “such users.” Yet, reading the sentence in context, it becomes clear that “such users” refers to “noninfringing uses by persons who are users of a copyrighted work [that] are, or are likely to be, adversely affected [by the prohibition],” *i.e.*, to those persons who are being adversely affected by the prohibition in their ability to make “noninfringing uses” of the works in the class. The tailoring of a “class” is supposed to be remedial for those users who are adversely affected by

⁵³ See 17 U.S.C. § 1201(a)(1)(D).

⁵⁴ The class of works under discussion in this section, relating to audiovisual works, is a case in point.

the prohibition. Unless a “class” may describe those uses or users, the regulatory language will not always clearly identify the intended recipients of the remedial exemption. While it is certainly possible, as our past rulemakings have demonstrated, to craft a properly tailored exemption without reference to a particular use or users, in other cases, such as the one here at issue, failing to specify the use or users for whom the exemption was found to be warranted would result in an unnecessarily broad exemption. Further, if a class is too broad, it will often entail undesirable consequences. If those consequences are such that they would lead to undue harm to copyright owners, it may be difficult to justify the exemption at all. Were that the result, the rulemaking proceeding would not be operating as the fail-safe mechanism that Congress intended it to be. Therefore, depending upon the circumstances, it can be appropriate to refine a class by reference to the use or user in order to remedy the adverse effect of the prohibition and to limit the adverse consequences of an exemption.

Such an analysis is also consistent with the statutory command to consider the four factors set forth in section 1201(a)(1)(C)(i)-(iv), as well as any other factors that the Librarian considers appropriate.⁵⁵ For example, in determining whether the prohibition on circumvention has an adverse effect on the availability for use of a particular class of works, the answer might be very different depending upon whether the class may be narrowed by reference to particular uses and/or users. In the case of DVDs, for example, the analysis in past rulemakings has concluded that the prohibition on circumvention of access controls has actually promoted availability for use of motion pictures by providing motion pictures studios with an incentive to make those works available in DVD format with the assurance that there will be legal remedies against those who circumvent CSS.⁵⁶ But when the class of works is more narrowly defined, permitting circumvention only by college and university film and media studies professors for classroom teaching, motion picture studios are not likely to be deterred from releasing their works on DVDs out of fear that permitting circumvention for such a specialized use by such a focused class of users would result in the circulation of large numbers of unprotected copies of their movies. In the absence of such concerns, which would be present if the class were not restricted to such users and uses, an adverse affect on the availability for use of the copyrighted works would be more likely.⁵⁷ In determining whether the prohibition on circumvention has an impact on the availability for use of works for nonprofit archival, preservation, and educational purposes, the analysis would be likely to be very different for a class of works consisting of all motion pictures on DVDs than it would be for a class of motion pictures in the educational library of a college or university’s film or

⁵⁵ See 17 U.S.C. § 1201(a)(1)(C)(v).

⁵⁶ See *2003 Recommendation of the Register of Copyrights*, at 118-119.

⁵⁷ While one might argue that a broad exemption would make more copyrighted works available for use because more copies would be unprotected and therefore available for unauthorized dissemination, it is difficult to believe that the “availability for use” to which the statute refers is intended to relate to infringing uses. Moreover, in the long run this would most likely lead to the availability of fewer works for use, since copyright owners would have fewer incentives to produce works that could more easily be pirated.

media studies department, when circumvention is accomplished for the purpose of making compilations of portions of those works for educational use in the classroom by media studies or film professors. This statutorily favored purpose would be more clearly served by an exemption in the latter case than in the former. The same would be true in considering whether the prohibition on circumvention is having an adverse effect on criticism, comment, news reporting, teaching, scholarship, or research. Finally, in evaluating the effect of circumvention on the market for or value of a particular class of copyrighted works, the analysis will be very different depending upon whether that class consists of all motion pictures on DVDs or only of motion pictures used by film and media studies professors for classroom teaching.

In relation to the proposal by film professors, the proper scope of a class of works is critical to the decision of whether an exemption is proper. Film and media professors have demonstrated more than simply that the use of film clips is important in film classes. Rather, they have demonstrated that the encrypted DVD versions of motion pictures often are of higher quality than copies in other available formats and contain attributes that are extremely important to teaching about film for a number of reasons.⁵⁸ For example, for older works, the DVD version of a motion picture can preserve the color balance and aspect ratio to accurately reflect how the original work would have appeared when it was originally released in theaters.⁵⁹ The record does not reveal sufficient viable alternatives to the DVD version of the motion pictures for this purpose. For instance, VHS versions of the films altered the color balance and aspect ratio.⁶⁰ Similarly, the demonstration at the hearing of screen shots with a digital video recorder revealed dramatic color distortions and greatly reduced picture quality. While these options may have satisfied the needs of many types of noninfringing users and even many noninfringing educational uses – *e.g.*, those wanting to comment on the historical context of a film or create a parody, or to show a film clip in class unrelated to cinematographic significance⁶¹ – the reduced quality of alternative formats was wholly insufficient for the pedagogical purposes for which the clips were sought in film and media studies classes.

The only alternative on the market that came close to satisfying the needs of film and media professors was the Pioneer DVD player that operated with barcode reader software. With this player and software, with a retail price of \$375 and \$100 respectively, professors could display clips in a classroom that had been pre-selected before class. However, this player was a single disc player, meaning that each time a professor wanted to show a clip on

⁵⁸ T Decherney 4/3/06, at 66-67. A review of such material submitted by opponents of the exemption confirms this conclusion.

⁵⁹ C5, at 7.

⁶⁰ T Decherney 4/3/06, at 11-12.

⁶¹ See 2003 Recommendation of the Register of Copyrights, at 116-118.

more than one DVD, one disc would have to be removed and a new one placed into the player. During the demonstration of this player at the hearing, the replacement of one disc with a new one entailed a considerable amount of time to elapse before the disc was ready for classroom use, *i.e.*, the disc had to load and the copyright notice and warning screens had to run their course. Although the amount of time delay was relatively short, it was a significant delay in light of the purpose and context of the intended use in the course of a classroom lecture. According to the principal proponent of the exemption, “If a professor wants to show a class ten separate thirty second clips, it can take more than 30 seconds for each change of a disc in a DVD player and to find the desired portion of a work. Those ten separate thirty second clips could easily take an added five minutes to be loaded for the class; in a fifty minute lecture, this means that ten percent of the class time is lost to meaningless DVD juggling.”⁶²

The significance of loading time deserves further discussion in order to make clear the scope and basis of the Register’s recommendation for this exemption. In the past, there have been proposals to permit circumvention for purposes of fast-forwarding through previews or commercials on DVDs. Proponents correctly stated that because watching a DVD in one’s home is a private performance, such conduct is noninfringing. It was further argued that CSS prevented consumers from engaging in this noninfringing use and, therefore, an exemption was warranted. Although the exemption was denied largely on other grounds⁶³ the adverse effect on noninfringing uses was found to be merely an inconvenience. However, what may be a “mere inconvenience” in one context may be a fundamental impediment to an important and socially beneficial activity in another context. Societal priorities and the expression of those priorities in the statutory factors offer us guidance. As noted above, section 1201(a)(1)(D) sets forth four nonexclusive considerations and instructs the Librarian to examine them and such other factors as he considers appropriate.

The first consideration is “the availability for use of copyrighted works.”⁶⁴ This broad inquiry necessitates the examination of the entire landscape of the availability of “works” for “use.” The Register has understood this to require an examination of the options available for use of a work, in all its tangible forms, *i.e.*, copies or phonorecords. This factor requires consideration of whether options for use exist in the marketplace. In many specific cases, this factor has required the Register to consider whether a particular use can be made from another readily available format when the access-controlled digital copy of that “work” does not allow

⁶² C5, at 5.

⁶³ See 2003 *Recommendation of the Register of Copyrights*, at 109-113 (the UOP function is not affected by the prohibition on circumvention of access controls).

⁶⁴ 17 U.S.C. § 1201(a)(1)(C)(i).

that use.⁶⁵

In the context of this proposal, this factor required examination of the alternative forms in which the “work,” *i.e.*, the motion picture or audiovisual work, was available for use. Although the motion pictures were available for use in other formats, *e.g.*, VHS or screenshots, these formats do not fully satisfy the purpose of the intended use because the quality is inferior for purposes of instruction in a college-level film or media studies class. Additionally, there are other features of the DVD version of these works that were not available in other formats, such as the camera angles, the director interviews, or alternative scenes. Thus, while the motion pictures were available for use, the DVD version provided enhanced quality, features and, in most cases, contained added material that was appropriate for classroom use but unavailable for use in other formats.

Simply finding that a work is optimized in a particular format, however, is not determinative of whether or not an exemption is warranted. As the United States Court of Appeals for the Second Circuit has stated, “fair use has never been held to be a guarantee of access to copyrighted material in order to copy it by the fair user’s preferred techniques, or in the format of the original.”⁶⁶ Preferences are not determinative and, in most cases, relate only to convenience. What is relevant is what formats are available that are necessary to achieve a productive purpose – and in particular, a purpose singled out in the statutory considerations found in § 1201(a)(1)(D).

Here, it is necessary to assess the ways in which the DVD format may be used in the classroom. Simply because a film professor would *prefer* to utilize presentation software rather than available DVD players is not a sufficient basis for demonstrating that an exemption is warranted. To successfully demonstrate that the prohibition is adversely affecting film and media professors, it must also be shown that available options (*e.g.*, use of VHS or screenshot versions of the motion pictures) are insufficient for the pedagogical purposes of film and media professors. In making that determination, it is helpful and instructive to examine the proposed use in light of the other statutory factors.

The second factor requires a more particularized inquiry than the first. While again focusing on the availability for use, particular types of use are identified, namely, nonprofit archival, preservation and educational uses. This factor clearly emphasizes special consideration for certain identified socially productive uses. It distinguishes between general noninfringing uses and uses that Congress considered to be particularly significant noninfringing uses, and seeks detailed consideration of the availability of works for these important uses.

⁶⁵ See, *e.g.*, 2000 Recommendation of the Register of Copyrights, 65 Fed. Reg. at 64,568 (Oct. 27, 2000).

⁶⁶ T Attaway 4/3/06, at 78, quoting *Universal City Studios v. Corley*, 273 F.3d 429, 459 (2001).

While the desired motion pictures may be available for use in formats other than DVDs, there is a heightened need for high quality for purposes of the intended use in the specific context of instruction in college-level film and media studies classes. As the proponents readily admit in response to written questions posed to parties following the hearing, in some cases (and in non-film or media courses), analog copies or other available alternatives may be fully adequate to accommodate the purpose of the use.⁶⁷ But the film and media professor proponents assert that use of the DVD version is more than just a matter of preference. The question is whether the delay in changing discs is simply an inconvenience or whether it is adversely affecting education. This is perhaps best examined under the third factor set forth in § 1201(a)(1)(D).

The third factor approaches similar socially productive uses from a different perspective and requires consideration of whether the prohibition has an impact on criticism, comment, news reporting, teaching, scholarship, or research. It is significant that Congress placed emphasis on establishing the impact on particular types of use rather than noninfringing uses generally. Congress expressed heightened concern for what may be considered traditionally socially productive noninfringing uses.

In the context of the film and media professors' proposal, it has not been demonstrated that the prohibition affects teaching generally, but only that it affects a particular form of teaching. Specifically, the evidence demonstrates that the prohibition affects film and media studies professors in their ability to demonstrate what may only be revealed by use of the DVD version of certain motion pictures.

A particular characteristic of most commercially released DVDs is that upon insertion into a DVD player, certain sequential screens must be allowed to run their course. Although the required duration of required introductory screens may vary, most contain at a minimum a studio logo screen and a copyright warning notice prior to displaying the menu screen. These screens are wholly appropriate for the copyright owner to include and, in general, do not have any negative implications for the public. Yet, for the film and media professors' intended use, these screens waste valuable class time. The larger the number of DVDs that need to be shown, the greater the amount of class time spent watching material that serves no pedagogical purpose. Thus, even with the availability of the Pioneer players, the prohibition has an adverse effect on film and media studies professors. Although the Pioneer players provide some benefits to educators, they do not resolve all of the adverse effects of the prohibition on film and media studies professors. Had a carousel player been available at a reasonable price that would have been capable of avoiding the introductory material during class, it might have solved the problem. Similarly, had "Educational Use" editions of DVDs been available in the market that eliminated these introductory screens, the adverse effect of the prohibition might have been mitigated.

⁶⁷ Response from Decherney to Carson dated 6/2/06, at 3.

However, there was no showing that such accommodations were available. The assertion by one studio, albeit one that owns the largest English language library of motion pictures, that it regularly licenses use by educators is not sufficient to negate the problem demonstrated – that the effect of the prohibition is that a more than *de minimis* amount of classroom time is wasted in film and media studies classes. Ten percent of educational classroom time is a significant social expenditure, particularly when classroom time is a limited and precious resource. While a delay of a few minutes during private, in-home use would be unlikely to constitute an adverse effect of the prohibition for purposes of this rulemaking, the same amount of time unnecessarily expended in the classroom for teaching purposes does qualify as an adverse effect. The third factor does not require that a use be prevented completely by the prohibition on circumvention. Rather, it requires consideration of the impact of the prohibition on teaching. Film and media professors have demonstrated that the prohibition adversely impacts teaching.

Finally, Congress instructed the Librarian to consider the effect of circumvention on the market for or value of copyrighted works. The scope of the exemption is extremely important to this examination of this factor. If the scope of the exemption were broad, *e.g.*, motion pictures on DVDs, the effect of the circumvention that would be authorized by the exemption would be potentially harmful to copyright owners and would adversely affect the public by undermining the incentive for the distribution of digital copies of motion pictures and audiovisual works. On the other hand, by crafting a class that appropriately addresses the narrow adverse consequences of the prohibition demonstrated by film and media professors, the effect on the market or value of the copyrighted works is likely to be virtually nonexistent. The most appropriate way in which to properly tailor the exemption to avoid adverse consequences is to refine the class by reference to the specific use and users that have demonstrated an adverse effect of the prohibition in a very limited situation.

Thus, the four nonexclusive factors enumerated in § 1201(a)(1)(C)(i)-(iv) favor both (1) an approach to defining “classes” of works that may, when appropriate, be refined by reference to particular types of users and/or uses, and (2) an exemption pertaining to the class described below.

Based on the examination of the evidence submitted by proponents and opponents of the exemption and a thorough review of the requisite statutory factors, the Register recommends the following class be exempted for the next three-year period: Audiovisual works included in the educational library of a college or university’s film or media studies department, when circumvention is accomplished for the purpose of making compilations of portions of those works for educational use in the classroom by media studies or film professors.

- 2. Computer programs and video games distributed in formats that have become obsolete and that require the original media or hardware as a condition of access, when circumvention is**

accomplished for the purpose of preservation or archival reproduction of published digital works by a library or archive. A format shall be considered obsolete if the machine or system necessary to render perceptible a work stored in that format is no longer manufactured or is no longer reasonably available in the commercial marketplace.

The Internet Archive, along with some supporting comments, proposed an exemption that is identical to the classes of works exempted in the 2003 Rulemaking proceeding, namely: “Computer programs and video games distributed in formats that have become obsolete and that require the original media or hardware as a condition of access.”⁶⁸ The Internet Archive submitted written comments, reply comments and testified in the hearings about the benefits that have resulted from the existing exemption over the course of the past three years, the types of works that have been preserved as a result of that exemption, and the work that remains to be done to preserve and archive obsolete formats of computer programs and video games.

The Internet Archive has also requested an additional exemption that would expand the scope of the existing exemption to include: “Computer programs and video games distributed in formats that require obsolete operating systems or obsolete hardware as a condition of access.” The Archive’s founder, Brewster Kahle, testified that while the existing exemption has been instrumental in the preservation of many works that otherwise could not have been preserved, the Archive is finding new problems with classes of works that do not fall within the scope of the existing exemption. For instance, Mr. Kahle claimed that the Archive receives CD ROMs containing computer programs or video games that may only be accessed by emulating a version of an operating system that is no longer commercially available or a particular hardware system that is obsolete. In its comments and testimony, the Archive questions whether the emulation of obsolete operating systems or hardware operates as a technological measure that protects access to the work sought to be accessed, yet in the face of uncertainty, it requests an exemption that would provide certainty in its archival endeavors.

There was no direct opposition to the Internet Archive’s request for a renewal of the exemption granted in the last rulemaking. In fact, the witness testifying on behalf of the Joint Reply Commenters⁶⁹ stated that the Internet Archive has done “a better job than anyone else of explaining how they’ve used the existing exemption, first demonstrating that they’ve used it . . . and, second, explaining how they’ve used [sic] and, third, explaining why they still need

⁶⁸ C4, C12, C19, C21, C54, R7, R12.

⁶⁹ The Joint Reply Commenters describe themselves as a group of 14 “organizations, representing copyright owners and creators, and most of the U.S. copyright industries.” It is fair to say that the Joint Reply Commenters were the principal opponents of most of the proposed exemptions.

it. . . .”⁷⁰ The Joint Reply Commenters stated that their “only concern” about the existing exemption is similar to their concern about the broadened proposal by the Archive, namely, that computer programs or video games that have become obsolete in particular formats or that are accessible only by interacting with particular operating systems or hardware that has become obsolete, are being reintroduced into the market in new ways by their copyright owners. They pointed to the reply comment by Time Warner Inc.⁷¹ discussing the GameTap website, which is making legacy games available for authorized access online. Similarly, they identified StarROMs as another online game site featuring access to legacy games. Further, they note that Amiga has licensed the development of a new operating system compatible with many of today’s chips that would allow legacy games to be played. and that the Nintendo Revolution system is another example of nostalgia for back catalogue games that has encouraged copyright owners to make their classic games available for use on current systems.⁷²

In addition to stating that particular hardware claimed to be obsolete could in fact be purchased through Internet sites, the Joint Reply Commenters stated that if a game is re-released on a new gaming platform, there is “access” to that work and therefore no need for an exemption to gain access to the old version.⁷³ They claimed that allowing circumvention would cause significant harm to copyright owners in their exploitation of these re-released works. The Joint Reply Commenters appreciate that the Internet Archive is solely interested in preservation and archival use, which would not necessarily be harmful to copyright owners’ interests. Yet, because the exemption is not limited by reference to the specific use or user, the effect of the exemption could extend well beyond the specific use that served as the basis of the exemption, i.e., archival and preservation use.⁷⁴

Aside from these concerns, there was essentially no opposition to the initial proposal by the Internet Archive. The Joint Reply Commenters simply sought to limit the scope of the exemption, should it be found to be warranted by the Librarian, so that it would not adversely affect the copyright owners of legacy games who are making those games available on the market in new ways, and that the exemption should not apply to such works.⁷⁵

The Internet Archive’s response to the Joint Commenters’ concerns is illuminating. It

⁷⁰ T Metalitz, 3/23/2006, at 93.

⁷¹ R18, at 4, 12-13.

⁷² *Id.*, and *see also* R11, at 37.

⁷³ R11, at 37.

⁷⁴ R11, at 37-38.

⁷⁵ R11, at 15.

agreed at the hearing that the commercial exploitation of re-releases of legacy games is useful, but pointed out that the archiving of the original games at a library or archive poses no threat to the market for such re-releases. The fact that a library has preserved the original version of a work is unlikely to implicate commercial exploitation, because it would be implausible to believe that consumers would substitute commercially exploited versions by going to the library where the archived version is located and running that preserved version in an emulated environment in the library. He further noted that copyright owners often turn to archival resources like the Internet Archive in order to obtain legacy copies of their own works which they themselves failed to preserve. In some cases, the availability of the archival version has allowed copyright owners to commercially exploit their legacy works in new ways.⁷⁶

The particular noninfringing use sought by the Internet Archive that serves as the sole basis for this exemption is preservation and archival use. Nonprofit archival and preservation uses are a specific concern of the statutory scheme as indicated by § 1201(a)(1)(C)(ii). This factor requires the Librarian to consider whether the availability for use of works for nonprofit archival, preservation, and educational purposes has been impacted by the prohibition. The fact that a work cannot be archived or preserved due to the prohibition on circumvention of measures that control access to the work has been sufficiently demonstrated by the Internet Archive. As the 2003 recommendation noted:

The primary form of access control with which the Internet Archive is concerned is the “original only” access control. Long before the enactment of the DMCA, many works distributed in digital formats on physical media (such as floppy diskettes) were designed so that the original diskette must be inserted into the appropriate drive in the computer in order to enable access to the work. When these works have been migrated to digital archival systems, the “original only” protection measure built into the software or audiovisual work can no longer find the original diskette since the copy of the work being used is not on the original diskette. In some cases, the problem is that the software checks to see that an authorized CD-ROM or floppy diskette is installed in a particular drive. In other cases, the software may be checking for some features of the hardware for which it was designed., *e.g.*, a floppy disk drive or a dongle to ensure that the copy is an authorized one. As a result of migrating these works to archival drives or media, the software’s built-in security check will fail because, *inter alia*, the work is not on the original diskette or because the computer is trying to access the work from a different location than the

⁷⁶ T Kahle, 3/23/2006, at 100-101.

one in which it was originally stored. Verification of the integrity of the reproduction is important to the archival process, and verification requires access to the work. Proponents of an exemption contend that in order to access the reproduction, circumvention of the original access protection measure is necessary. Circumvention is necessary to understand how the original access control operated so that it can be emulated to allow access to the reproduction of the work.⁷⁷

Such “original-only” technological measures qualify as access controls even though the primary purpose may be to prevent copying. “The problem is that the copy may be of limited or no use. From the point of view of the user, there is a copy, but the user cannot get access to it.” In that respect, the original-only measures are similar to the Content Scrambling System (“CSS”) used on DVDs of motion pictures: “While preventing unauthorized duplication may be the primary goal of such a technological scheme, the courts have held that CSS is a technological measure that ‘effectively controls access to a work.’ *See, e.g., Universal City Studios v. Corley*, 273 F.3d 429 (2d. Cir. 2001); *Universal City Studios, Inc. v. Reimerdes*, 111 F. Supp.2d 294, 317-18 (S.D.N.Y. 2000).”⁷⁸

In making its case for renewal of the exemption, the Internet Archive pointed out that it has, during the past three years, taken advantage of the exemption as it has preserved and archived software and video games with “original-only” access controls.⁷⁹ In addition to preserving newly acquired software, the Internet Archive conducts a periodic “migration” of its previously archived materials to ensure that the digital artifacts are properly preserved.⁸⁰ Therefore, the Internet Archive has demonstrated that but for the exemption, it would not be able lawfully to preserve and archive such works protected by “original-only” access controls.

The next step is to determine whether the use that the Internet Archive is making of the protected works is noninfringing. That use was also analyzed and found to be noninfringing in the 2003 Rulemaking, and there is no testimony or comment in the present record that suggests that the previous determination was flawed. In particular, the analysis of whether or not the use is noninfringing begins by examining 17 U.S.C. § 108(c), a subsection that was itself amended by the DMCA. Section 108(c) allows three copies or phonorecords of published works to be duplicated solely for the purpose of replacement of a copy or phonorecord that is damaged, deteriorating, lost, or stolen, or if the existing format in which the work is stored has become obsolete, if –

⁷⁷ 2003 *Recommendation of the Register of Copyrights*, at 43.

⁷⁸ 2003 *Recommendation of the Register of Copyrights*, at 44-45 & n.74.

⁷⁹ C4, at 2-7.

⁸⁰ *Id.* at 4, 7.

- I. the library or archives has, after a reasonable effort, determined that an unused replacement cannot be obtained at a fair price; and
- II. any such copy or phonorecord that is reproduced in digital format is not made available to the public in that format outside the premises of the library or archives in lawful possession of such copy.⁸¹

The Internet Archive has testified that it has received lawful copies of computer programs and video games as gifts and thus appears to be in lawful possession of the digital copies of the works it seeks to preserve. The 2003 exemption was premised on the finding that noninfringing archival uses of obsolete works by a nonprofit library fit within the archival exemption of § 108. It was not appropriate to extend the recommended exemption to cover works that were “deteriorating” or “becoming obsolete” rather than “obsolete,” because Congress chose not to place deteriorating works within the scope of § 108 in the DMCA amendments. In addition, the archival exemption contained within § 117(a)(2) did not encompass systematic preservation of computer programs by libraries, but rather has been construed by the courts more narrowly to protect against damage or the destruction of the original computer program that might be caused by mechanical or electrical failure. Although the Internet Archive’s motives are laudable and although the recommendation in this rulemaking in 2003 stated a statutory solution for the preservation of digital works may well be appropriate, the existing statutory exemption does not fit this situation. Thus, § 117 does not serve to immunize systematic archival activities by libraries or archives of computer programs generally.

Similarly, there is no legal basis to assert that systematic archival activity of libraries and archives that is outside the scope of § 108 would necessarily be covered by the fair use doctrine in § 107. The primary basis for the Internet Archives’ claim that such archival activity is, in general, noninfringing, and the basis that is most clearly applicable, is the extent to which its activity falls within the scope of § 108. As noted in the 2003 rulemaking:

The Register does not recommend broadening the exemption based on fair use, which is codified in §107. In determining whether libraries and archives may circumvent access controls for the purpose of systematic preservation of digital works, the Register believes that reliance on §107 is inappropriate. While it is true that some preservation activity beyond the scope of §108 may well constitute a fair use, it is improper in this context to generalize about the parameters of §107. Fair use involves a case-by-case analysis that requires the application of the four mandatory factors to the particular facts of each particular use. Since disparate works may be involved in the preservation activity and the effect on the potential market for the work may vary, sweeping generalizations are unfounded.⁸²

⁸¹ *Id.* at 51-52, quoting 17 U.S.C. § 108(c).

⁸² 2003 Recommendation of the Register of Copyrights, at 54-55.

Of course, there may be occasions where preservation or archival activity with respect to the works described in this class would be noninfringing as fair use, even if it does not clearly fall within the scope of § 108. In such cases, the exemption for this class of works should also be available.

Based on the record in this proceeding, the Internet Archive has sufficiently proved that there is a continued need for the existing exemption in relation to computer programs and video games distributed in formats that have become obsolete and that require the original media or hardware as a condition of access. Considering the concerns expressed about the scope of that exemption in light of the re-release of legacy games in new formats, it seems prudent to restrict the exemption in a manner that will not unnecessarily affect the commercial exploitation of such legacy works by copyright owners. However, the recommended means for avoiding such unintended consequences differs from the approach favored by the Joint Reply Commenters.

Because the noninfringing use that supports this exemption consists of preservation and archival activities by libraries and archives, and in light of the concerns expressed by the Joint Reply Commenters that the existing exemption might adversely affect the copyright owners of legacy games who are making those games available on the market in new ways, the Register recommends that the exempted class be refined by reference to the intended use, so that the beneficiaries of the exemption are limited to those who engage in the noninfringing conduct identified as the basis for granting the exemption. That limitation can be accomplished by adding the following condition to the description of the exempted class: *“when circumvention is accomplished for the purpose of preservation or archival reproduction of published digital works by a library or archive.”*

However, there is no basis for exempting the second, new class of works proposed by the Internet Archive, namely: “Computer programs and video games distributed in formats that require obsolete operating systems or obsolete hardware as a condition of access.” The Internet Archive admits in its proposal that “It is not clear whether works that require an obsolete operating system or obsolete hardware as a condition to operate, and thus whether § 1201(a) applies to such works.”⁸³ In its reply comment, the Internet Archive clarified that it proposed this second class “only if, and only to the extent that, the Copyright Office determines that such practical restrictions on access created by the lack of backward compatibility in new software and hardware platforms constitute “technological protection measures” within the meaning of the Digital Millennium Copyright Act. Act. In other words, this second proposed exemption may not be necessary if ‘obsolete hardware or operating systems’ do not actually constitute ‘technological protection measures’ within the meaning of 17 U.S.C. § 1201, but to the extent that it is necessary, we respectfully ask that it be granted.”⁸⁴ The Register finds no reason to conclude that § 1201(a)(1) applies to such works because there is no reason to

⁸³ C4, at 13.

⁸⁴ R12, at 3-4.

conclude that obsolete operating systems or obsolete hardware are technological measures that control access to works.

Although the Internet Archive poses the possibility that such obsolete operating systems or obsolete hardware may be access controls, it does not actually assert that they are. Rather, it suggests that the term “technological protection measure” is not defined in the statute or legislative history, that there is a scarcity of case law interpreting the phrase “technological protection measure,” and that the term is broad enough to potentially encompass a wide range of bars to access, including obsolete operating systems or obsolete hardware.⁸⁵

The Register cannot recommend an exemption based on the speculative fear that the statutory phrase “technological measure that effectively controls access to a work protected under this title” might be construed as including operating systems or hardware that were never intended or designed to operate as access controls. While it may be that old software designed to run on now-obsolete hardware or with now-obsolete operating systems may not be accessible on newer hardware or with newer operating systems, that does not convert the hardware or operating system – which of course were originally designed to *permit* access to the software that was designed to run on them – into a “technological measure that effectively controls access to a work.”

Section 1201(a)(3)(B) provides that “a technological measure ‘effectively controls access to a work’ if the measure, in the ordinary course of its operation, requires the application of information, or a process or a treatment, with the authority of the copyright owner, to gain access to the work.” While one could construct an argument that software that works only with the hardware or operating system for which it was designed does in fact “requires the application of information, or a process or a treatment ...to gain access to the work,”⁸⁶ such a simplistic reading of the statute comports with neither the statutory language nor the legislative intent.⁸⁷ Technological incompatibility is not the same thing as “a technological measure that effectively controls access to a work.” The fact that a DVD will not play on a CD player, notwithstanding the fact that the DVD disk will fit into the CD player’s tray, has nothing to do

⁸⁵ R12, at 4. Opponents of the proposed exemption also observed that there is no precedent for concluding that operating systems may be considered access controls. R11, at 38.

⁸⁶ Arguably, the software requires the “information” that the correct operating system or hardware is present.

⁸⁷ A similar argument might be made with respect to the PAL (Phase Alternating Line) and NTSC (National Television System Committee) video broadcast standards used for television broadcasts in different parts of the world. A VHS videotape of British television program formatted in the PAL standard used in the United Kingdom cannot be viewed on a conventional U.S. VHS videocassette player that uses the NTSC standard used in the United States. That does not make the PAL and NTSC standards technological measures that control access to the works in those formats. Rather, they are simply two different formats, just as Apple Macintosh operating system is, in effect, a different format from the Windows operating system, and software designed to operate on a Macintosh ordinarily will not play on a computer running on a Windows operating system.

with “a technological measure that effectively controls access to a work.”

The DMCA’s amendments adding Chapter 12 to Title 17 were enacted in order to implement the WIPO Copyright Treaty’ and the ‘WIPO Performances and Phonograms Treaty.’⁸⁸ Section 1201 was enacted specifically to implement the treaty requirement to provide “adequate legal protection and effective legal remedies against the circumvention of effective *technological measures that are used by authors* in connection with the exercise of their rights under this Treaty or the Berne Convention and that restrict acts, in respect of their works, which are not authorized by the authors concerned or permitted by law.”⁸⁹ The technological measures that Congress intended to protect were described as “technologies, such as encryption, which will *be used to protect copyrighted works* in the digital environment and to secure on-line licensing systems.”⁹⁰ As the legislative history noted, “Subsection (a) applies when a person has not obtained authorized access to a copy or a phonorecord of a work that is protected under the Copyright Act and *for which the copyright owner has put in place a technological measure* that effectively controls access to his or her work.”⁹¹

Thus, the purpose of § 1201 is to provide legal protection and remedies against circumvention of technological measures that copyright owners choose to place on copies of their works in order to control access to those works. There is no evidence that Congress intended that § 1201 might also be used to prevent acts taken to overcome obstacles to access that are the result of obsolete formats or other unintended results of technological developments.

The statutory language is consistent with the Congressional intent. Section 1201(a)(3)(B) includes in its definition of a “technological measure [that] ‘effectively controls access to a work’” the requirement that the measure must require “the application of information, or a process or a treatment, *with the authority of the copyright owner*, to gain access to the work.” (Emphasis added.) That language reflects the legislative intent that § 1201 addresses technological measures that copyright owners place on works in order to restrict access to those who are not authorized to gain access. Thus, CSS qualifies as a technological

⁸⁸ Manager’s Report, at 9; Commerce Comm. Report, at 20-21; Senate Judiciary Committee Report, at 1-2, 8, 9-11; Conf. Report, at 63.

⁸⁹ Conference Report at 63-64 (emphasis added); *see also* House Judiciary Committee Report at 10 (“To comply with the treaties, the U.S. must make it unlawful to defeat technological protections used by copyright owners to protect their works.”); Senate Judiciary Committee Report at 66 (“the treaties oblige the signatories to provide legal protections against circumvention of technological measures used by copyright owners to protect their works.”)

⁹⁰ Manager’s Report, at 10 (emphasis added).

⁹¹ Senate Judiciary Committee Report, at 28 (emphasis added). *See also* Manager’s Report, at 5 (“a technological measure *put in place* by the copyright owner that effectively controls access to the work.”) (emphasis added).

measure that controls access to a work because it is placed on DVDs by (or for) copyright owners in order to control access to the copyrighted content on the DVDs. See *Universal City Studios, Inc. v. Reimerdes*, 111 F. Supp.2d 294, 317-18 (S.D.N.Y. 2000), *aff'd sub nom. Universal City Studios v. Corley*, 273 F.3d 429 (2d. Cir. 2001).

Moreover, § 1201(a)(1) is a prohibition against circumvention of technological *measures* that effectively control access to works. While “measure” is not defined in § 1201 or elsewhere in Title 17, its plain meaning, in this context, is “a step planned or taken as a means to an end.”⁹² Thus, a “technological measure that effectively controls access to a work” is not simply a technological impediment to access, but rather must be an impediment that is imposed in order to control access to a work. So understood, the technological impediments to gaining access to “computer programs and video games distributed in formats that require obsolete operating systems or obsolete hardware as a condition of access,” when those requirements are simply due to the fact that a computer program or video game was written for use on a particular operating system or machine but were not consciously imposed in order to control access to the works, cannot be understood to fall within the scope of § 1201(a)(1). Because the Internet Archive’s second proposed class of works falls outside the scope of the prohibition in § 1201(a)(1), there is no need for an exemption for that class of works.

3. Computer programs protected by dongles that prevent access due to malfunction or damage and which are obsolete. A dongle shall be considered obsolete if it is no longer manufactured or if a replacement or repair is no longer reasonably available in the commercial marketplace.

The Library Copyright Alliance and Music Library Association proposed the renewal of an existing exemption from 2003, which in turn was a modified version of one of the exemptions from the first rulemaking in 2000. As described in the first rulemaking, “[the] issue relates to the use of ‘dongles,’ hardware locks attached to a computer that interact with software to prevent unauthorized access to that software.”⁹³ In both the previous rulemakings, evidence was presented that damaged or malfunctioning dongles can prevent authorized access to the protected software. Because in some instances the software vendors may be unresponsive or have gone out of business, the evidence painted a compelling picture of a genuine problem.

In the first rulemaking, the exemption was based on the conclusion that users were being adversely affected in their ability to make noninfringing uses; that is, to make use of the properly licensed software. Moreover, such a result did not serve the interests of copyright

⁹² Webster’s New Collegiate Dictionary 712 (1977). See also Webster’s II New Riverside Dictionary 524 (1996) (“An action taken as a means to an end.”).

⁹³ 2000 Recommendation of the Register of Copyrights, 65 Fed. Reg. at 64,565 (Oct. 27, 2000).

owners that section 1201(a)(1) was meant to protect.⁹⁴ Similarly, there was no significant harm to the copyright owner that would arise from an exemption to allow circumvention of damaged or malfunctioning dongles, or where the dongle was obsolete. In 2003, the exemption was renewed based upon similar evidence and on a record demonstrating that the exemption had been used for noninfringing acts during its three years of existence, but the exempted class of works was refined to apply only where a dongle was damaged or malfunctioned and was obsolete.⁹⁵

The legal and analytical rationale for this exemption remains unchanged. Thus, the key question is whether the evidence in this record supports renewing the exemption for another three years.

The initial and reply comments provide some support but absolutely no factual evidence for such an exemption.⁹⁶ Instead, the commenters supporting the exemption simply requested that the Librarian renew the exemption based on the claim that in the absence of evidence of harm, the exemption should be renewed. As noted in 2003, this is insufficient to support an exemption for another three years.⁹⁷

However, at the public hearing on this proposal, the primary proponent of this exemption from the previous rulemakings, Mr. Joseph Montoro, presented the panel with a large supplemental written submission in support of this exemption.⁹⁸

⁹⁴ *Id.*

⁹⁵ 2003 Recommendation of the Register of Copyrights, at 34-41.

⁹⁶ See C2, C54, R11, R13, R18.

⁹⁷ 2003 Recommendation of the Register of Copyrights, at 24-25, 34-35.

⁹⁸ T Joseph Montoro, 3/31/06. It is risky business for a proponent of an exemption to wait until the hearing to present any facts in support of a proposed exemption. The purpose of hearings in this rulemaking proceeding is not to present, for the first time, the facts and arguments in support of a proposed exemption; those facts and arguments must be presented in the comments submitted earlier in the proceeding. The purpose of the hearing is to give proponents and opponents of exemptions an opportunity to summarize the facts and arguments that have already been presented in written comments and to draw attention to those facts and arguments that they believe are most pertinent in the time allotted for the hearing, to respond to questions from the Register and her staff, and, if appropriate and applicable, to demonstrate some of the facts related in the written comments.

In future rulemakings, the Register will not hesitate to recommend rejection of any proposed class of works when proponents have failed to present sufficient facts and arguments in written comments. By the same token, the Register will likely recommend exempting a class of works when the proponents have made their case in the initial comments and opponents have failed to respond in reply comments, but wait until the hearings (or after the hearings) to be heard. Failing to require compliance with these procedural requirements can create difficulties for the Register and the Librarian in completing this rulemaking before the expiration of the existing exemptions (as has been the case this year), is unfair to opponents of the person who has delayed in making his or her case until a time when opponents have no real opportunity to reflect upon and respond to that case, and can leave the Register and the

As was the case in 2003, Mr. Montoro presented some evidence⁹⁹ demonstrating continuing difficulties in operating dongle-dependant software where the dongle has malfunctioned or was damaged and is obsolete.¹⁰⁰ Accordingly, the analysis and conclusion are essentially the same as in 2003. The totality of the evidence – including evidence of past harm, present needs, and likely future harm – must be considered, together with the absence of any evidence of an adverse effect on the market for or value of the class of works at issue. It remains instructive that an exemption has been in place for the past six years, but opponents did not cite any evidence of harm resulting from that exemption,¹⁰¹ despite the proponent’s evidence that the exemption has been put to use.¹⁰² Viewed as a whole, the case has again been made for this narrowly-tailored exemption for another three years.

At the hearing, Mr. Montoro proposed broadening the scope of the existing exemption, to cover “Computer programs protected by dongles that prevent access due to malfunction or damage or hardware or software incompatibilities or require obsolete operating systems or obsolete hardware as a condition of access.”¹⁰³ The only other witness to speak at the hearing on this issue objected to consideration of this expanded exemption, stating,

Mr. Montoro had ample opportunity to propose this additional “particular class of works” in the initial round of this proceeding, and/or to advocate it in the reply round as a variation on similar proposals made by others. He chose to do neither, but to raise it for the first time at the March 31 hearing. The Notice of Inquiry established a petition procedure (based on “unforeseen developments”) to accommodate untimely proposals in some circumstances. 2005 NOI at 57531. Mr. Montoro did not choose to invoke it. In our view it is not appropriate for the Copyright Office to entertain this new proposal at this point.¹⁰⁴

Librarian with an incomplete record upon which the base their decisions.

⁹⁹ Three years ago, the Register’s recommendation characterized Mr. Montoro’s evidence as follows: “Joseph Montoro presented some evidence, albeit not abundant evidence, some significant and some only anecdotal, that the adverse effects related to “dongles” or hardware locks continue to exist.” *2003 Recommendation of the Register of Copyrights*, at 35. That characterization is accurate with respect to the case made by Mr. Montoro this year as well.

¹⁰⁰ However, as noted by opponents of the proposed exemption, many of the situations described by Mr. Montoro did not clearly involve problems caused by a dongle that was both inoperative due to malfunction or damage and obsolete. Letter from Steven J. Metalitz, June 2, 2006.

¹⁰¹ R11, Joint Reply Comments, at 14, Letter from Steven J. Metalitz, June 2, 2006.

¹⁰² The evidence was presented by Mr. Montoro at the March 31 hearing.

¹⁰³ T Joseph Montoro, 3/31/06, at 179.

¹⁰⁴ The objection was stated in a post-hearing submission invited by the Copyright Office. Letter from Steven J. Metalitz, June 22, 2006, at 3.

The objection is well taken. The purpose of the hearing, at a relatively late stage of the proceedings, is not to accept new proposals for exemptions or to entertain requests for expanded versions of exemptions that were proposed in a timely manner. Mr. Montoro had ample opportunity to propose an expanded version of this class during the comment period, and offered no excuse for his delay. Under the circumstances, the request for an expanded exemption will not be considered.

The record, therefore supports renewal of the exemption for dongles that has been in place since the first rulemaking in 2000. However, for purposes of clarity and consistency, the description of the class should be refined to include an explanation of what constitutes an “obsolete” dongle. This is consistent with the existing exemption for “computer programs and video games distributed in formats that have become obsolete and which require the media or hardware as a condition of access.” That class of works includes a second sentence describing when a format is obsolete: “A format shall be considered obsolete if the machine or system necessary to render perceptible a work stored in that format is no longer manufactured or is no longer reasonably available in the commercial marketplace.”¹⁰⁵

The evidence submitted by Mr. Montoro shows that a number of people continue to experience dongle malfunctions which prevent authorized access to software in instances where replacement dongles are not available. Based on an examination of this evidence and a thorough review of the requisite statutory factors, the Register recommends the following class be exempted for the next three-year period: *Computer programs protected by dongles that prevent access due to malfunction or damage and which are obsolete. A dongle shall be considered obsolete if it is no longer manufactured or if a replacement or repair is no longer reasonably available in the commercial marketplace.*

¹⁰⁵ Adding to the description of the class an explanation of what is “obsolete” involves no substantive change from what was decided in the previous rulemaking. The Recommendation of the Register in 2003 stated:

Based on the evidence produced in this proceeding, an exemption is warranted when both access is prevented as a result of damage or malfunction and the dongle is obsolete. As in the previous rulemaking, the Register believes that the definition of “obsolete” set forth in 17 U.S.C. 108(c) captures the circumstances under which an exemption is justified: “a [dongle] shall be considered obsolete if [it] is no longer manufactured or is no longer reasonably available in the commercial marketplace.” For purposes of this exemption, a dongle would be considered “obsolete” if a replacement or repair are not reasonably available in the marketplace. This refinement of the previous exemption addresses concerns raised by both proponents and opponents of an exemption and comports with common sense. If the replacement or repair of a malfunctioning or damaged dongle is reasonably available in the marketplace, circumvention will generally not be necessary. In addition to encouraging reasonable support to be made available to users, the exemption will allow users who are denied access as a result of a damaged or malfunctioning dongle to circumvent when a reasonable alternative is unavailable. This exemption minimizes the adverse effects on nonfringing uses by users of software protected by these access control measures while also minimizing the adverse effects on copyright owners.

2003 Recommendation of the Register of Copyrights, at 40.

4. Literary works distributed in ebook format when all existing ebook editions of the work (including digital text editions made available by authorized entities) contain access controls that prevent the enabling either of the book's read-aloud function or of screen readers that render the text into a specialized format.

Electronic books (“ebooks”) are books that are distributed electronically over the Internet and downloaded by users to their personal computers or other electronic reading devices. There are a number of formats in which ebooks are distributed to the public, but the dominant formats have been the Adobe PDF format and the Microsoft format. Although this is still an evolving market, ebooks offer tremendous new opportunities for the blind and the visually impaired. When a book is in electronic format, it has the potential to offer accessibility to the blind and the visually impaired that is otherwise not available from a print version. First, ebooks may allow the user to activate a “read-aloud” function offered by certain ebook readers, *e.g.*, the Adobe Reader¹⁰⁶ and the Microsoft Reader. Both of these ebook readers contain read-aloud functionality that can render the written text of the book into audible, synthetic speech. Ebooks may also permit accessibility to the work by means of screen reader software, a separate program for the blind and visually impaired that interacts with an ebook reader and that is capable of converting the text into either synthesized speech or braille. In addition to the audible and/or tactile rendering of text works, screen readers also allow the text and layout of a text screen to be conveyed spatially so that a blind or visually impaired user can perceive the organization of a page on the screen or even the organization of a work as a whole and navigate through that ebook.

This read-aloud functionality of the ebook reader and the text-to-speech (TTS) or text-to-braille (TTB) functions of the screen reader software create tremendous potential for accessibility to works that might otherwise be unavailable to the blind and visually impaired. But these forms of accessibility to ebooks by the blind and visually impaired are not available for all ebooks. The read-aloud function of the ebook reader may be disabled by the copyright owner of the work and the ebook may be set to technologically prevent access to the work by means of screen reader software. Disabling these accessibility features may be accomplished in different ways, but it appears that generally, these uses are restricted by digital rights management tools. Digital rights management (DRM) may be employed in various ebook formats to set permissions or restrictions on uses of the work by the user. Typically, these DRM permissions are “wrapped” or bound to the copies of the work by means of an access control. For instance, after creating a document, the creator may decide to make it publicly accessible through the Adobe Reader software that is widely used on the Internet. The creator can convert the document into the Adobe Portable Document Format (PDF) with the Adobe Acrobat program and may also use that program to restrict or permit particular uses that will be

¹⁰⁶ In the past, Adobe marketed a separate eBook Reader, but “[w]ith the release of Adobe® Reader® 6.0 software, Adobe has united Acrobat eBook Reader and Acrobat Reader in a single application.” *See* <http://www.adobe.com/products/ebookreader/> (last visited October 31, 2006).

available to users of copies of the work that are distributed. After these permissions or restrictions are set, the creator or other copyright owner, or his or her agent, may bind these security settings to the file by means of a password or some other technological measure that protects access, thereby wrapping the usage rights within the overall access control. In order to alter the usage settings of the document, a user would have to circumvent the access control.

Not all books are distributed as ebooks and it must be remembered that one of the goals of section 1201 is to encourage the distribution of digital versions of works by providing copyright owners with legal support for digital distribution models. If a copyright owner decides to distribute a book in electronic form, it may be made available in one or more formats. In addition to determining the ebook format or formats in which the book will be distributed, the copyright owner also can decide what options for use the purchaser of an ebook copy of the work will have.

Three years ago, the American Foundation for the Blind (“AFB”) (supported by other commenters) proposed and successfully made the case for an exemption to address ebooks with access controls that disable screen readers or the read-aloud function. The current exemption is for “Literary works distributed in ebook format when all existing ebook editions of the work (including digital text editions made available by authorized entities) contain access controls that prevent the enabling of the ebook’s read-aloud function and that prevent the enabling of screen readers to render the text into a specialized format.”

AFB was the principal proponent of renewing that exemption in the current proceeding, although the Library Copyright Alliance and a few other commenters also supported its renewal.¹⁰⁷

It is undisputed that not all ebooks allow read-aloud or screen reader accessibility.¹⁰⁸ There was also no dispute that rendering an ebook accessible to visually impaired persons is a noninfringing activity. Further, it is undisputed that accessibility for the visually impaired is an important societal goal – one that finds explicit legislative support in the Copyright Act.¹⁰⁹ However, to warrant an exemption in this rulemaking, proponents must do more than present legal and policy arguments why the exemption is desirable; they must also present facts that demonstrate that the prohibition on circumvention is or is likely to have an adverse effect on noninfringing uses of particular classes of copyrighted works.

A key part of that case involves demonstrating that access controls that prevent the use of screen readers and the read-aloud function are, or in the next three years are likely to be,

¹⁰⁷ C1, C2, C18, C54, R7.

¹⁰⁸ See, e.g., T Metalitz, 3/29/06, at 55.

¹⁰⁹ 17 U.S.C. § 121.

deployed on ebooks. To make that case, AFB reported on its examination of five book titles. In the particular formats AFB tested, AFB reported that there was only one title that was accessible to screen readers. However, as the Joint Reply Commenters pointed out, AFB did not test all of the ebook formats in which the sampled book titles were available. For instance, AFB tested *The Imitation of Christ*, by Thomas A. Kempis, in the Microsoft Reader Lit Format and found that work to be inaccessible whether or not Microsoft's text-to-speech product was installed. However, the Joint Reply Commenters pointed out that the same title appeared to be available in the Adobe format with the read-aloud function enabled.¹¹⁰ Still, for two of the five titles considered (40%), neither AFB nor the Joint Reply Commenters could find a format accessible to the visually impaired.

In selecting a tiny sample of only five titles, and in conducting only a limited examination of the options available even for those five titles, AFB has made, at best, a minimal showing to demonstrate the existence of a continuing problem and the need to renew the proposed exemption. If AFB or others propose renewal of this exemption three years from now, they would be well advised to review a larger, more representative sample of titles and ascertain the availability and accessibility of those titles in all ebook formats.¹¹¹

Moreover, no participant in this proceeding was able to identify a single instance in which the existing exemption had been utilized in order to enable a noninfringing use to be accomplished. While such a failure may not be fatal to the case for renewal of an exemption, it is certainly relevant to whether users of the particular class of works "are, or are likely to be in the succeeding 3-year period, adversely affected by virtue of such prohibition in their ability to make noninfringing uses of that particular class of works."¹¹² One could well conclude that the fact that a class of works has enjoyed an exemption for the past three years but nobody appears to have taken advantage of that exemption is proof that the prohibition on circumvention is unlikely to have any adverse effect on the ability of users of that class of works to make

¹¹⁰ R11, at 16 fn. 35. The same is true of *The Business of Software*, another book identified by AFB. *See id.*

¹¹¹ In contrast to the showing made in this proceeding, three years ago AFB not only presented the results of its examination of a small number of ebooks, but also presented statistics relating to the overall percentage of ebooks in which the read-aloud function was enabled. *See 2003 Recommendation of the Register of Copyrights*, at 76-77 fn. 128.

AFB suggested that due to budgetary limitations, it was not possible to test very many ebooks. T Dinsmore, 3/29/06, at 72. But AFB's 2003 submission of statistics reveals that there appear to be other ways to obtain the information without having to purchase a large number of ebooks. Moreover, sources such as ebooks.com, an online seller of ebooks, provide information for each title as to whether that title is available with the read-aloud feature enabled.

¹¹² 17 U.S.C. § 1201(a)(1)(B).

noninfringing uses during the next three years.¹¹³

However, although the case made by proponents of renewal of this exemption can perhaps best be described as borderline, any deficiencies in that case take on less significance in light of the equivocal position taken by representatives of the copyright owners whose works are affected by the exemption. While urging the Register and Librarian to apply the standards articulated in previous rulemakings in determining whether an exemption is warranted, the Joint Reply Commenters stated that they do not oppose the exemption.¹¹⁴ They also admitted that there are ebooks in the marketplace that are not enabled for screen readers or the read-aloud function.¹¹⁵ They expressed optimism that fewer and fewer ebooks will include such access controls and that the need for an exemption will “diminish over time.”¹¹⁶

In light of the foregoing, the case has been made to renew this exemption for another three years. In light of the strong benefits of the proposed exemption in making works accessible for use by the visually impaired, the evidence that many ebooks appear to remain inaccessible to the visually impaired, and the lack of opposition to the exemption, the Register recommends renewal of the existing exemption. Because (with an exception discussed below) the factual posture is essentially the same as it was three years ago, and because no new arguments have been presented relating to whether the intended uses are noninfringing or relating to the factors set forth in § 1201(a)(1)(C), it is appropriate to rely upon the legal analysis set forth in the *2003 Recommendation of the Register of Copyrights*.¹¹⁷

However, questions remain as to the scope of the exempted class. At the hearing on this proposed exemption, it became clear that proponents of the exemption do not consider the existing class of works to meet the needs of the intended beneficiaries of the exemption due to the fact that a work falls into the exempted class only if there is no ebook edition of the work that contains access controls that prevent the enabling both of the ebook’s read-aloud function and of screen readers. In other words, if a work is available in an ebook edition with the read-aloud function enabled, it does not fall within the exempted class of works even though screen reader functionality has been disabled.

¹¹³ In the case of an existing exemption, of course, the case could not be made that users of an exempted class of works are currently adversely affected by the prohibition, because the prohibition does not currently apply to that class of works.

¹¹⁴ T Metalitz 3/29/06, at 50, 108.

¹¹⁵ *Id.* at 99.

¹¹⁶ *Id.* at 55 (“I’ll certainly concede that we’re not at 100 percent yet and we’re not even at 100 percent of the test that’s in the exemption, which is, does any edition have these features? But I think we are making progress and hopefully that will – the need for this will diminish over time.”).

¹¹⁷ See *2003 Recommendation of the Register of Copyrights*, at 64-82.

AFB's witness described the differences between the read-aloud function and screen readers, and why the former is insufficient to meet the needs of blind readers. The typical read-aloud feature in an ebook simply takes the text of the ebook and reads it aloud from beginning to end. It "voices what's on the screen. Some of it has a stop control. Some of it doesn't have a stop control. It is difficult to navigate and also, if the book is not structured well, it really isn't readable at all." In contrast, a typical screen reader permits the reader to navigate throughout the ebook, using features such as the table of contents to go to the part of the ebook that the user wishes to read. "This is a form of structured navigation which enables a blind user to manipulate, that is to read and analyze just like those of us in the room read and analyze, going back and forth through a book, using tagged elements, to get the geography of the book and also, to locate yourself within the book." It permits the reader "to look at footnotes, to preview indices and also, to look at items like the chapter headings."¹¹⁸

As AFB's witness testified, the read-aloud function does not provide all the desired functionality to visually-impaired users, and screen-reader accessibility is important in order to navigate and provide context within an ebook. Because of the limited utility of the read-aloud function, the proponents of renewal of the exemption asserted that a more appropriate exemption would allow circumvention if *either* the read-aloud function *or* screen reader accessibility has been disabled in all existing ebook editions of the work. In other words, the exemption would apply to any work that is not available in at least one format that is accessible to at least one reasonably available screen reader and in at least one format in which the read-aloud function is enabled.¹¹⁹

The modification of the scope of this exemption is based on the evidence presented at the hearing that current access controls typically do not discriminate among screen readers; rather, an access control that disables one screen reader is likely to disable all screen readers.¹²⁰ The exemption would not extend to the situation where screen reader access is enabled for a particular ebook title, and one or more screen readers will function with an ebook of that title, but for some reason there is incompatibility between a particular screen reader software program and that particular title, since the justification for permitting circumvention is based on the inability to gain access to the work, and there is no such inability if there is a screen reader that works with an ebook edition of the work.¹²¹

¹¹⁸ T Dinsmore, 3/29/06, at 41-42.

¹¹⁹ These need not be 2 different formats. In fact, it is likely that a format that is accessible to screen readers will also have the read-aloud function enabled.

¹²⁰ See T Dinsmore, 3/29/06, at 79-80.

¹²¹ Moreover, as a practical matter, it is difficult to imagine that a blind person wishing to gain screen reader access to an ebook would find it easier to circumvent the access controls on that ebook so that it will be accessible to the particular screen reader on his computer than to simply obtain the screen reader that can access the ebook.

Based upon the information provided at the hearing, the case appears to have been made for a such a modification of the previous exemption. The Register recommends that the following class of works be exempted for the next three years: *Literary works distributed in ebook format when all existing ebook editions of the work (including digital text editions made available by authorized entities) contain access controls that prevent the enabling either of the book's read-aloud function or of screen readers that render the text into a specialized format.*

5. Computer programs in the form of firmware that enable wireless telephone handsets to connect to a wireless telephone communication network, when circumvention is accomplished for the sole purpose of lawfully connecting to a wireless telephone communication network.

a. Procedural Posture.

The Wireless Alliance and Robert Pinkerton proposed an exemption for “Computer programs that operate wireless communications handsets.”¹²² Many reply comments¹²³ were submitted in support of this exemption and only one reply comment¹²⁴ provided any opposition to the proposal. Only two witnesses testified at the hearing on this issue: a representative of the principal proponent of the exemption¹²⁵ and a representative of the Joint Reply Commenters. Importantly, no party came forward to represent the interests of the copyright owners of the copyrighted works that operate wireless communications handsets, either in reply comments after the exemption was proposed, or at the public hearing. Nor did representatives of the manufacturers of the handsets¹²⁶ or providers of wireless telephone communications services (who, the initial comment asserted, are the principal beneficiaries of the deployment of access controls on wireless telephone handsets) make any effort to present their views.

After the hearing, the Copyright Office submitted additional written questions to the two witnesses because “the record on these questions is rather thin and we require more detailed information in order to complete our evaluation of the proposed exemption.”¹²⁷ The two witnesses responded in writing on September 11, but the Office also received two additional unsolicited

¹²² C3.

¹²³ R14, R5, R6, R9, R14, R15, R17, R19, R20, R21, R22, R23, R24, R25, R27.

¹²⁴ R11.

¹²⁵ Jennifer Granick, Stanford Law School, Center for Internet and Society's Cyberlaw Clinic, on behalf of The Wireless Alliance and Robert Pinkerton; *see generally*, T Granick, 3/23/2006, C3 and R14.

¹²⁶ It is likely that the handset manufacturers are also the copyright owners of the software on the handsets in at least many instances.

¹²⁷ Letter from David O. Carson, Copyright Office General Counsel, to Jennifer Granick and Steven Metalitz, Aug. 14, 2006.

submissions on that date: one from CTIA - The Wireless Association and one from TracFone Wireless, Inc. CTIA, describing itself as a nonprofit trade association that promotes the interests of the wireless industry, representing both wireless carriers and manufacturers, submitted a 25-page document entitled "Information Submitted on Behalf of CTIA - The Wireless Association." This document contained responses to the questions that had been asked of the two witnesses in the August 14 letter, as well as eight pages of "further information," consisting of argument as to why the exemption should not be granted. TracFone, describing itself as "America's largest prepaid wireless company," submitted a 15-page "Petition for Consideration and Entry of Reply Comments," plus exhibits. The petition presented TracFone's arguments as to why its untimely submission should be accepted, offered TracFone's responses to the questions that had been asked of the two witnesses, and included several pages of "Argument in Opposition to the Proposed Exemption."

As the Notice of Inquiry had stated:

To provide sufficient flexibility in this proceeding, in the event that unforeseen developments occur that would significantly affect the Register's recommendation, an opportunity to petition the Register for consideration of new information will be made available after the deadlines specified. A petition, including proposed new classes of works to be exempted, must be in writing and must set forth the reasons why the information could not have been made available earlier and why it should be considered by the Register after the deadline. A petition must also be accompanied by fifteen copies of any new proposed exemption that includes the proposed class of works to be exempted, a summary of the argument, the factual basis for such an exemption and the legal argument supporting such an exemption. These materials must be delivered to the Copyright Office at the address listed above. The Register will make a determination whether to accept such a petition based on the stage of the rulemaking process at which the request is made and the merits of the petition. If a petition is accepted, the Register will announce deadlines for comments in response to the petition.¹²⁸

TracFone's petition was in substantial compliance with these requirements, but because CTIA had made no attempt to comply, the Copyright Office sent a letter to its counsel on September 18. That letter observed that the deadline for initial comments had been December 1, 2005, the deadline for reply comments had been February 2, and that persons wishing to testify in opposition to the proposals for exemptions had the opportunity to do so at the March 23 hearing. It also noted, following the hearings, if we determine that we require additional information or clarification on matters addressed by the witnesses who participated in the hearings, it has been

¹²⁸ 70 Fed. Reg. 57,526, 57,531 (Oct. 3, 2005).

our practice to submit additional questions to those witnesses seeking that information or clarification. However, those questions are not invitations for public comment. Once the hearings have concluded, the rulemaking proceeding is at an advanced stage and, apart from the information we elicit from the witnesses following the hearings, our rulemaking record is closed.¹²⁹

The letter also advised CTIA of the procedure, referenced above, that had been announced in the Notice of Inquiry that had “anticipate[d] the possibility that someone may be able to justify submitting a comment to the Office after the deadlines for comments have passed.” It offered CTIA the opportunity to submit a petition in compliance with the requirements announced in the Notice of Inquiry, and also asked CTIA to address a number of questions in that petition, including when CTIA first became aware of the rulemaking proceeding and the specific request for the exemption about which it wished to comment, and to explain the reasons for any delay from that time until its September 11 submission.

On September 22, CTIA submitted a “Petition for Consideration of its ‘Complementing Response to Copyright Office Request of August 14, 2006 for Further Information,’ Submitted on September 11, 2006.” The petition stated that CTIA had first become aware of this rulemaking proceeding and the fact that an exemption was being sought for “Computer programs that operate wireless telecommunications handsets,” either in early February 2006 or at the very end of January 2006. It stated that it had passed the information on to a “select group of member contacts,” and that in retrospect “these contacts may not have been the correct group to address this issue.” CTIA then explained what steps it took to make its views known to the Register of Copyrights in a section entitled, “CTIA Has Proceeded with Great Diligence *Since August*” (emphasis added), stating that it had again become aware of this proceeding in August and had “raised the issue promptly with the general counsels at several of the carriers” and that “[f]rom that point until its submission on September 11, 2006, CTIA, its members and its counsel in this proceeding (who were retained on August 30, 2006) have acted speedily to gather and present the information relevant to answer the questions that the Office put in its August 14 letter.”

TracFone’s petition stated that “TracFone was not aware of the proposed Rulemaking and the proposed exemption *in its current form* until August 2006, when an e-mail from CTIA, the international association for the wireless industry, informed its members of the above events.” (Emphasis added.) TracFone stated that “the clear intent of this petition mechanism is to accommodate situations like the current one where TracFone learned of the proposed exemption and discussion surrounding the TracFone handsets far beyond the time limit to reply.”

Given the extremely late stage in the proceedings at which CTIA and TracFone submitted their comments, and given their failure to offer a reasonable explanation for why they waited until this late date to make their views heard, the petitions must be denied. CTIA became aware of the

¹²⁹ Letter from David O. Carson, Copyright Office General Counsel, to Morton David Goldberg, Sept. 18, 2006.

proposed exemption around the time that reply comments were due and well before the March 10 deadline to request to participate in hearings. When TracFone first became aware of the proposed exemption is less clear. While TracFone asserts that it first learned of the proposed exemption “in its current form” in August, its recitation of facts tellingly notes that “At the Public Hearing, debate was had on the merits of the proposed exemption which was initially titled ‘Computer programs that operate wireless telecommunications handsets. (Mobile firmware).’ At that hearing, the focus of the potential exemption was made to ‘Computer firmware that enables wireless telecommunications’ handsets to connect to a wireless communication network.’ [T. at 45, 48]. Much discussion was also made in the hearing about the case of *TracFone Wireless, Inc. v. SOL Wireless*, 05-CV-23279 (S.D. Fla.), and the functionality of the TracFone prepaid handsets. [See, e.g. T. at 54].” While not conclusive, this suggests that TracFone was aware of the proposal relating to “Computer programs that operate wireless telecommunications handsets. (Mobile firmware)”¹³⁰ before August, and perhaps before or at the time of the March 31 hearing, at which TracFone’s litigation against SOL Wireless was discussed.¹³¹ TracFone correctly notes that at the hearing, there was discussion of narrowing the description of the proposed exempted class to “Computer firmware that enables wireless telecommunications’ handsets to connect to a wireless communication network.” However, that suggested new language simply reflected the nature of what was in the proponents’ proposal, and does not appear to give rise to a valid excuse for TracFone’s failure to recognize the significance of the proposal at an earlier stage.

In any event, it is not necessary to determine when TracFone itself first learned of the proposed exemption, in either its form or in the slightly amended form that was discussed at the hearing. It is sufficient to note that TracFone’s trade association – CTIA – was aware of the proposal in late January or early February. CTIA calls itself “the voice of the wireless industry - representing its members in a constant dialogue with policy makers in the Executive Branch, in the Federal Communications Commission, in Congress, and on the state, regulatory, and legislative levels” and describes one of its services as follows: “Distributes timely, factual and reliable information to members, policymakers, the investment community, customers and the news media on the latest policy and technical developments.”¹³²

The only explanation for the tardiness of the submissions put forward by CTIA and TracFone is that they were unaware of the proposed exception. As noted above, that is not the case with respect to CTIA – or to TracFone, at least insofar as it is a member of CTIA. In any event, lack of awareness is insufficient grounds. As another agency stated in a different context, but in reasoning equally applicable here:

¹³⁰ TracFone Petition, at 1.

¹³¹ It is also reasonable to expect that, having initiated litigation pleading violations of § 1201, TracFone would have been on the alert for developments in this rulemaking.

¹³² See <http://www.ctia.org/aboutCTIA/index.cfm> (last visited Oct. 13, 2006).

The Commission's procedural rules are designed to provide adequate time and opportunity for interested parties to fully participate in the decision making process and to avoid prejudice to competing parties by providing predictable, uniformly applicable rules. They also permit the Commission to conduct its business within a reasonable period of time so as to avoid undue delay in the provision of service to the public. Accordingly, the Commission has required adherence to appropriate administrative standards. Furthermore, it may dismiss requests which fail to meet these standards. In Table of Allotment rule making proceedings, the Commission requires an expression of interest in a proposed channel in order to conduct the rule making process in an orderly manner. . . . Thus, the requirement of an expression of interest is reasonable and necessary to the efficient conduct of the agency's business, and the Commission has good reason to preserve the integrity of its processes by requiring adherence. . . .

Pursuant to this policy, applicants seeking waiver of the deadline must demonstrate unusual or compelling circumstances which prevent timely filings. The Commission deemed this policy necessary and reasonable to assure that all applicants are treated fairly and reasonably in dealing with Commission processes and to guarantee an identifiable point when the Commission can close the door to new applications, thereby assuring that it can efficiently and effectively fulfill its public interest mandate. In the application context, to consider a late filed application is generally unfair to competitors and delays the provision of new service to the public. Similar concerns prevail in contested allotment proceedings.

1988 WL 488121 (Discussion at 10, 11) (F.C.C.) 3 FCC Rcd. 2336.¹³³

This is not an open-ended rulemaking, to be concluded whenever the Register and Librarian believe they have received enough information to make a decision. The rulemaking is to be conducted every three years, and the exemptions expire on every third anniversary of the

¹³³ *In the Matter of Amendment of Section 73.202(b), Table of Allotments, FM Broadcast Stations, (Santa Isabel, Puerto Rico and Christiansted, Virgin Islands)*, 64 Rad. Reg. 2d (P & F) 1408, 3 F.C.C.R. 2336, 3 FCC Rcd. 2336, 1988 WL 488121 (F.C.C. 1988), *reconsideration denied*, 66 Rad. Reg. 2d (P & F) 804, 4 F.C.C.R. 3412, 4 FCC Rcd. 3412, 1989 WL 512708 (F.C.C. 1989), *aff'd sub nom. Amor Family Broadcasting Group v. FCC*, 918 F.2d 960 (D.C. Cir. 1990). On appeal, Amor argued that its tardiness should be excused due to its earlier ignorance of the proceeding, its absence of legal counsel, and its inability to speak English, among other things, but the court of appeals upheld the agency's application of its policy regarding late-filed comments and its refusal to consider Amor's late comment. *See also Universal City Studios LLLP v. Peters*, 402 F.3d 1238 (D.C. Cir. 2005)(upholding Copyright Office's refusal to accept royalty claims involving millions of dollars received one or two days too late).

October 28, 1998, enactment of the Digital Millennium Copyright Act. For that reason, the deadlines for submission of comments and participation in hearings must be taken seriously. Permitting new submissions from hitherto unheard-from parties only a few weeks before the expiration of the existing exemptions and the time for announcement of new exemptions jeopardizes the ability of the Register and the Librarian to complete the proceeding in a timely fashion. Indeed, the necessity of considering the petitions of CTIA and TracFone contributed greatly to the Register's delay in making her recommendation to the Librarian.¹³⁴

Not only would acceptance of the late filings wreak havoc on the decisionmaking process, but it also would be fundamentally unfair to the parties who have made timely submissions, and in particular to the proponents of the exemption. It would be inappropriate to accept such late filings from opponents of an exemption without giving the exemption's proponents sufficient opportunity to respond.¹³⁵

As noted above, the Copyright Office had indicated to the witnesses on this proposed exemption that the record was "rather thin" and sought additional information from the witnesses. In the course of his consultation with the Register of Copyrights on this rulemaking, the Acting Assistant Secretary of Commerce for Communications and Information shared his concern that the record on this proposal appeared to be incomplete and stated that he was pleased that the Register had sought additional information to supplement the record.¹³⁶ Subsequently, he expressed to the Register his view that the CTIA and TracFone comments "afford you a complete record in which the views of both users and creators of content are currently represented," and

¹³⁴ While the authority of the Register and the Librarian to issue new regulations did not expire on October 28, 2006, *see Gottlieb v. Pena*, 41 F.3d 730 (D.C. Cir. 1994), the Register made every effort to complete her recommendation well before that date.

¹³⁵ Upon receipt of the CTIA and TracFone submissions, counsel for the proponents of the exemption did request leave to respond, noting that "there are approximately 40 pages to which we must respond. I request the most generous deadline possible given the circumstances, hopefully no earlier than two weeks from the date we received the papers, September 27th." Letter from Jennifer Granick to David O. Carson, September 15, 2006. The Copyright Office responded that because of the shortness of time before the rulemaking proceeding was scheduled to conclude, any response would have to be received no later than September 25. Letter from David O. Carson to Jennifer Granick, September 18, 2006. The Office's letter noted that the "Office has not yet made a determination whether to accept either of the submissions from CTIA or TracFone. Because it is not likely that we will have made such a determination within the next week, and because there will be insufficient time following the time such a determination is made to give you an opportunity to prepare a response at that time, you should assume for present purposes that we will be accepting the two submissions and provide us with any response you may have by the end of the day on September 25." An 8-page response was filed on September 25. *Reply to Submissions of TracFone Wireless Inc. and CTIA-The Wireless Association*, September 25, 2006. However, the fact that the proponents were able, in this instance, to respond (albeit on a very abbreviated schedule) does not ameliorate the unfairness and undue burden caused by the tardy submissions. In light of the decision not to accept the submissions of CTIA and TracFone, the September 25 submission from the proponents of the exemption has not been considered by the Register in making her recommendation.

¹³⁶ Letter from John M. R. Kneuer to Marybeth Peters, September 13, 2006.

urged the Register to consider those submissions in making her recommendation.¹³⁷

The Assistant Secretary's concerns are understandable, and the Register shares his desire that the views of both users and creators of content be represented in the rulemaking. However, complying with the Assistant Secretary's request and accepting the last-minute submissions of CTIA and TracFone would make a mockery of the procedural requirements of this proceeding and of the rulemaking process in general. While it is preferable that all interested parties make their views known in the rulemaking process, they must do so in compliance with the process that is provided for public comment, or offer a compelling justification for their failure to do so. They have failed to offer such justification.

If these extremely untimely submissions were accepted, it would be difficult to imagine when it ever would be justified to reject an untimely comment. Such a precedent would be an invitation to chaos in future rulemakings. For these and the other stated reasons, the late submissions of CTIA and TracFone will not be considered.

b. The Merits

The proponents of this exemption stated that providers of mobile telecommunications networks are using various types of software locks in order to control customer access to the "bootloader" programs¹³⁸ on cellphones and the operating system programs embedded inside mobile handsets, *i.e.*, cellular phones. Generally, these software locks prevent customers from using their handsets on a competitor's network by controlling access to the software that operates the mobile phones (*e.g.*, the mobile firmware). The manner of locking the handsets may vary depending on the handset and the type of network, but it was alleged that there are four principal types of software locks applied to mobile handsets: SPC (Service Provider Code) locking, SOC (System Operator Code) locking, Band Order Locking, and SIM (Subscriber Identity Module) locking.¹³⁹

It was undisputed that mobile handset consumers who desire to use their handsets on a different telecommunications network (*e.g.*, a person who originally subscribed to and purchased a mobile handset from Verizon Wireless but, after all contractual obligations to Verizon have expired, wishes to switch carriers to Cingular Wireless) are often precluded from doing so unless they can obtain access to the bootloader or operating system within the handset in order to direct the phone to a different carrier's network. Although the evidence demonstrated that one

¹³⁷ Letter from John M. R. Kneuer to Marybeth Peters, October 31, 2006.

¹³⁸ A bootloader is "A small program stored in ROM and responsible for initializing the hardware to a known initial state and making it possible to download application software to the system to be run." Jack Ganssle and Michael Barr, *Embedded Systems Dictionary* 33 (2003).

¹³⁹ C3, at 6-7.

telecommunication provider allows handsets to be switched,¹⁴⁰ most other providers do not allow a consumer to switch a cell phone from one network to another. The evidence indicated that although a consumer is the owner of a cell phone and the copy of the mobile firmware within the cell phone, the consumer could not use the cell phone with another carrier, even after fulfilling his or her contractual obligations with the carrier that sold the phone. In order to switch carriers, the consumer would have to purchase a new phone from a competing mobile telecommunications carrier. The consumer's old phone would be useless on the new mobile phone network and the consumer would be in the same predicament with the new phone.

Thus, in many cases, the software locks preclude use of a handset owned by a consumer even though that handset is intrinsically capable of use on alternative networks. The evidence demonstrated that if consumers wish to switch providers, they are forced to purchase a new handset and spend the time to personalize that new phone, *e.g.*, input contact lists, etc. The obstacle that prevents customers from using lawfully acquired handsets on different carriers is the software lock. But the proponents of this exemption argued that consumers face an additional, legal, obstacle: the prohibition on circumvention contained in § 1201(a)(1).

Evidence was presented that the operator of at least one wireless telecommunications network, TracFone, Inc., has filed suit against persons for, *inter alia*, violation of § 1201(a)(1), alleging that "Defendants avoided, bypassed, removed, disabled, deactivated, or impaired a technological measure for effectively controlling access to the proprietary software within the TracFone Prepaid Software without TracFone's authority," and that the United States District Court for the Southern District of Florida has, by stipulation, issued a final judgment and permanent injunction enjoining the defendants from "engaging in the alteration or unlocking of any TracFone phones."¹⁴¹

The software locks on the handsets were analogized to filters placed on the bootloader program and/or the operating system program.¹⁴² In the absence of locks such as SPC locking, SOC locking, Band Order Locking, and SIM locking, a handset would be capable of connecting to any provider (assuming that the user was an authorized subscriber of that provider) and, indeed, mobile telephone handsets are designed to be compatible with either a GSM, CDMA, or TDMA network, regardless of the carrier.¹⁴³ While a handset user must have authority to access a carrier's network, *i.e.*, to obtain cellular service on the carrier's network, the handsets themselves

¹⁴⁰ See, *e.g.*, R6 (stating that T-Mobile allows unlocking after a waiting period).

¹⁴¹ *TracFone Wireless, Inc. v. Sol Wireless Group, Inc.*, No. 05-23279-CIV (S.D. Fla., Feb. 28, 2006) The court did not appear to make any actual findings with respect to liability, but entered the permanent injunction and final judgment pursuant to stipulation. As the witness opposing an exemption noted, "There is no provision in the injunction that refers to Section 1201." T Metalitz, 3/23/06, at 21.

¹⁴² T Granick, 3/23/06, at 42-43, 75-76.

¹⁴³ C3, at 3; T Granick, 3/23/2006, at 39.

do not restrict the consumer's use to a particular carrier. Rather, it is the software lock acting as a filter which limits the handset's use to a particular carrier, *i.e.*, the software lock limits the capabilities that are inherent in the handset.¹⁴⁴

These locks limit access to the mobile handset's firmware, such as the bootloader programs and/or the handset's operating system.¹⁴⁵ The bootloader and operating system contained in the mobile firmware are alleged to be works protected under Title 17 and there was no evidence offered to rebut this proposition. The locks effectively control access to these works because it appears that in the ordinary course of their operation, they require the application of information or a process to gain access to the works. As the proponents explained, "Each lock, whatever type, limits the customer's access to the handset firmware by stopping the user from operating the firmware on any network other than that approved by the carrier. Either these measures prevent the owner from reprogramming the firmware in his handset, in effect instructing it to run on a different network, or they stop the owner from operating the firmware inside the phone when he inserts a different SIM card."¹⁴⁶ Further, it appears that the cell phone carriers lock the phone with the authority of the copyright owner of the mobile firmware.¹⁴⁷

There is no evidence in the record of this rulemaking that demonstrates or even suggests that obtaining access to the mobile firmware in a mobile handset that is owned by a consumer is an infringing act. Similarly, there has been no argument or suggestion that a consumer desiring to switch a lawfully purchased mobile handset from one network carrier to another is engaging in copyright infringement or in activity that in any way implicates copyright infringement or the interests of the copyright owner. The underlying activity sought to be performed by the owner of the handset is to allow the handset to do what it was manufactured to do – lawfully connect to any carrier. This is a noninfringing activity by the user. But for the software lock protected by § 1201, it appears that there would be nothing to stand in the way of a consumer being able to engage in this noninfringing use of a lawfully purchased mobile handset and the software that operates it. Indeed, there does not appear to be any concern about protecting access to the copyrighted work itself. The purpose of the software lock appears to be limited to restricting the owner's use of the mobile handset to support a business model, rather than to protect access to a

¹⁴⁴ Even in the absence of a software lock, or if a software lock were circumvented, the user of a handset would not be able to connect to another wireless network unless the user is an authorized subscriber of that other network. In other words, the software lock does not serve the function of protecting the new network against unauthorized access. Rather it serves the function of preventing the handset itself from being used on another network, even if the person using the handset is an authorized subscriber of that other network.

¹⁴⁵ T Granick, 3/23/2006, at 9.

¹⁴⁶ Response to Supplemental Questions of the Copyright Office submitted by Jonathan R. Newman and Robert Pinkerton, September 11, 2006, at 8.

¹⁴⁷ *Id.* at 11.

copyrighted work itself.¹⁴⁸

Circumventing the lock by either bypassing, avoiding, removing,¹⁴⁹ deactivating, or impairing it without the authority of the copyright owner in order to gain access to the protected work (*i.e.*, the firmware) appears to be actionable under section 1201(a)(1). The measure effectively controls access to the work if the measure, in the ordinary course of operation, requires the application of information, or a process or a treatment, with the authority of the copyright owner, to gain access to the work. Further, under § 1203(a), any person injured by circumvention may bring suit in federal court for violation of the prohibition. Thus, if a cellular telecommunications carrier is harmed by the circumvention of the software lock, acting as a technological protection measure that is effectively protecting access to the copyrighted software within the mobile handset, it appears that the carrier may bring an action for violation of § 1201(a)(1) against anyone who circumvents such a technological protection measure.¹⁵⁰

Because (1) a strict application of the statutory language of § 1201 would be likely to result in a finding that one who circumvents the software lock on a cell phone in order to connect to a new network is engaging in unlawful circumvention of an access control, (2) the act of circumvention is made in order to engage in conduct which cannot reasonably be understood as infringing activity, and (3) the interests of the copyright owner do not appear in any way to be adversely affected when such circumvention takes place, an exemption is warranted.

A review of the four factors enumerated in § 1201(a)(1)(C)(i)-(iv) supports this conclusion. There is nothing in the record that suggests that the availability for use of copyrighted works would be adversely affected by permitting an exemption for software locks. Nor is there any reason to conclude that there would be any impact – positive or negative – on the availability for use of works for nonprofit archival, preservation, and educational purposes or on

¹⁴⁸ Nothing in this discussion is intended to be construed as expressing approval or disapproval of any particular business models, or as expressing any views on telecommunications policy. The Register's recommendation is based on law and policy considerations relating to 17 U.S.C. § 1201(a)(1) and on her conclusion that the record relating to this proposed class of works does not demonstrate any copyright-based rationale for enforcing the prohibition on circumvention of technological measures that control access to works protected by copyright.

¹⁴⁹ It may be that in some cases, it is possible “to reflash the chip and totally redo all of the software within it.” T Granick, 3/23/2006, at 61. While this would involve removing the software lock, it would also remove the firmware to which the lock controls access. Whether simultaneously removing not only an access control, but also the work protected by that access control, would be a violation of § 1201(a)(1) is an interesting question which need not be resolved in this proceeding. There is certainly a reasonable argument that the purpose of § 1201(a)(1) would not be served by penalizing such conduct, since the person removing the access control is also actually eliminating access to the work by deleting it. *See* T, 3/23/2006, at 62 (remark of Associate Register Sigall). The witness for the Joint Reply Commenters appears to have agreed that deleting the software probably would not be a violation of § 1201(a)(1). T Metalitz, March 31, 2006, at 41.

¹⁵⁰ That is what happened in *TracFone Wireless, Inc. v. Sol Wireless Group, Inc.*, No. 05-23279-CIV (S. D. Fla. February 28, 2006), noted above.

the ability to engage in criticism, comment, news reporting, teaching, scholarship, or research. Nor would circumvention of software locks to connect to alternative mobile telecommunications networks be likely to have any effect on the market for or value of copyrighted works. The reason that these four factors appears to be neutral is that, as noted above, in this case the access controls do not appear to actually be deployed in order to protect the interests of the copyright owner or the value or integrity of the copyrighted work; rather, they are used by wireless carriers to limit the ability of subscribers to switch to other carriers, a business decision that has nothing whatsoever to do with the interests protected by copyright. And that, in turn, invokes the additional factor set forth in § 1201(a)(1)(C)(v): “such other factors as the Librarian considers appropriate.” While this discretionary factor has lain dormant in prior proceedings, largely because it has rarely been invoked by proponents or opponents of exemptions, the present proposal presents an occasion where an additional factor presents itself: When application of the prohibition on circumvention of access controls would offer no apparent benefit to the author or copyright owner in relation to the work to which access is controlled, but simply offers a benefit to a third party who may use § 1201 to control the use of hardware which, as is increasingly the case, may be operated in part through the use of computer software or firmware, an exemption may well be warranted. Such appears to be the case with respect to the software locks involved in the current proposal.

Objections to the proposed exemption were expressed by owners of copyrighted works other than the firmware to which the proponents desired access: The Joint Reply Commenters expressed concern about the potential effect of an exemption on separate copyrighted works that are downloaded and stored on handsets, such as ringtones, games, applications, photos and videos.¹⁵¹ They stated that wireless telephone handsets “are rapidly becoming tools for accessing and using copyright materials, not simply communications devices, and any exemption in this area could substantially interfere with the use of access controls applied to those materials.”¹⁵² They question whether circumvention can actually be limited to the programs that operate the handset as distinct from other portions of the firmware that control access to these other works.¹⁵³

Unfortunately, the record as to whether the software locks that are the target of the proposed exemption also control access to these other works is unclear. The Joint Reply Commenters assert that “the ability to unilaterally reprogram the firmware *may well* extend to the ability to unilaterally revamp the permissions system for accessing and using ringtones, music samples, games, software, and video programming, whether already stored on the handset at the time of ‘unlocking’ or later accessed by the user through either the old or new mobile service.”¹⁵⁴ The proponents of the exemption pointed out that the Joint Reply Commenters “provide[s] no

¹⁵¹ R11, at 26.

¹⁵² *Id.*, at 24.

¹⁵³ *Id.*, at 26.

¹⁵⁴ *Id.*, at 26. (emphasis added).

evidence that the protection is or must be controlled by the same firmware that operates the phone on the network of the customer's choosing."¹⁵⁵ They also stated that at least one standard used by a significant percentage of the mobile device market, the Open Mobile Alliance standard, "places DRM functionality at a different layer than Service Provider functionality," and that the "content industry, in collaboration with the carriers and manufacturers, can simply choose to store the keys to DRMed audiovisual material elsewhere, as is currently the case with many of the handsets on the market."¹⁵⁶ They suggest that if the software locks control access not only to that part of the firmware that governs what wireless communication network to connect to, but also to other copyrighted works stored on the wireless device, there is no reason that the locks have to control both.

The record does not permit a reliable conclusion as to whether the software locks that are the focus of this proposed exemption ever do control access to ringtones, photographs, etc., but because it appears that there is no reason why those other works cannot be protected by separate access controls, there is no justification for denying an exemption based on speculation that the exemption might permit circumvention that would remove restrictions on access to those works. On the other hand, it would be prudent to tailor an exemption so that it does not allow circumvention in order to gain access to copyrighted works, uses of which have not been shown to be noninfringing. There is no evidence in the record that users of handsets require access to any other copyrighted work contained in a handset beside the bootloader or operating system programs that control functionality of the handset or that enable potential connection to a carrier's telecommunication network. Therefore, while the case has been made for an exemption, the exemption should be crafted in such a manner that allows the demonstrated noninfringing use adversely affected by the prohibition, but is also designed to avoid unintended consequences relating to other types of copyrighted works contained on the handsets.¹⁵⁷ Having determined above that a class of works may be additionally refined by reference to the particular type of use and/or user,¹⁵⁸ the Register recommends that the following class of works be subject to exemption: *Computer programs in the form of firmware that enable wireless telephone handsets to connect to a wireless telephone communication network, when circumvention is accomplished for the sole purpose of lawfully connecting to a wireless telephone communication network.*

6. Sound recordings, and audiovisual works associated with those sound recordings, distributed in compact disc format and protected by

¹⁵⁵ T Granick, 3/23/2006, at 14.

¹⁵⁶ T Granick, 3/23/2006, at 15.

¹⁵⁷ Nonetheless, a prudent copyright owner of works offered for download to wireless telephone handsets would be wise to insist that access to those works be protected by access controls other than those which control access to the part of the firmware that governs with which wireless communication network the handset will communicate.

¹⁵⁸ See Section III.A.1.

technological protection measures that control access to lawfully purchased works and create or exploit security flaws or vulnerabilities that compromise the security of personal computers, when circumvention is accomplished solely for the purpose of good faith testing, investigating, or correcting such security flaws or vulnerabilities.

A number of commenters sought an exemption based on facts arising out of the distribution, by Sony BMG Music Entertainment, of compact discs (CDs) which employed certain digital rights management (“DRM”) software that created security vulnerabilities on computers on which the software was installed. Specifically, they identified SunnComm’s MediaMax content protection software and First4Internet’s XCP copy protection software program. The leading proponents of such an exemption, Edward W. Felten, Professor of Computer Science and Public Affairs at Princeton University, and J. Alex Halderman, a graduate student at Princeton, proposed a class of “sound recordings and audiovisual works distributed in compact disc format and protected by technological measures that impede access to lawfully purchased works by creating or exploiting security vulnerabilities that compromise the security of personal computers.”¹⁵⁹

During the public hearing on this proposed exemption, Professor Felten submitted a study of these programs which stated that, in October, 2005, Mark Russinovich stumbled across the XCP software, found that it surreptitiously installed itself on computers and was designed in such a way that it compromised the security of those computers, and posted the results of his investigation on the Internet, beginning what would become a notorious chapter in DRM use and Sony BMG customer relations.¹⁶⁰ By one estimate, this software was installed on half a million computer networks worldwide.¹⁶¹ In response, Sony BMG recalled the CDs, offered customers software to uninstall the XCP software, and has reached a settlement agreement in related litigation, offering customers further means of remuneration.¹⁶² Notwithstanding these attempts to mitigate the problem, proponents of this exemption are concerned about computers being

¹⁵⁹ C6. Other comments and reply comments in support of exempting this class or a similarly described class include C2 (pp. 7-10), C7, C8, C26, C30, C31, C36, C60, C66, R5 (at 9-10), R7 (at 6-8), and R10.

¹⁶⁰ Edward W. Felten, March 31, 2006, (J. Alex Halderman and Edward W. Felten, “Lessons from the Sony CD DRM Episode,” February 14, 2006 (citing Mark Russinovich, “Sony, Rootkits and Digital Rights Management Gone Too Far,” October, 2005, <http://www.sysinternals.com/blog/2005/10/sony-rootkits-and-digital-rights.html>)).

¹⁶¹ C6 (Edward W. Felten, J. Alex Halderman, Deirdre K. Mulligan, and Aaron Perzanowski), at 4 (citing Paul F. Roberts, “Sony’s ‘Rootkit’ is on 500,000 Systems, Expert Says,” <http://www.eweek.com/article2/0,1895,1887181,00.asp> (Nov. 15, 2005)).

¹⁶² R11 (Joint Reply Comments), at 18.

reinfected by CDs containing the XCP software that remain in circulation.¹⁶³ They are also concerned that other types of DRM which present similar security concerns may be deployed in the next three years.¹⁶⁴

There are three aspects to the XCP software, which was designed to load onto the computer of a person playing the CD: a music player application, a device driver (which produces garbled sounds if any other music player application is employed to play the protected CD), and a ‘rootkit’ which cloaks the first two aspects.¹⁶⁵ The rootkit creates security vulnerabilities by providing a cloak that conceals malicious software, a cloak that in fact was exploited by disseminators of malware “within days of the discovery of the [XCP] rootkit.”¹⁶⁶

The proponents of an exemption argue that these three features collectively constitute a control on access to the sound recordings on the CD because installation of the software is a prerequisite to gaining access to the music on the CD,¹⁶⁷ although they are somewhat equivocal on that point.¹⁶⁸ To be sure, the CDs need not be played on a computer, but may be played in a traditional, dedicated CD player without activating the DRM software. None of the above software is activated when the CD is so played.

In opposition, the Joint Reply Comments point out what they say is the weakness of the claim that the software in question is an access control within the meaning of the statute or that the conduct in which the proponents seek to engage would constitute a prima facie violation of § 1201(a)(1). They also assert that the Sony situation appears to have resolved itself in the

¹⁶³ See C6, at 5-6.

¹⁶⁴ See C8, at 6-7.

¹⁶⁵ Edward W. Felten, March 31, 2006, at 55-56. For a detailed description of rootkits and their early development, see <http://www.cs.wright.edu/people/faculty/pmateti/Courses/499/Fortification/obrien.html>.

¹⁶⁶ C6, at 4.

¹⁶⁷ At the public hearing, a proponent discussed ways in which this prerequisite may be avoided. Felten, 3/31/06, at 79.

¹⁶⁸ See C6, at 4, note 3 (“Although no court has determined that the active protection measures employed by protected CDs ‘effectively control access’ to the discs’ contents, this comment assumes—solely for the purpose of this rulemaking—that, at least for those users of the Windows operating system who have enabled the AutoRun feature, the protection measures described above are effective in controlling access to the audio files contained on those CDs.”); C8, at 7 (“the DRM rootkits in question are in fact copy controls – for which no exemption rulemaking exists”).

marketplace.¹⁶⁹

Less information was provided about the MediaMax content protection software. Professor Felten stated that “listening to a MediaMax compact disk in a PC exposes a consumer to security risks.”¹⁷⁰ Unlike XCP, MediaMax does not include a rootkit. It does include a device driver and a media player.¹⁷¹ But despite the absence of a rootkit, the installation of MediaMax “left openings by which a malicious person could seize control of the computer.”¹⁷² When a Mediamax CD is inserted into a computer’s CD-ROM drive, Windows’ autorun feature launches an installer from the disc and installs files and data on the computer’s hard drive. Mediamax also sets the file permissions to allow any user to modify the code directory and the files and programs in it. These “lax permissions allow a non-privileged user to replace the executable code in the MediaMax player files with malicious code.”¹⁷³

The threshold question is whether the technology described controls access to a copyrighted work. In “the ordinary course of operation”¹⁷⁴ of the technology, a user of the CD faces no access control when playing it on a traditional, dedicated CD player. However, XCP and MediaMax are access controls insofar as they require the use of a particular media player in order to listen to music on certain devices, such as personal computers.¹⁷⁵ After the installation of the DRM software in question, the user would no longer have the option of rendering the music on other player software.

Proponents of an exemption argue that the software constitutes an unacceptable security risk and seek to neutralize its operation on affected computers and on computers which may play the affected CDs in the future.¹⁷⁶ Their ability to achieve that is apparently dependant on removing the rootkit and the other aspects of XCP and MediaMax software that create security

¹⁶⁹ See R11, at 17-23. However, although the Joint Reply Commenters expressed doubt whether the rootkit is an access control, they admitted that at least some part of the DRMs under discussion “may qualify as an access control, too.” Metalitz, 3/31/06, at 152-53.

¹⁷⁰ Felten, 3/31/06, at 13.

¹⁷¹ *Id.* at 62-64.

¹⁷² *Id.* at 130.

¹⁷³ Halderman and Felten, “Lessons from the Sony CD DRM Episode,” February 14, 2006, at 17.

¹⁷⁴ 17 U.S.C. § 1201(a)(3)(B).

¹⁷⁵ CSS (the “Content Scrambling System” used on DVDs) is similarly an access control because it controls access to motion pictures on DVDs by requiring the use of licensed DVD players to view the motion pictures. See *Universal City Studios, Inc. v. Reimerdes*, 82 F.Supp.2d 211, 216-17 (S.D.N.Y. 2000); *Universal City Studios, Inc. v. Corley*, 273 F.3d 429, 453 (2d Cir. 2001).

¹⁷⁶ C6, at 2.

vulnerabilities.¹⁷⁷

The Joint Reply Commenters argued that the existing statutory exemption in 17 U.S.C. § 1201(j) appears to address the problem raised by the proponents of a regulatory exemption and that in the face of an applicable statutory exemption, there is no basis for designating an exempted class of works in this rulemaking.¹⁷⁸ It is true that in past rulemakings, exemptions have been denied “where the factual record indicates that the statutory scheme is capable of addressing the problem. Where a statutory scheme exists for particular activity, persons must utilize such statutory exemptions to accomplish their goals or provide evidence why the statutory exemption is unavailable to accomplish a noninfringing use, not simply that the user could have accomplished his or her goal more conveniently by deviating from the congressional design.”¹⁷⁹ The Joint Reply Commenters assert that the “uninstallation of software that creates or exploits security vulnerabilities certainly appears to fall within the range of activities that Congress was seeking to address when it enacted” § 1201(j).¹⁸⁰ The question, then, is whether the exemption in § 1201(j) offers sufficient protection for persons who remove or inactivate access controls that pose threats to the security of a computer.

Section 1201(j) provides that it is not a violation of § 1201(a)(1)(A) “to engage in an act of security testing, if such act does not constitute infringement under this title or a violation of applicable law other than this section,” Section 1201(j)(1) defines “security testing” as:

Accessing a computer, computer system, or computer network, solely for the purpose of good faith testing, investigating, or correcting, a security flaw or vulnerability, with the authorization of the owner or operator of such computer, computer system, or computer network.¹⁸¹

The proponents of an exemption who testified at the hearing on the subject made clear that in the event of litigation alleging that they had violated § 1201(a)(1) in their efforts to investigate and deactivate the rootkit, they would invoke § 1201(j) as a defense. However, they expressed doubt whether § 1201(j) actually does apply in this context.¹⁸² They argued that “1201(j) requires a prior and ongoing relationship between the copyright holder and the circumventer, since that

¹⁷⁷ Felten, 3/31/06, at 84.

¹⁷⁸ R11, at 19-21; Metalitz, 3/31/06, at 44-47.

¹⁷⁹ *2003 Recommendation of the Register of Copyrights*, at 181.

¹⁸⁰ R11, at 19-20.

¹⁸¹ 17 U.S.C. § 1201(j)(1).

¹⁸² Perzanowski, 3/31/06, at 17-23; Schruers, 3/31/06, at 31-35; Sulzberger, 3/31/06, at 37-38.

statute requires authorization from the copyright holder in order for circumvention to be protected.”¹⁸³ That, however, is a misreading of the statute. Section 1201(j) requires no relationship whatsoever with the copyright owner; rather, it simply requires the “authorization of the owner or operator of such computer, computer system, or computer network.”¹⁸⁴ They also asserted that § 1201(j) permits only “limited disclosure of the results of security testing. Ideally, I think the statute would prefer a situation where the results of security testing were shared only with the copyright holder and were not disclosed publically at all.”¹⁸⁵ But in fact, the only provisions on disclosure in § 1201(j) are two factors that are considered (but are not necessarily conclusive) in determining whether the exemption is available:

(A) whether the information derived from the security testing was used solely to promote the security of the owner or operator of such computer, computer system or computer network, or shared directly with the developer of such computer, computer system, or computer network; and

(B) whether the information derived from the security testing was used or maintained in a manner that does not facilitate infringement under this title or a violation of applicable law other than this section, including a violation of privacy or breach of security.¹⁸⁶ These appear to be reasonable considerations that give a court the ability to deny the applicability of the § 1201(j) defense when the person invoking it has strayed beyond the purposes of the exemption.

Moreover, § 1201(j)(4) permits “a person to develop, produce, distribute or employ technological means for the sole purpose of performing the acts of security testing,” which actually goes beyond disclosure of the results of the security testing and extends to dissemination of tools that will correct the security vulnerability.

Witnesses testifying in favor of the proposed exemption also asserted that § 1201(j) is of insufficient scope because it addresses accessing computers, not access to works, and that the proponents seek access to works.¹⁸⁷ As noted above, the exempted act of “security testing” involves “Accessing a computer, computer system, or computer network, solely for the purpose of good faith testing, investigating, or correcting, a security flaw or vulnerability.” The question is whether such activity includes circumventing an access control that protects a sound recording or audiovisual work that is stored on a computer or on removable media that may be accessed through a computer. Proponents of an exemption in this proceeding argued that § 1201(j)

¹⁸³ Perzanowski, 3/31/06, at 19.

¹⁸⁴ 17 U.S.C. § 1201(j)(1).

¹⁸⁵ Perzanowski, 3/31/06, at 19.

¹⁸⁶ 17 U.S.C. § 1201(j)(3).

¹⁸⁷ Perzanowski, 3/31/06, at 19-20, C8 (CCIA/OSAIA), at 9.

“appears to permit the ethical hacking into a computer system for the purpose of detecting security flaws in the firewall protecting the system. It is not clear that it permits the permanent disabling of a technological measure on a specific work when the measure causes a vulnerability.”¹⁸⁸

The Joint Reply Commenters’ response is not very helpful on this point. At the hearing, their witness said:

We looked at the words of the section and the activity that’s involved here: accessing a computer, a computer system, or computer network solely for the purpose of good faith testing, investigating, or correcting a security flaw or vulnerability with the authorization of the owner or operator of such computer, computer system, or computer network. I think if you match that language up against what the activity that this exemption is aimed at immunizing, there’s a pretty good fit.¹⁸⁹

However, he did not explain how the conduct in which the proponents wish to engage “fits” the language described in § 1201(j): accessing a computer, a computer system, or computer network.

The language in § 1201(j) has not been construed by any court.¹⁹⁰ While there is a reasonable argument that its reference to “accessing a computer, computer system, or computer network solely for the purpose of good faith testing, investigating, or correcting a security flaw or vulnerability” would include the case where correcting the security flaw involves circumventing access controls on a computer that protect a sound recording or audiovisual work rather than the computer itself, it is not clear whether it extends to such conduct. Because of the uncertainty whether § 1201(j) addresses the situation presented by this proposal, the Register cannot conclude that it is unnecessary to consider an exemption for the proposed class of works. Under the circumstances, the proposed class must be considered on its merits.

¹⁸⁸ C2, at 9; *see also* Perzanowski, 3/31/06, at 19-20.

¹⁸⁹ T Metalitz, 3/31/06, at 44-45.

¹⁹⁰ Proponents of an exemption argued that in *Universal City Studios v. Reimerdes*, 82 F.Supp.2d 211 (S.D.N.Y. 2000) and 111 F.Supp.2d 294 (S.D.N.Y. 2000), the court “said that 1201(j) could not apply because DCSS, the program at issue, had nothing to do with a computer, computer network, or computer system because the protection measure was not designed to protect the computer but was designed to protect the copyrighted content on the removable media.” Perzanowski, 3/31/06, at 20-21. But the two decisions in *Reimerdes* simply said that “The record does not indicate that DeCSS has anything to do with testing computers, computer systems, or computer networks.” 82 F.Supp.2d at 219; 111 F.Supp.2d at 321. The court offered no elaboration and it is not at all clear whether *Reimerdes* stands for the proposition urged by the proponents of the exemption.

It is difficult to fit concerns about computer security into a rulemaking process which is focused on noninfringing uses of copyrighted works. However, it appears that the proponents of an exemption have carried their burden of showing that a substantial number of phonorecords of sound recordings have been distributed with digital rights management software (XCP and MediaMax) that qualifies as technological measures that control access to copyrighted works – sound recordings – and interfere with a user’s right to engage in noninfringing uses of the sound recordings – *e.g.*, to listen to the sound recordings on devices of their own choosing in the manner in which they choose. If that were all that they had shown, the proponents would not necessarily have made their case. In previous rulemakings, exemptions have been denied based on similar showings because although a user might have been prevented from engaging in a noninfringing use of a work using a particular device, the user could engage in the same noninfringing use of the work using a different device.¹⁹¹ Consideration of the statutory factors led to the conclusion that, in particular cases, an exemption to permit noninfringing uses on particular devices was not warranted.¹⁹²

To the extent that the proponents of this exemption have built their case on the desire to be able to engage in “device and format-shifting,”¹⁹³ which they describe as “creat[ing] personal copies of their CDs in the format of [users’] choice,”¹⁹⁴ they have failed to establish the basis for an exemption. Although, for example, Professor Felten’s comment argued that device and format-shifting is “unquestionably fair use,” there is no case that remotely reaches such a holding and the Register is skeptical that such conduct would be considered fair use.¹⁹⁵

But the proponents of an exemption have made a more compelling case in light of the fact that in order to use a computer to engage in noninfringing uses of the sound recordings they have purchased – noninfringing uses authorized by the copyright owners – they must either do so by activating and using the DRM software supplied by the copyright owners and exposing their computers to the security vulnerabilities described by Professor Felten et al., or by circumventing

¹⁹¹ See *e.g.*, 2000 Recommendation of the Register of Copyrights, at 64569 (“there is no unqualified right to access works on any particular machine or device of the user’s choosing. There are also commercially available options for owners of DVD ROM drives and legitimate DVD discs. Given the market alternatives, an exemption to benefit individuals who wish to play their DVDs on computers using the Linux operating system does not appear to be warranted.”).

¹⁹² See *id.*; 2003 Recommendation of the Register of Copyrights, at 120-24, 137-41.

¹⁹³ See, *e.g.*, C6 at 7.

¹⁹⁴ *Id.*

¹⁹⁵ Professor Felten’s comment cites *Sony Corp. of America v. Universal City Studios, Inc.*, 464 U.S. 417 (1984), in support of the conclusion that such conduct is fair use. But *Sony* addressed a much more limited context: copying of free broadcast television programs for the purpose of “time-shifting,” which the court described as “the practice of recording a program to view it once at a later time, and thereafter erasing it.” 464 U.S. at 423. *Sony* offered no broad immunity for the making of “personal copies.”

the DRM software in order to avoid those security vulnerabilities.

The deployment by copyright owners of such dangerous DRM software shifts the balance in favor of an exemption, but the scope of the exempted class of works should be calibrated to address the harm that the proponents have demonstrated. Professor Felten himself testified that “what we are asking for is a relatively targeted, a relatively targeted exemption which is based on a really detailed technical study of what has happened in the Sony BMG case and, based on that study, a concern about the same issues being important going forward. We spent significant care making sure that our request was tailored to that issue and that we could justify it based on the detailed study of these technologies.”¹⁹⁶

The exemption crafted by Professor Felten comes close to the mark. The Register recommends that the following class of works be exempted: Sound recordings, *and* audiovisual works *associated with those sound recordings*, distributed in compact disc format and protected by technological protection measures that *control* access to lawfully purchased works *and* create or exploit security *flaws or* vulnerabilities that compromise the security of personal computers, *when circumvention is accomplished solely for the purpose of good faith testing, investigating, or correcting such security flaws or vulnerabilities.*¹⁹⁷

The restriction of the class to sound recordings “and audiovisual works associated with those sound recordings” is based upon testimony by counsel for Professor Felten and Mr. Halderman,¹⁹⁸ clarifying that the audiovisual content that has been distributed with the XCP or MediaMax DRM software consists of “bonus content” such as music videos distributed on CDs consisting predominantly of sound recordings.¹⁹⁹ Thus, the exempted class of works consists of the types of works that actually have been distributed with the kinds of access controls that present the problem that caused the proponents to seek this exemption.

The Register recommends modifying “security vulnerabilities” to “security flaws or vulnerabilities” in order to conform the language of this exemption to the language Congress chose in crafting § 1201(j). Whether or not § 1201(j) applies to access controls that protect sound recordings or audiovisual works,²⁰⁰ the same policies that led Congress to enact § 1201(j) provide the rationale for recommending an exemption for this class of works. Under the circumstances, it

¹⁹⁶ T Felton , 3/31/06, at 94.

¹⁹⁷ Italicized text represents modifications of the text proposed in Comment 6.

¹⁹⁸ Aaron Perzanowski, a student at the Samuelson Law Technology and Public Policy Clinic at the University of California Berkeley School of Law, working under the supervision of Professor Deidre Mulligan.

¹⁹⁹ T Perzanowski, 3/31/06, at 60-61.

²⁰⁰ See the discussion of § 1201(j) earlier in this section.

seems wise to use the same language chosen by Congress when it addressed the same problem.²⁰¹

The paragraph of the comment submitted by Professor Felten and Mr. Halderman that formulates the proposed class included language describing security vulnerabilities.²⁰² It is not clear whether they were proposing that the description of the exempted class of works include that language, but in any event, the Register cannot recommend its inclusion. While the statement that the “creation of security vulnerabilities includes running or installing rootkits or other software code that jeopardize the security of a computer or the data it contains” appears reasonable, the proponents of the exemption do not appear to have offered sufficient explanation of why it should be that the “exploitation of security vulnerabilities includes running or installing software protection measures without conspicuous notice and explicit consent and failing to provide a permanent and complete method of uninstalling or disabling the technological measure.” While one can understand why such a practice may be undesirable, it is not clear, without further information, whether it rises to the level of a security vulnerability.

Indeed, while the proponents of an exemption have offered examples of security vulnerabilities, they have not offered a definition or description based in the record that is appropriate for inclusion in regulatory text. Rather than attempt to define that which the record does not clearly delineate, the Register believes that interpretation of what is a “security flaw or vulnerability” should be left to the courts, which can evaluate the specific factual situations presented to them and should construe that language in exactly the way they would construe the same language found in § 1201(j).

The Register also concludes that it is appropriate that this class of works be limited to circumstances where circumvention is accomplished “solely for the purpose of good faith testing, investigating, or correcting such security flaws or vulnerabilities.” That language, too, is taken directly from § 1201(j). Including such a condition in the description of the class ensures that, as the proponents of the exemption acknowledged, the exempted class should be “targeted” and “narrowly tailored to address a very specific form of harm,”²⁰³ and that access controls that might otherwise fall within this class of works are not circumvented for purposes having nothing to do with the harm that the proponents of the exemption have demonstrated.

²⁰¹ The modification of “that impede access to lawfully purchased works by creating or exploiting” to “technological protection measures that control access to lawfully purchased works and that create or exploit” simply replaces “impede” with the statutory term “control” and clarifies that the technological measures must both control access and create or exploit security flaws or vulnerabilities.”

²⁰² “The creation of security vulnerabilities includes running or installing rootkits or other software code that jeopardize the security of a computer or the data it contains. The exploitation of security vulnerabilities includes running or installing software protection measures without conspicuous notice and explicit consent and failing to provide a permanent and complete method of uninstalling or disabling the technological measure.” C6, at 1.

²⁰³ T Felton , 3/31/06, at 94; T Mulligan, 3/31/06, at 61.

In recommending the exemption for this class, the Register emphasizes that the proponents' case was based on actual facts demonstrating that a significant number of sound recordings have been distributed on CDs with access controls that create security vulnerabilities.²⁰⁴ While Sony BMG has responded by entering into a settlement agreement in litigation that involves recalling CDs that employ the measures in question, making uninstallation tools available to customers, and encouraging customers to use those tools,²⁰⁵ the fact remains that many of the CDs remain in the hands of consumers. Moreover, Professor Felten testified that the uninstallation tools offered by Sony are less effective than other uninstallation tools that are available because, unlike some of the other uninstallation tools, the authorized uninstallation tools do not prevent the reinstallation of the harmful DRM software whenever one of the original CDs is placed in the CD-ROM drive of a computer.

Based on this record, it seems clear that users of such CDs are adversely affected by such access controls in their ability to make noninfringing uses of the sound recordings on those CDs. Moreover, the recency of the deployment of such faulty access controls leads to an inference that there is a likelihood that access controls that pose such security risks will be deployed during the next three years. If, during the next three years, no such access controls have been deployed, proponents of renewal of an exemption may have difficulty three years from now in making the case that "users of a copyrighted work [in that class] are, or are likely to be in the succeeding 3-year period, adversely affected by the prohibition under subparagraph (A) in their ability to make noninfringing uses under this title of [that] particular class of copyrighted works."

Exempting such a class of works is warranted based on a review of the statutory factors set forth in § 1201(a)(1)(C)(i)-(v). In evaluating the availability for use of copyrighted works, it is appropriate to consider whether, in the context of the particular class of works in question, access control measures are increasing or restricting the availability of works to the public in general. The Joint Reply Commenters observe that access controls such as those placed on sound recordings have led to a "digital cornucopia," encouraging copyright owners to make their works more widely available when they can use access controls protect them against unlawful uses. But one can accept that proposition and still conclude that permitting circumvention of access controls that pose security risks to personal computers will have no appreciable impact on the growth of

²⁰⁴ In contrast, in past rulemaking efforts by researchers to secure exemptions to permit them to engage in research relating to access controls were rejected when the researchers were unable to demonstrate that an existing statutory exemption did not address the issue or that the prohibition on circumvention actually had prevented them from engaging in noninfringing uses. *See, e.g., 2000 Recommendation of the Register of Copyrights*, at 64571. In 2003, in addressing a request for an exemption that in many respects resembles the exemption recommended herein, the Register's Recommendation observed that "the task of the Register and the Librarian is to look at developments in the marketplace for digital works to determine whether there are particular classes of works of which users are having difficulties making noninfringing uses due to problems created by access controls." In that particular instance, the Register's Recommendation noted that "The comment is completely devoid of information about actual problems that have occurred or are likely to occur during the next three years." *2003 Recommendation of the Register of Copyrights*, at 185.

²⁰⁵ R11, at 18.

that cornucopia.

The Register can discern no appreciable impact on availability for use of works for nonprofit archival, preservation, and educational purposes. However, in considering “the impact that the prohibition on the circumvention ... has on criticism, comment, news reporting, teaching, scholarship, or research,” it is easy to see that without an exemption, the prohibition on circumvention will have an adverse impact on scholarship and research involving the good faith testing, investigating, or correcting of security flaws and vulnerabilities in access controls deployed on copyrighted works.

It is also difficult to see how permitting circumvention under the circumstances set forth in the recommended class would have an adverse effect on the market for or value of copyrighted works. Indeed, it could be argued that research into and correction of security flaws in access controls ultimately will have a positive impact on the market for or value of copyrighted works, to the extent that it results in the marketing of copies of copyrighted works that do not pose computer security risks for consumers.

Finally, it is appropriate to consider an additional factor here:²⁰⁶ the strong public interest in preventing the distribution of software that poses security risks to the computers of unwitting consumers.²⁰⁷ Indeed, Professor Felten and Mr. Halderman point out that “the Department of Homeland Security cautioned copyright holders in reaction to Sony BMG’s rootkit.”²⁰⁸ In the particular circumstances presented here, and because the other statutory factors either favor an exemption or are neutral, the following class of works should be subject to an exemption: *Sound recordings, and audiovisual works associated with those sound recordings, distributed in compact disc format and protected by technological protection measures that control access to lawfully purchased works and create or exploit security flaws or vulnerabilities that compromise the security of personal computers, when circumvention is accomplished solely for the purpose of good faith testing, investigating, or correcting such security flaws or vulnerabilities.*

B. Other Exemptions Considered, But Not Recommended

²⁰⁶ See 17 U.S.C. § 1201(a)(1)(C)(5).

²⁰⁷ There is no intention to suggest that Sony BMG or any other copyright owners have knowingly distributed software that poses security risks. As Mr. Halderman and Professor Felten suggested in their paper, “Lessons from the Sony CD DRM Episode,” “incentive differences make the vendor more likely than the label to (a) cut corners and accept security risks, and (b) push DRM software onto more users’ computers. If the label had perfect knowledge about the vendor’s technology, this incentive gap would not be an issue—the label would simply insist that the vendor protect the label’s interests. But if, as seems likely in practice, the label has imperfect knowledge of the technology, then the vendor will sometimes act against the label’s interests.” *Id.* at 3.

²⁰⁸ R6, at 13. See <http://www.us-cert.gov/current/archive/2005/11/18/archive.html#xcpdrm> (Department of Homeland Security’s United States Computer Emergency Readiness Team, webpage on “First 4 Internet XCP (Sony DRM) Vulnerabilities,” added November 15, 2005, updated November 18, 2005) (last visited November 14, 2006).

1. Compilations consisting of lists of Internet locations blocked by commercially marketed filtering software applications that are intended to prevent access to domains, websites or portions of websites, but not including lists of Internet locations blocked by software applications that operate exclusively to protect against damage to a computer or a computer network or lists of Internet locations blocked by software applications that operate exclusively to prevent receipt of email.

This proposal is for the renewal of an existing exemption from 2003, which in turn was a modified version of one of the original exemptions from the 2000 rulemaking. As in the previous two rulemakings, initial comments proposed an exemption to the prohibition on circumvention in order to access the lists of blocked websites or Internet addresses that are used in various filtering software programs sometimes referred to as “censorware.” These programs are intended to prevent children and other Internet users from viewing objectionable material while online. It has been alleged that although the software is intended to serve a useful societal purpose, the emphasis of the programs is on robust blocking rather than accuracy. Critics contend that the result of this focus is that this type of filtering software tends to over-block, thereby preventing access to legitimate informational resources. Proponents of the exemption (both previously and again this year) wish to legalize the circumvention of the technology which controls access to lists of blocked Internet locations and thus adversely affects one’s ability to comment on and criticize the lists of sites blocked by the technological protection measure.²⁰⁹

In the prior rulemakings, there was no dispute that the lists of Internet locations blocked by filtering software are generally encrypted or otherwise protected by an access control measure. It was also demonstrated that relatively few people have the motivation and ability to circumvent the access control measure, investigate the lists of blocked sites, and comment on or criticize those lists. However, such actions by only a few held the promise of relatively widespread societal benefit. Therefore, an exemption was warranted even though there were likely to be few cases of circumvention (and correspondingly minimal harm to the copyright owner), due to the substantial benefits that would accrue by shedding light on the accuracy of filtering lists and, presumably, by leading to more accurate and precise filtering lists.²¹⁰

The notice of inquiry initiating this rulemaking proceeding made clear that proponents of renewal of an exemption must make their case *de novo*:

Exemptions are reviewed *de novo* and prior exemptions will expire unless sufficient new evidence is presented in each rulemaking that

²⁰⁹ 2003 Recommendation of the Register of Copyrights, at 24-26.

²¹⁰ *Id.* at 26-34.

the prohibition has or is likely to have an adverse effect on noninfringing uses. The facts and argument that supported an exemption during any given 3-year period may be insufficient within the context of the marketplace in a different 3-year period. Similarly, proposals that were not found to warrant an exemption in any particular rulemaking could find factual support in the context of another rulemaking.²¹¹

Three years ago – the first occasion when an exempted class under this rulemaking came up for renewal, the burden on a proponent of renewal was explained at greater length:

The burden of proof for an exemption rests with its proponents, and the fact that an exemption was granted in the previous rulemaking creates no presumptions. The exemptions in each rulemaking are considered *de novo*. Congress anticipated that market conditions would be constantly changing and that the market would be viewed anew in each triennial proceeding.²¹² [M]any commenters simply requested that the Librarian renew the exemption established in the previous rulemaking. They claimed that since there is no evidence that the conditions in the market have changed, the exemption should be renewed. Since such a claim for “renewal” is discussed extensively above, it suffices to restate that such burden-shifting is incompatible with the *de novo* nature of the triennial review. Allowing a presumption to be created based on a finding of likely harm made in a preceding rulemaking would effectively transform any exemption into a permanent exemption unless opponents satisfied a burden of going forward with new evidence.²¹³

When renewal of this exemption was sought three years ago, the exemption was granted based on a record that was summarized as follows:

The Register’s recommendation in favor of this exemption is based primarily on the evidence introduced in the comments and testimony by one person, Seth Finkelstein, a non-lawyer participating on his own behalf. In addition to identifying a class of works that related to the specific facts presented, he identified the

²¹¹ Notice of Inquiry, 70 Fed. Reg. 57,526, 57,529 (Oct. 3, 2005).

²¹² 2003 Recommendation of the Register of Copyrights, at 25.

²¹³ *Id.* at 35.

qualitative nature of the noninfringing uses for which circumvention was necessary and generally identified the technological measure which controlled access to this class. There was no dispute that the lists of Internet locations blocked by filtering software are generally encrypted or otherwise protected by an access control measure. The remedy sought was causally related to the noninfringing uses that are necessary to conduct research, comment and criticism on the filtering software at issue. Mr. Finkelstein also anticipated objections to the exemption and proved that available alternatives to the exemption were insufficient to remedy the adverse effect caused by the prohibition. The insufficiency of alternatives was supported by testimony and demonstrative evidence at the hearing in California by James Tyre. Finally, Mr. Finkelstein's succinct initial comment addressed the statutory requirements and thoughtfully analyzed each of the statutory factors required to be considered in this rulemaking.

The case made by Mr. Finkelstein for this exemption is also instructive for the manner in which it met the requisite showing. The evidence produced did not prove that a substantial number of people have utilized or were likely to utilize an exemption. On the contrary, the evidence tended to prove that very few people have had the motivation or technological ability to circumvent this technological measure, to investigate the lists of blocked sites in filtering software or to report on, comment on or criticize such lists. Although there was little need for an exemption in quantitative terms (*i.e.*, in terms of the number of persons likely to take advantage of it directly), it was the qualitative need for an exemption that was controlling in this case; absent the ability of a few to carry out their noninfringing efforts notwithstanding the prohibition set forth in section 1201, the many would not reap the fruits of such efforts – the information, analysis, criticism and comment enabled by the quantitatively small number of acts of circumvention. The fact that the act of circumvention was unlikely to be widespread rebutted copyright owners' concerns of abuse and further supported the conclusion that the potential adverse effects to copyright owners would be minimal. The showing that the particular noninfringing use prevented was a result of the prohibition on circumvention and that these uses were necessary to criticism, comment, news reporting, teaching, scholarship, or research, further strengthened the argument.²¹⁴

²¹⁴ 2003 Recommendation of the Register of Copyrights, at 26-27.

While the legal and analytical rationale for this exemption remains unchanged, the key question is whether the evidence in the record supports renewing the exemption for another three years. In this case, however, proponents made no attempt to make any factual showing whatsoever, choosing instead to rest on the record from three years ago and argue that the existing exemption has done no harm, that nothing has changed to suggest the exemption is no longer needed, and that if anything, the use of filtering software is on the rise.²¹⁵ The opponents argue that no evidence has been put forward in support of the renewal of this exemption or even that the existing exemption has been used.²¹⁶

All that the record reveals is that *three years ago*, the lists of websites blocked by filtering software were typically encrypted, there were no reasonably available alternatives to an exemption for researchers wishing to investigate what websites were blocked by filtering software, researchers (albeit a small number) were actively engaged in examining the effectiveness and accuracy of filtering software, and those researchers' ability to engage in noninfringing uses, for purposes of criticism, comment, news reporting, teaching, scholarship, or research, was being prevented as a result of the prohibition on circumvention.

While it might be reasonable to assume that filtering software continues to operate today as it did three years ago, one cannot *presume* that to be the case in a proceeding where proponents have a burden of proof every three years. Moreover, in a rulemaking proceeding that places the burden of coming forward with facts to justify an exemption for the ensuing three-year period on proponents, one cannot assume that the elements of the case that was made three years ago remain true now. As noted above, Congress anticipated that market conditions would be constantly changing and that the market would be viewed anew in each triennial proceeding. But the record tells us nothing about today's market with respect to filtering software and the need to circumvent access controls placed on lists of Internet locations blocked by filtering software.

Nor is there any evidence in the record that there has been any use of the exemption in the past three years, or that there would be likely to be any use of an exemption during the next three years. In 2003, this exemption found virtually all of its support from a single proponent, Mr. Seth Finkelstein. Mr. Finkelstein's submitted a reply comment in the current proceeding, but the substance of his comment was distinctly different as he noted that he has "abandon[ed] censorware decryption research."²¹⁷ As such, Mr. Finkelstein put forth no evidence of prior, current, or future likely use of the proposed exemption. Of course, the burden of proof in support of this exemption need not fall exclusively upon Mr. Finkelstein, but nobody else stepped forward to fill in the gap left when Mr. Finkelstein chose not to provide the necessary information.

²¹⁵ See C 2 (Library Copyright Alliance and Music Library Association); R4 (Seth Finkelstein); R7 (David Tyrrell); T Jonathan Band, 3/29/06.

²¹⁶ R11 (Joint Reply Comments), at 14.

²¹⁷ R4, at 2.

Thus, there is no information in the record to suggest that anybody is now taking advantage of the existing exemption or would be likely to take advantage of the exemption if it is renewed.²¹⁸ As noted above,²¹⁹ while this is not necessarily fatal, nevertheless a record that reveals no use of an existing exemption tends to indicate that the exemption is unnecessary. Proponents of an exemption bear the burden of coming forward with evidence of such present or likely future adverse effects on noninfringing uses. Logically, this requires some evidence that there is a noninfringing use which people would make, but for § 1201(a)(1)(A). Together, the absence of any quantification of the current scope of the problem along with the absence of any demonstration that the existing exemption has offered any assistance to noninfringing users leaves a record that provides no basis to justify a recommendation for renewal of the exemption.²²⁰

2. Space-shifting.

A number of commenters sought an exemption for an activity that is referred to by some of those commenters generally as “space-shifting.”²²¹ In essence, these commenters seek an exemption to permit circumvention of technological protection measures applied to audiovisual and musical works in order to copy these works to other media or devices and to access these works on those alternative media or devices. In most cases, the comments did not identify the particular technological measures; indeed, in most cases it was unclear whether the commenters were referring to access controls or copy controls, or simply to incompatibility of formats. The only access control clearly identified in any of the comments is the Content Scrambling System (CSS) used to protect motion pictures on DVDs.²²² For this reason alone (with the exception of the reference to CSS), the proponents of a space-shifting exemption have failed to make their case.

Some of the commenters would like to move the motion picture content on DVDs to hard drives on laptop computers, iPods, or other similar devices.²²³ In other cases, commenters desired

²¹⁸ At the hearing on this proposed exemption, the sole witness in favor of the exemption admitted that as far as he knows, people are not taking advantage of the existing exemption. T Jonathan Band, 3/29/06, at 19-20.

²¹⁹ See Section III.A.4.

²²⁰ In fact, denial of the exemption is justified even without taking into account the lack of evidence that anyone has taken advantage of the exemption during the past three years. By resting on a stale record presented in the previous rulemaking, the proponents have failed to make their case.

²²¹ C16, C22, C23, C25, C27, C29, C33, C34, C45, C48, C49, R30, R31. Almost all of these comments were one page or less in length and offered few factual details and little or no legal analysis. While the various comments used different words to describe the class of works (*e.g.*, “Compact Discs created so that they cannot be copied on to the computer hard drive of the person who bought the CD legally and, subsequently, an MP3 player of the person who bought the CD legally” C25), and “Digital audio and video media of all types” C45), what these proposals have in common is that all sought to exempt works for purposes of space-shifting, as described herein.

²²² See, *e.g.*, R31. For a description of CSS, see Section III.A.1.

²²³ See C16, C33 and C35.

to move protected music and sound recordings obtained through the iTunes Music Service to devices other than an iPod²²⁴ or, conversely, to play music and sound recordings purchased with Microsoft's digital rights management to non-Microsoft-compatible players.²²⁵ In at least one instance, a commenter sought to legitimize moving programming recorded on a Tivo to a video iPod.²²⁶

Many of the commenters claimed that their space-shifting of the works and their access to those works on an alternative device were noninfringing uses and that technological restrictions were impeding their ability to engage in a noninfringing use. Yet these commenters uniformly failed to cite legal precedent that establishes that such space-shifting is, in fact, a noninfringing use. Stating that the ultimate goal of space-shifting is to engage in noninfringing private performances of musical or audiovisual works misses the point: the question is whether the reproduction of those works onto new devices is infringing. Clearly such conduct infringes the the exclusive reproduction right unless some exemption or defense is applicable. In the absence of any persuasive legal authority for the proposition that making copies of a work onto any device of the user's choosing is a noninfringing use, there is no basis for recommending an exemption to the prohibition on circumvention. Recommendations for an exemption may not be based simply on perceived beneficial or desirable uses, but on noninfringing uses that are or are likely to be adversely affected by the prohibition on circumvention. Thus, the commenters have failed to establish an essential element of any exemption.

It is also worth noting that even if the noninfringing nature of space-shifting could be established, that threshold requirement would not be determinative of whether an exemption is warranted. Once the Register has found that access controls are adversely affecting a particular noninfringing use, the statute specifically requires the Register and the Librarian to pay particular attention to the four considerations set forth in § 1201(a)(1)(C), as well as any other factors the Librarian considers appropriate. In considering the availability for use of copyrighted works, the Register notes that the use of access controls on music and motion pictures distributed in digital forms has encouraged copyright owners to make their works available in those potentially vulnerable formats.²²⁷ "An evaluation of the availability for use of copyrighted works must also consider whether, in the context of the particular class of works in question, access control measures are increasing or restricting the availability of works to the public in general."²²⁸

Opponents of exemptions for space-shifting pointed out that music and audiovisual works

²²⁴ See C29 and C49.

²²⁵ See C23.

²²⁶ See C48.

²²⁷ See R11, at 32.

²²⁸ 2003 Recommendation of the Register of Copyrights, at 59-60.

are being made available in a wide variety of formats for performance on all sorts of devices through various distribution channels.²²⁹ They also pointed out that to the extent that particular copies of some works may be tethered to particular devices, “the inconvenience that faces consumers of works tethered to specific devices is far outweighed by the threat to the enjoyment of copyright posed by illegal digital distribution facing copyright owners. As the Register stated in 2003, ‘[c]ertainly, where the [unauthorized] online distribution of works is a potential concern, space-shifting will be incompatible with fair use.’”²³⁰ They stated that “copyright owners have relied on access controls, some of which are very flexible, while developing the market for online downloads over the past few years. Stripping copyright owners of the ability to manage access to works in digital formats could slow the rapid growth of this emerging distribution channel, to the detriment of all consumers. On the whole, the Register’s observation in 2003 remains equally apposite today: ‘in essence, the commenters seek to have their cake and eat it too – they want copyright owners to provide works in digital formats, but do not want to live with the reasonable measures copyright owners feel they must take to guard against the risks that this digital distribution entails.’”²³¹

With respect to the second statutory consideration, there has been no assertion that the technological measures in question have had an adverse impact on the availability for use of works for nonprofit archival, preservation, and educational purposes.²³² Nor has there been any assertion that these technological measures have had an adverse impact on the use of works used for criticism, comment, new reporting, teaching, scholarship, and research, the third consideration enumerated in the statute. While noninfringing uses related to consumer preferences or convenience may rise to a socially significant level, they are not the type of noninfringing activity that Congress instructed the Librarian to focus on in considering the statutory factors.

Finally, the Register and Librarian must consider the effect of circumvention of technological measures on the market for or value of copyrighted works, the fourth statutory factor. As the Register noted in considering a similar proposed exemption three years ago, “tethering and DRM policies serve a legitimate purpose for limiting access to certain devices in order to protect the copyright owners from digital redistribution of works. Tethering works to particular platforms such as RealOne Player or Windows Media Player provides copyright owners with some assurance that these works will not be easily placed on peer-to-peer networks. The fact

²²⁹ See R11, at 9-13, 31-32.

²³⁰ *Id.* at 32.

²³¹ *Id.*

²³² While some commenters argued, without foundation, that fair use gives them a right to make “backup copies,” such activity is not the type of nonprofit archival use envisioned in the statute. Rather, the “archival use” consideration in § 1201(a)(1)(C)(2) clearly appears to refer to the type of nonprofit archival and preservation activities conducted by libraries and archives pursuant to 17 U.S.C. § 108. With respect to back-up copies, *see also* the discussion below in Section III.B.10.

that copyright owners are able to tether works to particular platforms is likely to encourage some copyright owners to make their works available in digital format.”²³³ The Register also noted that “The effect of circumvention of the protection measures employed on these works would be likely to decrease the digital offerings for these classes of works, reduce the options for users, and decrease the value of these works for copyright owners. Therefore, the factors weigh heavily against an exemption.”²³⁴

None of the commenters proposing an exemption for “space shifting” have come forward with any reasons for the Register to view the situation differently three years later. At most, the commenters have asserted that technological measures have made it difficult to make copies of musical and audiovisual works for use on other devices – a use that is either infringing, or, even if it were noninfringing, would be merely a convenience which is insufficient to support a claim for an exemption.²³⁵ Given the wide availability of the works in a wide array of formats in the digital marketplace, the Register finds no reason for recommending an exemption to the prohibition for purposes of space-shifting activity.

3. DVDs that cannot be viewed on Linux operating systems.

In contrast to the relatively narrow proposal for an exemption for the making of film clips by film professors for pedagogical use in film and media studies classes, some commenters have proposed an exemption to allow circumvention of CSS in order to view DVDs on the platform of the user’s choice. Specifically, users would like to be able to view DVDs on computers running the Linux operating system.²³⁶

Similar proposals have been advanced in the preceding two rulemaking proceedings. Because nothing new has been raised in this proceeding, and the Register is faced with factual and legal arguments no more compelling than those advanced in the earlier two proceedings, the

²³³ 2003 Recommendation of the Register of Copyrights, at 138. Opponents of an exemption echoed this theme in the current rulemaking. See R11 at 32.

²³⁴ *Id.* at 141.

²³⁵ See Manager’s Report, at 6 (“mere inconveniences, or individual cases ... do not rise to the level of a substantial adverse impact”) see also 2000 Recommendation of the Register of Copyrights, 65 Fed. Reg. at 64,558, 64,562 (Oct. 27, 2000).

²³⁶ C12, C13, C24, C32, C41, R31. Four of the five initial comments were one page or less; the fifth was two pages. The reply comment mentioned Linux in passing. The comments contained little information or legal reasoning.

recommendation should be denied for the same reasons as in 2000²³⁷ and 2003.²³⁸ Moreover, the arguments made in the comments presented this year fail to support the requested exemption.

In essence, the proponents' argument is that users of the Linux operating system cannot view lawfully purchased or possessed DVDs on their computers because there is no licensed player available for the Linux operating system. The decryption keys authorized by copyright owners whose works are protected by CSS on commercially distributed DVDs are available for license by the DVD CCA on a nondiscriminatory basis. Anyone willing to abide by the terms of the DVD CCA license and pay the requisite licensing fees can obtain a license from the DVD CCA in order to manufacture and distribute an authorized DVD player capable of accessing and rendering the motion picture or audiovisual content contained on CSS-protected DVDs.²³⁹ However, it is asserted that the requirement of payment for such a license makes it economically unfeasible to obtain such a license for the "open source" Linux operating system.²⁴⁰ The specifics of these difficulties have not been presented in the record, so it is unclear on the record exactly why a licensed player for this segment of the market has not become more readily available in the marketplace.²⁴¹ Moreover, the Register is not persuaded that if there is truly a demand for the ability to view DVDs on the Linux platform, there would be no market for a version of the Linux operating system or for separate Linux-based software that enables the viewing of DVDs, even if the purchaser of that software had to pay for it. In any event, the key question is: assuming that there is no suitable player for the Linux operating system on the market, is an exemption to the prohibition on circumvention warranted? For a number of reasons that are consistent with previous determinations, the Register finds that the answer to the question is no.

First, there is evidence in the record that Linux-based DVD players currently exist.²⁴² Second, it remains true that there are many readily available ways in which to view purchased DVDs. Standard DVD players that can connect to televisions have become inexpensive and portable DVD players have decreased in price. Similarly, Linux users can create dual-boot systems on their computers in order to use DVD software that is compatible with, for example,

²³⁷ See 2000 Recommendation of the Register of Copyrights, 65 Fed. Reg. at 64,568-64,569 (Oct. 27, 2000).

²³⁸ See 2003 Recommendation of the Register of Copyrights, at 142-146.

²³⁹ R1, at 2-3, 18-19.

²⁴⁰ C13.

²⁴¹ One proponent of the exemption stated that there is one commercial "[m]anufacture[r] of Linux distributions" that includes "software that makes it possible to view encrypted DVD movies," suggesting that users of Linux operating systems do have at least one option that would permit them to view CSS-protected motion pictures on their computers, but the information provided was too sketchy to evaluate. See C13.

²⁴² See R11, at 35.

the Microsoft operating system.²⁴³

Third, there are alternative formats in which to purchase the motion pictures contained on DVDs. While the availability of VHS as an alternative format appears to be diminishing somewhat, new formats are becoming increasingly available that do not require the use of DVD players in order to access the works. Online access and online downloading of motion pictures and television series are options. While these online distribution and on-demand access sites may still be in a nascent stage, they offer an alternative form of access to these works. Similarly, on-demand services from cable and satellite companies are quickly becoming more widely available and offering quality that, in some cases, surpasses DVD quality.²⁴⁴

Due to these alternative options for access and use by consumers, there is no reason to conclude that the availability for use of the works on DVDs is adversely affected by the prohibition. An exemption is not warranted simply because some uses are unavailable in the particular manner that a user seeks to make the use, when other options are available. If a user may access the DVD in readily-available alternative ways or may purchase the works in alternative formats, the need for the exemption becomes simply a matter of convenience or preference. As described above in the case of space-shifting, such reasons for an exemption simply do not establish a sufficient basis for an exemption under the statutory scheme.

Unlike the proposal by film professors for use of the exemption in furtherance of educational pursuits, the proposal by users of the Linux operating system is a matter of consumer preference or convenience that is unrelated to the types of uses to which Congress instructed the Librarian to pay particular attention, such as criticism, comment, news reporting, teaching, scholarship, and research as well as the availability for use of works for nonprofit archival, preservation and educational purposes. The proposed exemption is unrelated to any of these socially beneficial noninfringing uses. As such, and in light of the many alternative means available for viewing motion pictures – on DVDs and otherwise -- the proponents of this exemption have failed to sufficiently establish a need for remedial action by the Librarian.

4. Region Coded DVDs.

Two commenters sought an exemption to permit circumvention in order to obtain access to motion pictures protected by region coding, a technological protection measure contained on many commercially distributed DVDs that limits access to the content on DVDs to players coded for the same geographical region.²⁴⁵ In the United States, generally, players are enabled to play

²⁴³ See 2003 Recommendation of the Register of Copyrights, at 143, 2000 Recommendation of the Register of Copyrights, 65 Fed. Reg. at 64,569 (Oct. 27, 2000).

²⁴⁴ See R11, at 11-12, 34-35.

²⁴⁵ C41, R31. In contrast, in the previous rulemaking proceeding in 2003, the Register received over 100 comments in support of a similar exemption. See 2003 Recommendation of the Register of Copyrights, at 122.

only Region 1 DVDs. One commenter stated that since laptop computers are designed to be usable anywhere in the world, DVDs purchased in different regions, for instance while traveling, should all be accessible on the same laptop computer. Yet the same commenter notes that DVD drives allow the preset region to be changed up to five times. This latter allegation is consistent with the record on this issue in prior rulemakings in which there was also evidence that manufacturers could increase the number of resets upon request by the purchaser.

The DVD Copy Control Association (DVD CCA) opposed an exemption that would permit circumvention of region codes, noting that such proposals had been rejected in the two previous rulemakings and that there “is no more basis now than previously to grant this request.” DVD CCA pointed out that consumers have a number of options for viewing DVDs coded for regions other than the United States without circumventing region coding. It also noted that “region coding allows a copyright owner to protect its exclusive right of distribution. In addition to permitting the content owner to divide its distribution right geographically (i.e., the content owner may grant different licensees the right to distribute the work in particular regions of the world), region coding also permits content owner to choose the sequence and overall timetable for the various channels in which its copyrighted content will be distributed.”²⁴⁶

The Register concludes that the two proponents²⁴⁷ of an exemption for region-coded DVDs have failed to make the case for permitting circumvention in order to bypass region coding.

On a more extensive record, such an exemption was denied three and six years ago. The reasoning behind the denial of the exemption in 2000 and 2003 appears to be equally valid today:²⁴⁸

- Region coding imposes, at most, an inconvenience rather than actual or likely

²⁴⁶ R1, at 10-11.

²⁴⁷ In reality, there was probably only one proponent of such an exemption: a person who submitted a reply comment relating primarily to region-coded DVDs. R31. That reply comment purported to be in support of a proposal that in fact related to the Linux issue addressed above. See C13. Another initial comment also focused primarily on Linux, but mentioned in passing that “Due to certain commercial DVD players that only allow access to movies listened to in the regional languages, a person who wishes the right to view the copyrighted material for other than “regional” languages (for educational purposes) is prohibited from access to this material by the Movie industry (meaning they don’t have full access to the movie, in all languages, due to DMCA and Digital Rights Management (or protected encryption that, along with an installation ELTLA (end user license agreement), could lock up the access rights to terms of use that are longer periods of time than the copyright allows (by itself)!” See C41. While the references to “regional languages” may have been intended to refer to region coding, it is not at all clear that the commenter was actually addressing that issue.

²⁴⁸ One factor cited in 2000 is less valid today: In 2000, the Register remarked that “it is clear that, at present, most works available in DVD format are also available in analog format (VHS tape) as well.” 2000 *Recommendation of the Register of Copyrights*, 65 Fed. Reg. at 64,568 (Oct. 27, 2000). It is not clear that the same could be said today. However, as noted below, persons wishing to view motion pictures from other regions continue to have a number of options that do not involve circumvention.

harm, because there are numerous options available to individuals seeking access to content from other regions.²⁴⁹

- Consumers who wish to view non-region 1 DVDs have a number of inexpensive options other than circumvention, including obtaining DVD players, including portable devices, set to play DVDs from other regions and obtaining DVD-ROM drives for their computers, and setting those drives to play DVDs from other regions.²⁵⁰
- Region coding of audiovisual works on DVDs serves legitimate purposes as an access control, such as preventing the marketing of DVDs of a motion picture in a region of the world where the motion picture has not yet been released in theatres, or is still being exhibited in theatres.²⁵¹

In light of the *de minimis* showing made in support of the proposed exemption, and in recognition that on the limited record before us, the arguments presented by opponents, reflecting the judgments made in the previous rulemaking proceedings, appear to be valid today, the Register recommends rejection of this proposed class.

5. Computer programs protected by mechanisms that restrict their full operation to a particular platform or operating system.

Two commenters asserted that certain lawfully obtained computer programs do not work properly when operating systems are upgraded.²⁵² One commenter, in a 221-word comment, stated that these problems are often the result of programs that contain anti-piracy mechanisms that rely on quirks or specific features in an old operating system but not on the new platform. He claimed that to use these old programs, users must reverse engineer and often circumvent technological protection measures in order to make the programs to work. However, he offered no actual examples.²⁵³ Another commenter, in a comment slightly more than one page long, stated a similar concern with upgrades to the Mac OS X operating system and asserted that after four years on the market, many application vendors have not created OS X-compatible versions of their programs. He asserted that “at least one vendor of copy protection provided software that ended up failing in Classic [a mode that emulates the prior version of the operating system]. This

²⁴⁹ 2000 Recommendation of the Register of Copyrights, 65 Fed. Reg. at 64,569 (Oct. 27, 2000).

²⁵⁰ 2003 Recommendation of the Register of Copyrights, at 120-124.

²⁵¹ 2000 Recommendation of the Register of Copyrights, 65 Fed. Reg. at 64,569 (Oct. 27, 2000).

²⁵² C19 (proposing “Computer programs protected by mechanisms which restrict their full operation to a particular platform or OS (tethered works)”); C21 (proposing “Software programs for Macintosh Computers which have not been updated for compatibility with version 10 of the Macintosh operating system and are encumbered with copy protection schemes that are not compatible with ‘Classic’ support in version 10 of the MacIntosh operating system.”).

²⁵³ C19.

copy protection is used by many application vendors; so, there are many many applications out there that fail in Classic because the copy protection is broken, even though they would run fine if not for the copy protection.”²⁵⁴ He identified two specific computer programs²⁵⁵ in the proposed class, but did not identify any access controls used in connection with those programs. The brief comments submitted on this issue failed to present sufficient evidence from which to conclude that technological measures that control access to works are interfering with the ability of users of copyrighted works to make noninfringing uses. In fact, it is not at all clear whether access controls are even implicated in the cases cited by the commenters. In the most detailed articulation of the issue, one commenter indicated only that “copy protection schemes” cause the compatibility problems and that these applications are “way too complicated for an average computer user to remove themselves.” It is unknown whether the problems to which the commenter alludes are causally related to “copy protection,” but accepting the commenter’s assertion, “copy” protection measures, *i.e.*, measures that protect the section 106 rights of the copyright owner, are not implicated by the prohibition in section 1201(a)(1).

No exemption can be recommended in this case because insufficient information has been presented to understand the nature of the problem or even the relevance of § 1201(a)(1).

6. Computer games and software with Copy Protections that prevent legitimate users installing and using games and programs.

One commenter, in a one-page comment, stated that some copy protection systems create problems with the installation or using of computer games or programs, specifically citing SecureRom and StarForce as examples of such systems.²⁵⁶ The commenter did not present any evidence that the adverse effect articulated is the result of an access control. The commenter used the term “copy control” and did not adequately explain what the technological measure is or how the measure works. He merely stated that in some cases the measure will prevent installation because it detects the copy as being pirated. There was no indication whether the company was contacted, whether remedial action was available, or whether the cause of the problem was the prohibition contained in § 1201(a)(1). There is not sufficient evidence in the record to understand the problem adequately, to know whether the prohibition is the cause of the problem, or to know whether an exemption is warranted.

It is worth noting, however, that technological measures employed by software producers should not impede legitimate use by purchasers of lawful software products. To the extent that consumers can demonstrate that an access control is preventing lawful use of a program or computer game by legitimate purchasers, and can prove that manufacturers are unresponsive to

²⁵⁴ C21.

²⁵⁵ Composer’s Mosaic (version 1.58) and Galaxy Plus with Editors (version 2.5).

²⁵⁶ C20.

such defects or problems, a viable claim for an exemption may exist. In future rulemakings, such such problems will be considered if sufficient evidence is presented detailing what the problem is and the ways in which a manufacturer is ignoring a problem that has been brought to its attention. While copyright owners have a right to apply technological protection measures to their works, they cannot expect to enjoy legal protection for those measures if they malfunction or prevent authorized uses and, after learning of such problems, the copyright owners do nothing to remedy the problem.

7. Literary works distributed in electronic audio format by libraries.

One commenter stated that an exemption should issue for circumvention of literary works distributed in electronic audio format by libraries, because although libraries lend downloadable versions of audio books, they require special software in order to use the legally checked-out downloaded books.²⁵⁷ While the commenter notes that such software is generally free to download, he says that it requires a particular operating system and requires a special media player to be installed on that operating system. The commenter states that if a patron does not use the requisite operating system, he or she cannot listen to the downloaded audio books.

The commenter cites a webpage from the Tucson-Pima Public Library that describes an online system for lending of digital books, described on the library's website as follows: "Digital books are audio books or ebooks you read or listen to on your computer, PDA or mp3 player. They're portable and convenient, they can't be lost, and they check in automatically. No overdue fines!"²⁵⁸ However, the comment does not identify any technological measures that control access to the literary content of the digital books, nor does it explain how such measures are creating problems for users. Rather, the primary concern expressed in the comment is that "special software is required to use the legally-checked out downloaded books. While this software is free to download, it is only offered on a single computer operating system, and then requires a special media player to already be installed on that operating system." While it is conceivable that the limitation to a single operating system is somehow related to access controls, the comment does not state that that is the case or explain the nature of the problem.

To the extent that the comment is concerned that the copies of works offered through the library's digital book lending program are compatible only with a particular operating system, that problem does not appear to be related to access controls. As noted above in the discussion of the Internet Archive's second proposed exemption, incompatible operating systems do not, in general, constitute technological measures that control access to works. However, even if access controls are implicated, the case does not appear to have been made for an exemption.

²⁵⁷ C40.

²⁵⁸ The URL provided by the commenter -- <http://www.lib.ci.tucson.az.us/digitalbooks/default.htm> -- is to a page that no longer exists, apparently because the library has redesigned and reorganized its website. However, based on a quick search of the library's website, it appears that the relevant information may be found at <http://www.tppl.org/research/digital/index.cfm>.

In this case, it appears that access controls are used to replicate, in the online world, the conventional lending model for libraries. A book may be “lent” on-line by transmitting a copy to the borrower. Because the borrower does not physically return the transmitted digital copy, it appears that the book is “checked-in” by means of digital rights management technology that makes the book inaccessible once the lending period has expired.²⁵⁹

Such use-facilitating technology is the type that the DMCA was enacted to encourage.²⁶⁰ It would appear that the deployment of such technology actually results in greater access to copyrighted works by enabling libraries to engage in online lending that they would not otherwise be able to conduct without infringing the copyrights of the books that they distribute online.²⁶¹ Digital transmission of such books without the permission of the copyright owner would clearly constitute infringement of the reproduction and distribution rights.²⁶² If publishers are willing to license such online lending but insist upon deployment of access controls that restrict access after the book is “due,” those access controls actually lead to greater access to the works that are subject to online lending. See § 1201(a)(1)(C)(i) and (iv).

While it may be unfortunate that persons who have devices that run on operating systems that do not support the currently available online lending systems may not participate in such online lending programs, permitting circumvention of access controls used in connection with those programs would not serve the purposes of this rulemaking. Such online lending programs appear to be in their infancy.²⁶³ It is reasonable to assume that with time, such offerings will be made in ways that are compatible with a greater variety of operating systems. Meanwhile, persons who do not have devices using the compatible operating systems have other options in order to gain access to the literary works that are included in the online lending program: *e.g.*, hard copies of the book, CD versions, or audio cassette tape versions. Therefore rather than making a case for an exemption, the commenter has actually shown how the prohibition has

²⁵⁹ The library’s website explains: “After the check out period expires, the digital book is automatically checked back in. You don’t need to do anything to return the book. A copy of the digital book file will remain on your computer and any device if you have transferred it. The copy will not open or play after three weeks. You can delete the copy just like you would delete a file from your computer.” <http://www.tppl.org/research/digital/index.cfm>

²⁶⁰ See *2000 Recommendation of the Register of Copyrights*, 65 Fed. Reg. at 64,564 (Oct. 27, 2000) (citing Manager’s Report, at 7); *2003 Recommendation of the Register of Copyrights*, at 91-92, 97.

²⁶¹ While very little information about the practice has been presented in this rulemaking, published sources suggest that such lending is done under license from the publishers of the books. See, *e.g.*, “Libraries Offering Audiobook Downloads,” Technology Review, http://www.technologyreview.com/read_article.aspx?id=14645 (last accessed October 9, 2006). Indeed, without a license from the copyright owner, such lending would appear to violate the copyright owner’s exclusive rights of reproduction and distribution. See the discussion below.

²⁶² See *e.g.*, Register of Copyrights, *DMCA Section 104 Report* 96 (2001).

²⁶³ As noted in the Technology Review article, *supra* note 80, the online lending programs are a “new way to borrow audiobooks from the library,” and “such offerings help libraries stay relevant in the digital age.”

increased the availability of works in an increasing number of formats that are useful to many users, even if they are not useful to the commenter due to the operating system chosen. The commenter's evidence does not provide support for an exemption on ebooks.²⁶⁴

8. All works and fair use works.

Many commenters stated that the DMCA adversely affects consumer rights and that all works should be exempt for a variety of purposes.²⁶⁵ Simply stated, these commenters have not articulated a sufficient class or provided sufficient evidence of adverse effects by the prohibition on noninfringing uses that would allow the articulation of a cognizable class. Such proposed exemptions have been routinely rejected in prior rulemakings,²⁶⁶ and the Register recommends their rejection for the same reasons.

9. All works protected by access controls that prevent the creation of back-up copies.

A number of commenters sought an exemption for a class that, while described in various ways, can be summarized as "works protected by access controls that prevent the creation of back-up copies."²⁶⁷ Proponents made assertions such as that it is common sense to make back-up copies of expensive media. Most often cited was the need to preserve the original in case of damage by children, particularly with regard to CDs and DVDs. A few comments also suggested that CDs and DVDs are particularly fragile media and that back-ups are needed to preserve a usable copy as the work will become inaccessible through normal wear and tear. Some comments also noted a desire to engage in format shifting with their back-up copies.

Three years ago this rulemaking addressed whether making backup copies of DVDs is fair use in considering proposals by 321 Studios and others. 321 Studios created and sold a computer program that would allow its users to create copies of DVDs, even where those DVDs were

²⁶⁴ The Register recognizes that some of her observations are based upon information that is, strictly speaking, outside the record in this proceeding. However, so little information was provided by the proponent of the exemption – indeed, too little information in any event to justify an exemption -- that resort to publicly available sources has assisted the Register in understanding the nature of the situation referred to in the comment.

²⁶⁵ C47, C53, C60, C61, C62, C64, C66, C69, C70.

²⁶⁶ See 2000 Recommendation of the Register of Copyrights, 65 Fed. Reg. at 64,571-64,572 (Oct. 27, 2000); 2003 Recommendation of the Register of Copyrights, at 82-86.

²⁶⁷ C9, C10, C11, C15, C16, C20, C35, C38, C44, C50, C51, C65, C66, R31, R33. In some cases, a commenter limited his or her proposal to a particular kind of work – e.g., "DVD movies." See, e.g. C11. In other cases, the commenter sought a broader class consisting of two or more kinds of works. See, e.g., C9, C15. What the proposals had in common is that all were for the purpose of making "backup copies." With one exception R31, a 4-page comment which focused primarily on region-coded DVDs), none of the comments were more than one page long, and most were considerably shorter.

protected with CSS.²⁶⁸ Circumvention of that access control was necessary to create the copy. Numerous comments were submitted by 321 Studio's customers. In many cases, their desire to make backup copies was a matter of convenience. In others, it was perceived by them as necessary in the face of the likelihood of the original being damaged due to misuse or mishandling. The proposed exemption was denied. The Recommendation of the Register concluded, in part:

The creation of a backup copy of a work implicates the reproduction right. While the Copyright Act contains an exemption for the making of backup copies of computer programs in §117, it contains no comparable exemption for motion pictures and other audiovisual works. In addition, the Register is aware of only one court decision that has held that reproducing a copyrighted motion picture is a fair use: where an over-the-air broadcast was taped for purposes of time-shifting the user's viewing of the work. In the time-shifting case, the Court explicitly did not address the issue of librarying such a work, and this rulemaking is not the forum in which to break new ground on the scope of fair use. The proponents of an exemption bear the burden of proving that their intended use is a noninfringing one. No proponent has offered a fair use analysis or supporting authority which would allow the Register to consider such a basis for the exemption, and the Register is skeptical of the merits of such an argument.

DVDs, of course, are not indestructible. Neither were traditional phonograph records; nor are CDs, videotapes, paperback books, or any other medium in which copyrighted works may be distributed. The Register is not persuaded that proponents of this exemption have shown that DVDs are so susceptible to damage and deterioration that a convincing case could be made that the practice of making preventive backup copies of audiovisual works on DVDs should be noninfringing.

The proposed exemption is not simply to permit remedial measures for disks which become damaged, but rather to allow reproduction of the works as a precautionary measure. While an analogy might be made to the basis for the backup exemption for computer programs that was enacted in the days of corruptible floppy diskettes, there are important differences. Congress carefully addressed the §117 exemption for backups of computer programs with restrictive conditions. One day Congress may choose to

²⁶⁸ For a discussion of CSS, *see* Section III.A.1 above.

consider a carefully tailored exception for backing up motion pictures if it is persuaded that one is necessary, but the Register sees no authority under current law that would justify an exemption to enable the making of backup copies of motion pictures on DVDs. Given the tremendous commercial appeal of the DVD format at a time when alternative analog formats still exist, it seems unlikely that now is the time. And while it may well be true that analog formats are headed for ultimate extinction, the market is already beginning to see evidence of alternative forms of digital delivery over the Internet. The decision to purchase a DVD format entails advantages and, perhaps, disadvantages for some. The purchase of a work in that particular format is not, at present, a necessity and DVDs are unlikely to become the only format in which motion pictures may be purchased. The record in this rulemaking does not establish that the potential for possible future harm to individual disks outweighs the potential harm to the market for or value of these works that would result if an exemption were granted. The unauthorized reproduction of DVDs is already a critical problem facing the motion picture industry. Creating an exemption to satisfy the concern that a DVD may become damaged would sanction widespread circumvention to facilitate reproduction for works that are currently functioning properly. As presented in this rulemaking, the exemption would be based on speculation of future failure. Even though certain copies of DVDs may be damaged, given the ready availability of replacements in the market at reasonable costs, on balance, an exemption is not warranted on the current record.

The opponents have provided strong evidence of the increasing popularity of the DVD format. The Register finds it difficult to imagine that a format that is fundamentally flawed would become so popular. Similarly, it is difficult to imagine how a business model of renting DVDs, which also appears to be thriving, could be viable if the medium were so fragile. Further, it is significant that the scope of the problem the proponents describe is limited to movies on DVDs and does not address other types of works which commonly employ DVDs, such as video games. All these facts lead to the conclusion that, on the current record, DVDs are not unusually subject to damage in the ordinary course of their use. To the extent that some commenters found it more convenient to travel with backups or keep backups of their works in multiple locations, e.g., vacation homes or cars, the prevention of such uses appears to represent an inconvenience rather than an adverse effect on noninfringing uses. Indeed, the Register is aware of no authority

that such uses are noninfringing. To endorse such uses as noninfringing would be tantamount to sanctioning reproductions of all works in every physical location where a user would like to use the work, e.g., the purchase of one book would entitle the user to reproduce copies for multiple locations. Except where a case-by-case analysis reveals such reproduction to be noninfringing under §107 or some other specific exemption, such reproductions of convenience are infringing under the Copyright Act. Neither the fear of malfunction or damage nor the conveniences enabled by backups satisfy the requirement that the intended use be a noninfringing one.²⁶⁹

The commenters in the present proceeding do not add any information or analysis that in substance goes beyond what was presented in support of a similar exemption in 2003.²⁷⁰ Hence, there is no more basis to exempt such works today than there was three years ago.²⁷¹

10. Audiovisual works and sound recordings protected by a broadcast flag.

A number of comments assert that broadcast flags for television and radio broadcasts would interfere with time shifting, format-shifting, recording for personal use, and more than one commenter asserts that it would violate an alleged Constitutional right to fair use.²⁷²

²⁶⁹ 2003 Recommendation of the Register of Copyrights, at 106-08 (footnotes omitted). See also *id.* at 103-105.

²⁷⁰ While the quoted discussion from the 2003 rulemaking related only to DVDs, the same analysis would apply to the other types of works identified in some of the comments. Moreover, the 2003 rulemaking also considered proposals to permit circumvention for purposes of backing up works other than motion pictures – e.g., sound recordings – and found no grounds to do so. The Register’s recommendation noted, “these proponents have not clearly stated or demonstrated that access controls are preventing these activities. Compact discs rarely if ever are protected by access controls. Because many commenters failed to identify any particular work protected by an access control, it is impossible to determine how the alleged problem fits into this rulemaking. *Id.* at 103 (footnote omitted).

²⁷¹ A reply comment (R29) purporting to support a comment (C11) proposing “circumventing DVD encryption to make a backup copy for personal use,” actually argued in favor of a broader exemption for music and motion pictures”, which he asserted should be subject to circumvention for reproduction “as long as their use is for personal, educational, or nonprofit purposes.” However, he did not identify any particular personal, educational or nonprofit purposes or activities. The reply comment’s proposal was much broader than the proposal it ostensibly supported, and for that reason alone, would have to be rejected as, in fact, a new proposal made after the deadline. Moreover, apart from the Sony BMG digital rights management problem discussed above, this commenter did not refer to any access controls or describe any adverse impacts access controls are having on the ability to engage noninfringing uses.

²⁷² C27, C46, C52, C56, R8.

Currently, there is no broadcast flag mandate for either television or radio broadcasts. In 2003, the Federal Communications Commission adopted regulations mandating a broadcast flag for digital broadcast television programming.²⁷³ However, those regulations were overturned last year.²⁷⁴ It is unclear whether a television broadcast flag will again be resurrected by regulation pursuant to specific Congressional enactment, by direct Congressional enactment, or by any other means in the next three years. It is similarly uncertain whether an audio broadcast flag will be adopted in any form in the next three years. The proponents offer no evidence to suggest that such systems will be established, nor is such evidence readily available – it is a matter of conjecture and opinion. Moreover, even if an audio or television broadcast flag were to be established or re-established, the precise substance of the requirement is likewise unknown at this time.²⁷⁵ Nonetheless, the comments assert that such a system will adversely affect their ability to make noninfringing uses. That is speculation. No evidence has been presented that a “broadcast flag” is currently being deployed and the case has not been made that a “broadcast flag” is likely to be deployed in the next three years (or whether it would constitute an access control). The proposed exemption is simply premature at best.

11. Miscellaneous Proposals.

A number of individual comments, each of one page or less, were submitted that do not fall into any of the categories noted above. In each case, the proponent failed to provide information that would justify an exemption.

One 82-word comment proposed a class of “Any copyrighted work which has been available for purchase for more than one year,” observing that most motion pictures and music are “extremely devoid of cultural or intellectual value anyway and is generally of less value to [copyright owners] after a relatively short period of time.” The comment also observed that “Content created by publicly incentivised entities such as the Corporation for Public Broadcasting, while more significant in its cultural and intellectual value, should be considered as

²⁷³ See *Digital Broadcast Content Protection*, 18 F.C.C.R. 23,550 (2003).

²⁷⁴ See *Am. Library Ass’n v. F.C.C.*, 406 F.3d 689 (D.C. Cir. 2005).

²⁷⁵ Arguably, if a digital broadcast television flag mandate were resurrected, it would be very similar in substance to the one put forth by the FCC in 2003. Even assuming that is true, it is not clear that such a system would involve access controls protected under § 1201, and the proponents have provided no analysis of the 2003 regulations. The United States Court of Appeals for the District of Columbia Circuit described the broadcast flag as “a digital code embedded in a DTV broadcasting stream, which prevents digital television reception equipment from redistributing broadcast content.” *Am. Library Ass’n v. F.C.C.*, 406 F.3d at 691. That appears to describe a “technological measure that effectively protects a right of a copyright owner under this title in a work or a portion thereof,” governed by § 1201(b), rather than a “technological measure that effectively controls access to a work protected under this title.”

more belonging to the public domain.”²⁷⁶ The comment contained no discussion of access controls or the prohibition in § 1201(a)(1) and appears to be simply a statement of the commenter’s policy view regarding the scope and duration of copyright. As such, it is clearly beyond the scope of this rulemaking.

Another brief comment²⁷⁷ sought an exemption for “any digital work” for the purpose of overriding End User License Agreements (“EULAs”) containing terms which prohibit comment and criticism, which the commenter asserted are inconsistent with the First Amendment. This is, in essence, an extremely short version²⁷⁸ of somebody else’s lengthy proposal of three years ago. That proposed class was rejected in 2003 because there was meager evidentiary support, the proposed class (covering a number of categories of works) was too broad, and the alleged problem related to contractual terms rather than access.²⁷⁹ Nothing that has occurred in the past three years and certainly nothing presented by the commenter in his brief comment, which provides no examples and virtually no legal argument (apart from a statement that “First Amendment rights to free speech should overrule such contracts”) suggests a need to revisit the issue.

One commenter asserted that he paid in advance for a certain programming package for one year from a satellite television service, but that during that year, the satellite television service demanded additional payments beyond the agreed amount and employed access controls to deny access to certain aspects of the package in the absence of such additional payments. The commenter engaged in a form of self-help, by obtaining a circumvention device to gain access to the withheld programming.²⁸⁰ While no specific class was proposed, it appears that the commenter wishes to be permitted to circumvent access controls contained in a chip in his satellite television receiver, in order to receive programming that the satellite television service is refusing to deliver to him. This dispute is, at its heart, a matter of contract law. If the satellite television service failed to abide by the terms of the contract, the customer/commenter is entitled to vindicate his rights through the legal process. While the commenter’s allegations, if true, are a cause for concern, an exemption is not justified to permit self-help in the form of circumventing access controls in what is a single individual’s contractual dispute with a satellite television service.

Another commenter submitted a one-page comment proposing a class of “computer games and software,” arguing that “Copy Protection methods, such as SecurRom and StarForce often

²⁷⁶ C58 (82 words).

²⁷⁷ C55

²⁷⁸ 114 words.

²⁷⁹ See 2003 Recommendation of the Register of Copyrights, at 146-50.

²⁸⁰ C42.

create problems with legitimate users installing and using games and programs, forcing them to use illegal methods to use their legally purchased products.”²⁸¹ The comment asserted that “SecureROM” and “StarForce” often prevent access to the work(s) they protect, such as videogames, because they incorrectly read the copy as pirated during installation. The commenter claimed that customer support fails to correct the error and that because of “standard return policies,” it is impossible to obtain a refund. The commenter presented a sympathetic scenario, but simply failed to provide evidence to support his claims. The comment contained no description of the operation of the technologies cited, no indication of how widely they are employed, no information about how many works are subject to this problem, and no statistics on how often the technologies cited result in the described malfunction. In fact, the commenter described the technologies as “copy protection,” which suggests that it may be copy controls (not governed by § 1201(a)(1)), rather than access controls, that are involved. Further, the comment did not provide any details regarding the problems with technical support or return policies about which it complains. It is unclear why a replacement copy (as opposed to a refund) is not available from a retailer or the manufacturer.

Another comment proposed a class of “Any works in digital or electronic format which, due to their access controls, prevent the user from being able to access the user-created content,” and asserted that certain forms of digital rights management have the side-effect of preventing access to user-created works.²⁸² The only example cited is the Sony use of a rootkit. The Sony rootkit issue has already been addressed above.²⁸³ The commenter did not provide any examples of other technological measures that prevent users from accessing works they have created. Therefore, there are insufficient grounds for an exemption.

Another one-page comment proposed the class of “Digital Broadcasts which employ measures that protect ‘access’ to copyrighted works which disable, prevent, or otherwise make impossible, time-shifting of programs.”²⁸⁴ However, the comment did not identify any access controls that prevent time-shifting of broadcast programs.

IV. Proposed Regulatory Text

The Register proposes that the Librarian adopt the following regulatory text, which designates the classes of works recommended by the Register above.

Final Regulations

²⁸¹ C20.

²⁸² C57 (235 words).

²⁸³ Section III.B.9.

²⁸⁴ C17.

For the reasons set forth in the preamble, 37 CFR part 201 is amended as follows:

1. The authority citation for part 201 continues to read as follows:

Authority: 17 U.S.C. 702

2. Section 201.40 is amended by revising paragraphs (b) and (c) to read as follows:

§ 201.40 [Amended]

* * * * *

(b) *Classes of copyrighted works.* Pursuant to the authority set forth in 17 U.S.C. 1201(a)(1)(C) and (D), and upon the recommendation of the Register of Copyrights, the Librarian has determined that during the period from **[date of publication in the Federal Register]** through October 27, 2009, the prohibition against circumvention of technological measures that effectively control access to copyrighted works set forth in 17 U.S.C. 1201(a)(1)(A) shall not apply to persons who engage in noninfringing uses of the following six classes of copyrighted works:

(1) Audiovisual works included in the educational library of a college or university's film or media studies department, when circumvention is accomplished for the purpose of making compilations of portions of those works for educational use in the classroom by media studies or film professors.

(2) Computer programs and video games distributed in formats that have become obsolete and which require the original media or hardware as a condition of access, when circumvention is accomplished for the purpose of preservation or archival reproduction of published digital works by a library or archive. A format shall be considered obsolete if the machine or system necessary to render perceptible a work stored in that format is no longer manufactured or is no longer reasonably available in the commercial marketplace.

(3) Computer programs protected by dongles that prevent access due to malfunction or damage and which are obsolete. A dongle shall be considered obsolete if it is no longer manufactured or if a replacement or repair is no longer reasonably available in the commercial marketplace.

(4) Literary works distributed in ebook format when all existing ebook editions of the work (including digital text editions made available by authorized entities) contain access controls that prevent the enabling either of the book's read-aloud function or of screen readers that render the text into a specialized format.

(5) Computer programs in the form of firmware that enable wireless telephone handsets to connect to a wireless telephone communication network, when circumvention is accomplished

for the sole purpose of lawfully connecting to a wireless telephone communication network.

(6) Sound recordings, and audiovisual works associated with those sound recordings, distributed in compact disc format and protected by technological protection measures that control access to lawfully purchased works and create or exploit security flaws or vulnerabilities that compromise the security of personal computers, when circumvention is accomplished solely for the purpose of good faith testing, investigating, or correcting such security flaws or vulnerabilities.

(c) *Definition.* “Specialized format,” “digital text” and “authorized entities” shall have the same meaning as in 17 U.S.C. 121.