

MEMORANDUM



LIBRARY
OF
CONGRESS

To: James H. Billington
Librarian of Congress

date: October 27, 2003

from: Marybeth Peters
Register of Copyrights

subject: 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

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), and elaborates upon the oral recommendations that I have presented during our discussions in recent weeks.

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 - 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.

B. Other Exemptions Considered, But Not Recommended

1. Proposed class: All works should be exempt for noninfringing uses, e.g., fair use and private uses, and other use-based proposals.
2. Proposed classes: Several, including "Per se Educational Fair Use Works" and "Fair Use Works."
3. Proposed classes: (1) Musical recordings and audiovisual works protected by access control mechanisms whose circumvention is reasonably necessary to carry out a legitimate research project where the granted exemption applies only to acts of circumvention whose primary purpose is to further a legitimate research project; and (2) Musical recordings and audiovisual works protected by access control mechanisms whose circumvention is reasonably necessary to carry out a legitimate research project.
4. Proposed class: Any work to which the user had lawful initial access (and variations).
5. Proposed class: Copies of audiovisual works, including motion pictures, and phonorecords of musical sound recordings that have been previously licensed for reproduction but can no longer be reproduced for private performance after the lawful conditions for prior reproduction have been met.
6. Proposed class: "Thin copyright" works.
7. Proposed class: Public domain works or works distributed without restriction.
8. Proposed class: Musical works, sound recordings, and audiovisual works embodied in media that are or may become inaccessible by possessors of lawfully-made copies due to malfunction, damage, or obsolescence.
9. Proposed class: Audiovisual works released on DVD that contain access

- control measures that interfere with the ability to defeat technology that prevents users from skipping promotional materials.
10. Proposed class: Ancillary audiovisual works distributed on DVDs encrypted by CSS.
 11. Proposed class: Audiovisual works stored on DVDs that are not available in Region 1 DVD format and access to which is prevented by technological measures.
 12. Proposed class: Video games stored on DVDs that are not available in Region 1 DVD format and access to which is prevented by technological measures.
 13. Proposed class: Audiovisual works embodied in DVDs encrypted by CSS.
 14. Proposed class: Software designed for use on dedicated video game players.
 15. Proposed class: Literary works (including ebooks), sound recordings, and audiovisual works protected by access controls that prevent post-sale uses of works; “tethered” works.
 16. Proposed class: Audiovisual works, including motion pictures, the DVD copies of which are tethered to operating systems that prevent rendering on alternative operating systems
 17. Proposed class: Sound recordings, audiovisual works and literary works (including computer programs) protected by access control mechanisms that require assent to End-User License Agreements as a condition of gaining access.
 18. Proposed class: Published sound recordings of musical works on compact discs that use technological measures that prevent access on certain playback devices.
 19. Proposed class: Sound recordings on copy-protected Red Book Audio format compact discs.
 20. Proposed exemption: Broadcast news monitoring.
 21. Proposed exemption: Reverse engineering for interoperability and the Static Control proposals.
 22. Proposed exemption: Computer issues: encryption research, data file formats, recovery of passwords, personally identifying material.
 23. Proposed exemption: Conversion of data file formats and source code
 24. Proposed exemption: Privacy and personally identifying information
 25. Other comments beyond the scope of the rulemaking: Webcasting, Limitations of Liability for Online Service Providers and the Antitrafficking provisions of the DMCA

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. 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 (hereinafter “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

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) (hereinafter “Commerce Comm. Report”).

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

³ See *id.* at 36.

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

The first §1201 rulemaking took place three years ago, and on October 27, 2000, the Librarian announced noninfringing users of two classes of works would not be subject to the prohibition on circumvention of access controls.⁶ The regulations announced by the Librarian were effective for the period commencing October 28, 2000. Exemptions to the prohibition on circumvention remain in force for a three-year period and expire at the end of that period. The Librarian is required to make a determination on potential new exemptions every three years.

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

⁵ §1201(a)(1)(D).

⁶ Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, 65 FR 64556 (Oct. 27, 2000); <http://www.copyright.gov/fedreg/2000/65fr64555.pdf>. The Federal Register notice contained the recommendation of the Register of Copyrights and the determination of the Librarian.

B. Responsibilities of Register of Copyrights and Librarian of Congress

As noted above, the prohibition against circumvention is subject to triennial review by Register of Copyrights and the Librarian of Congress in order to permit a determination 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.⁷ 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.⁸ 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 Commerce Comm. Report, at 37.

⁸ *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 measure that effectively controls access to a work protected under this title.”⁹ 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

⁹ See S. Rep. No. 105-190 (1998), and H.R. Rep. No. 105-551, pt. I (1998).

undermine Congress' commitment to fair use.¹⁰ 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,”¹¹ the Committee was concerned that “marketplace realities may someday dictate a different outcome, resulting in less access, rather than more, to copyrighted materials that are important to education, scholarship, and other socially vital endeavors.”¹² 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.”¹³ In order to address such possible developments, the Commerce Committee proposed a modification of § 1201 which it characterized as a “‘fail-safe’ mechanism.”¹⁴ 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.”¹⁵ The “fail-safe” mechanism is this rulemaking. In its final form as enacted

¹⁰ Commerce Comm. Report at 35.

¹¹ *Id.*

¹² *Id.* at 36.

¹³ *Id.*

¹⁴ *Id.*

¹⁵ *Id.*

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.”¹⁶ “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.”¹⁷ 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 diminishing the ability of individuals to use these works in ways that are otherwise lawful.”¹⁸ 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

¹⁶ 17 U.S.C. 1201(a)(1)(C).

¹⁷ 17 U.S.C. 1201(a)(1)(C).

¹⁸ Commerce Comm. Report, at 37. Accord: Staff of House Committee on the Judiciary, 105th Cong., Section-By-Section Analysis of H.R. 2281 as Passed by the United States House of Representatives on August 4, 1998, (hereinafter House Manager's Report) (Rep. Coble)(Comm. Print 1998), at 6.

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.”¹⁹

2. *The Necessary Showing*

The language of section 1201(a)(1) does not offer much guidance as to the respective burdens of proponents and opponents of any classes of works to be exempted from the prohibition on circumvention. The Commerce Comm. Report stated that “[t]he regulatory prohibition is presumed to apply to any and all kinds of works, including those as to which a waiver of applicability was previously in effect, unless, and until, the Secretary makes a new determination that the adverse impact criteria have been met with respect to a particular class and therefore issues a new waiver.”²⁰

After reviewing the record and the legislative history of the section, the Register concluded that the burden of proof for proposed exemption was on the proponents of the exemption.²¹ In order to make a prima facie case for an exemption, proponents must show by a preponderance of the evidence that there has been or is likely to be a substantial adverse effect on noninfringing uses by users of copyrighted works.²² As the Copyright Office’s notice of inquiry

¹⁹ Id. at 2.

²⁰ Commerce Comm. Report, at 37. The Commerce Committee proposal would have placed responsibility for the rulemaking in the hands of the Secretary of Commerce. As finally enacted, the DMCA shifted that responsibility to the Librarian, upon the recommendation of the Register.

²¹ 65 FR at 64558-64559.

²² For additional discussion of the use and meaning of the term “substantial,” see the discussion below (section I.D.) of the Register’s consultation with the Assistant Secretary for Communications and Information of the Department of Commerce.

explained, de minimis problems, isolated harm or mere inconveniences would not suffice to provide the necessary showing.²³ 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.²⁴ The Register also emphasized the requirement of showing a causal nexus between the prohibition on circumvention and the alleged harm.²⁵ Adverse impacts that are the result of factors other than the prohibition are not within the scope of this rulemaking.

The Register also makes it clear within this recommendation that the proposed exemptions are reviewed *de novo*. The existence of a previous exemption creates no presumption for consideration of a new exemption, but rather the proponent of such an exemption must make a prima facie case in each three-year period.

3. *Determination of “Class of Works”*

A major focus of the previous (and 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:

²³ 67 FR 63578, 63579-63580 (October 15, 2002).

²⁴ *Id.*

²⁵ 65 FR at 64559.

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 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

²⁶ Commerce Comm. Report, at 38

scope of what “particular class of work” is intended to be. And it is not permissible to classify a work by reference to the type of user or use (e.g., libraries, or scholarly research).²⁷

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.

The Register of Copyrights met with Assistant Secretary Nancy Victory at the Department of Commerce in November, 2002 to discuss the rulemaking proceeding initiated by the Copyright Office. 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.

After this initial meeting, the Assistant Secretary and her staff were notified about developments in the rulemaking, such as the posting of comments and reply comments on the Copyright Office’s website, and were kept apprised of information about the hearings that would be held in Washington, D.C. and in Los Angeles, California. Senior counsel for NTIA attended hearings at both locations.

²⁷ For a more detailed discussion of the term “class of works,” see, 65 FR at 64559 - 64561.

Following the hearings and prior to beginning deliberations on the record in the rulemaking, on June 6, 2003, the Register wrote to the Assistant Secretary requesting further consultation and offered to meet again to discuss the Assistant Secretary's views or, alternatively, requesting the Assistant Secretary's views and analysis in writing. Another meeting was held between the Register and the Assistant Secretary on July 28, 2003 at the Department of Commerce. At that time, the Assistant Secretary briefed the Register on her views and advised the Register that a letter elaborating on those views would be sent to the Register shortly. The Assistant Secretary advised the Register that rather than address any particular proposals for exemptions, NTIA would be commenting on the rulemaking process itself.

In an August 11, 2003 letter to the Register, the Assistant Secretary addressed many of the points discussed at the previous meeting and which provided "advice to the Register that will inform her consideration of the record, and will help to ensure that both the underlying rulemaking proceeding and her recommendation to the Librarian of Congress comply with the intent of Congress as reflected in the statute and its legislative history."

The Assistant Secretary first addressed the appropriate standard for the burden of proof in the rulemaking process. The letter stated that "NTIA is concerned that the standard set forth in the Notice of Inquiry (the "NOI") imposes a significantly heightened burden on proponents of an exemption, and is therefore inconsistent with the opportunity that Congress intended to afford the user community." In particular, the letter expressed concern that the Copyright Office's initial NOI of October 15, 2002 used the term "substantial" in relation to the quantum of evidence necessary to prove that the prohibition on circumvention has had an adverse effect on noninfringing uses of works by users of copyrighted works. The Assistant Secretary stated that since the word "substantial" does not appear in the statutory text, this "more stringent requirement thus appears to add a significant new term to the express language of the statute." The Assistant Secretary stated that

“[g]iven the clarity of Section 1201(a)(1), no basis exists to justify insertion of a material modifier into its text.”

The Assistant Secretary’s letter continued by opining that the NOI’s “requirement” that commenters provide “actual” and “first-hand” knowledge of problems in the marketplace resulting from the prohibition exceeds the plain language of the statute and thus raises the bar for proponents of exemptions. The letter stated that this “requirement” cannot logically be applied prospectively and that therefore this “refinement” should be abandoned “and a standard more consistent with the statutory language should be adopted.”²⁸ Similarly, with respect to future “likely adverse impacts,” the letter objected that there is no basis for requiring a showing of “extraordinary circumstances in which the evidence of likelihood is highly specific, strong and persuasive,” and asserted that no requirements beyond “likely adverse effects” are warranted.

The Assistant Secretary also stated that she agreed with the October 15, 2002 NOI that the burden of proof rests with proponents of exemptions and that the assessment of adverse impacts is to be determined *de novo*. The Assistant Secretary also agreed with the Register that the starting point for identifying a particular class of works to be exempted must be one of the section 102 categories, but suggested that the intended use of the work or the attributes of the user will sometimes be critical to that determination.

The Register has carefully considered the views of the Assistant Secretary and can report that, despite any impression that might be drawn from the Assistant Secretary’s letter, the Register and the Assistant Secretary actually appear to view the legal criteria governing this rulemaking in much the same way. The Assistant Secretary, like some other observers and commenters, appears to

²⁸ NTIA letter at 3.

have read the NOI as imposing a higher burden on proponents of exempted classes than was intended or than the Register believes was stated in the NOI. It had been the Register's intent that the NOI, which was based upon the criteria set forth in the announcement of the final rule in the October 2000 rulemaking, would clarify the appropriate burden of proof and required showing by proponents.

Because it appears that the Assistant Secretary (among others) has in some respects misapprehended what was said in the NOI, it is pertinent to offer some additional clarification.

It appears that the use of the term "substantial" in the NOI and in the Register's recommendation in 2000 has caused undue alarm. A term that has one meaning in the context of a particular body of law may have different connotations for persons who do not specialize in that field. The phrase "substantial adverse impact," as quoted from the House Manager's Report in the previous recommendation and the NOI, has been mischaracterized by many commenters, including both proponents and opponents of exemptions, as requiring a high standard of proof. The Register did not quote this term from the legislative history in order to impose a heightened standard for proposals for exemptions, but rather used the phrase, taken from the House Manager's Report on the DMCA (at p. 6), as a shorthand phrase to supplement and clarify what both the House Manager's Report and the House Commerce Committee Report stated about the necessary showing for proponents of exemptions. Read in context, the phrase "substantial adverse impact" – the words used by the House Manager's Report – is the equivalent of what the Commerce Committee Report described as a requirement of a showing of "distinct, verifiable, and measurable impacts." See Commerce Comm. Report, at 37. "Substantial," after all, simply means the opposite of "insubstantial." Surely an exemption would not be warranted if its proponents made a showing that the prohibition on circumvention was having an *insubstantial* adverse impact on users' ability to engage in noninfringing uses of copyrighted works. Stating that there is a requirement of

“substantial” adverse impact is another way of saying that a showing of more than “de minimis impacts” is required. See *id.* (exemption “should not be based upon *de minimis* impacts”).

The dictionary defines “substantial” as “consisting of or relating to substance;” “not imaginary or illusory.” Webster’s New Collegiate Dictionary 1153 (1980). Similarly, the Supreme Court has stated: “Substantial evidence is more than a mere scintilla. It means such relevant evidence as a reasonable mind might accept as adequate to support a conclusion.”²⁹ The Court’s use of “substantial” in that context is similar to the meaning that the Register intended to convey in her use of the term in this rulemaking and the previous rulemaking. The Register is confident that Congress did not intend that hypothetical or inadequate evidence could be the basis for an exemption. The Assistant Secretary’s letter appears to agree with this view. It appears, therefore, that NTIA and many others have misunderstood the meaning of the term “substantial” in this context. The Register reaffirms that “substantial” is a reasonable description of the requisite showing when it is given its proper meaning.

Further, the meaning of this term was clarified in the Register’s 2000 recommendation which highlighted the congruence between the language of the Commerce Committee’s Report and the House Manager’s Report.³⁰ When the Commerce Committee and House Manager’s Reports are read together, it becomes clear that this burden of proof is not more stringent than the statutory text, but rather is a clarification that any showing must be based on real, verifiable, and reasonable evidence. Such a showing is equally applicable to present or likely harm. Substantial evidence of likely adverse impacts is more than mere speculative or theoretical harm. It requires more than “mere inconveniences, or individual cases.” With this further clarification, the Register hopes that this

²⁹ *Metropolitan Stevedore Co. v. Rambo*, 521 U.S. 121, 149 (1997).

³⁰ 65 FR 64556, 64558 n.4 (October 27, 2000)

term will be accurately understood by all participants in future rulemakings. This is the meaning that has been consistently applied by the Register throughout the history of this rulemaking process, and the Register intends to apply it in the future.

As the NOI stated, “[d]e minimis or isolated problems would be insufficient to warrant an exemption for a class of works. Similarly, mere inconveniences to noninfringing uses or theoretical critiques of section 1201 would not satisfy the requisite showing.” Despite the Register’s efforts to inform commenters about the proper composition of comments, a sizeable number of comments were again based on theoretical arguments, de minimis or completely absent proof of present or likely harm, and mere inconveniences. Nevertheless, even these comments were accepted, considered, put into the record in this rulemaking, and generally addressed in this recommendation.

The Register must also clarify the record with respect to the NOI’s statements about “first-hand knowledge” and “actual instances of verifiable problems existing in the marketplace.” Both of these statements were clearly made in relation to evidence of existing adverse effects and did not refer to the required showing with respect to “likely adverse effects.” Proof that users “are adversely affected by the prohibition” can only be interpreted as requiring that users are “actually harmed.” To prove actual harm, a proponent must provide a factual basis. “Actual instances of verifiable problems” is a clear way of presenting this term to the public and is entirely consistent with a standard of actual harm. On the other hand, “first-hand knowledge” was not stated as a “requirement” in the NOI, but rather was an effort to encourage those with such knowledge to come forward. The NOI merely stated that “a *compelling* case will be based on first-hand knowledge” (emphasis added) and as will be revealed in the analysis of the exemptions recommended below, the majority included “first-hand knowledge.” The Register stands by her preference to hear from persons with actual knowledge of the facts they are asserting as a basis for requesting an exemption. Experience with the first two rulemakings has confirmed that participants (or their representatives)

with no actual knowledge of the facts have been of little assistance in evaluating a proposed exemption. The most compelling cases will be presented by those with the most thorough knowledge of the facts.

The NOI was very clear in stating the Register's view that proof of "likely adverse effects" during the next three years does not entail a heightened requirement involving "first-hand knowledge" and "actual instances of verifiable problems existing in the marketplace." These statements in the NOI appeared in a sentence describing "the burden with respect to actual harm," which the previous sentence in the NOI distinguished from harm "that it is 'likely' to occur in the ensuing 3-year period." The Register therefore agrees with the Assistant Secretary (and has not stated otherwise) that "this requirement cannot logically be applied prospectively, as the refinement would mandate 'first-hand knowledge' of *future* problems in order to sustain a 'compelling case' for an exemption."

The Assistant Secretary's letter states that the NOI seems to suggest that an exemption based on "likely" future adverse impacts during the applicable period should only be made "in extraordinary circumstances in which the evidence of likelihood is highly specific, strong and persuasive" because the NOI quoted the legislative history to that effect.³¹ Giving due regard to legislative history, the Register has not stated that she will require such a showing as a prerequisite for an exemption based on likely future harm. The legislative history is certainly relevant on this point, and any proponent of an exemption based solely on a prediction of future harm should be prepared to address it. But the NOI did not state that such a requirement will be imposed with respect to a showing of likely future harm. In fact, it stated (just after quoting the "highly specific, strong and persuasive" language) that "[w]hile such a statement could be interpreted as raising the

³¹ House Manager's Report at 6.

burden beyond a standard of a preponderance of the evidence, the statutory language enacted . . . does not specify a standard beyond more likely than not.”³² While speculation alone will not be sufficient, the NOI makes clear that proof of “likely adverse effects” requires only a showing of likelihood – i.e., more likely than not, the traditional preponderance of the evidence standard. The burden of proof required by the Register is no more stringent than the statutory text.

After this closer inspection, it is apparent that the Register and the Assistant Secretary are in agreement on most points raised in the NTIA’s August 11, 2003 letter. The Register also concurs with NTIA’s view that it would be useful for Congress to provide additional guidance on the term “class of works,” a view expressed by the Register in her recommendation three years ago.³³

II. Solicitation of Public Comments and Hearings

On October 15, 2002, the Librarian and the Register initiated the second rulemaking proceeding pursuant to §1201(a)(1)(C) with publication of a Notice of Inquiry.³⁴ 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, the Notice

³² 67 FR at 63579

³³ 65 FR at 64562.

³⁴ 67 FR 63578; <http://www.copyright.gov/fedreg/2002/67fr63578.html>.

stated a preference for submission of comments in electronic format and created a web-based form to facilitate comment submission.³⁵

During the initial comment period that ended on December 18, 2002, the Copyright Office received 50 written comments, all of which were received electronically and posted on the Office's website.³⁶ 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 fifty initial comments contained proposals for multiple classes of works proposed for exemption.

During the reply comment period which ended on February 19, 2003, 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 272 reply comments in response to the initial proposals for exemption. All of these reply comments were also received electronically and posted on the Copyright Office website.³⁷

Due to the fact that the established comment period necessarily ended many months before a final determination on the evidence was complete, the Office created a new process by which a petitioner could seek consideration for a newly proposed exemption for a class of works which could not reasonably have been offered during the formal comment period.³⁸ This process was intended to

³⁵ Id.

³⁶ <http://www.copyright.gov/1201/2003/comments/index.html>.

³⁷ <http://www.copyright.gov/1201/2003/reply/reply1.html>.

³⁸ See, 67 FR at 63582.

provide some flexibility to take account of important unanticipated developments. One such petition was received, and the Register granted the petition to consider the additional classes of works proposed in that petition.³⁹ Since this petition was granted during the reply comment period, the Copyright Office created a new reply period for reply comments responsive to the proposed exemptions contained in the granted petition.⁴⁰ This reply comment period ended on March 10, 2003 and the Office received an additional 65 reply comments responsive to this proposal which were also posted on the Office's website.⁴¹

The Copyright Office also conducted public hearings on six separate days: in Washington, DC on April 11, May 1, 2 and 4, 2003⁴² and in Los Angeles, California, at the UCLA Law School on May 14 and 15, 2003.⁴³ Forty-four witnesses representing over 60 groups testified at six days of hearings held in either Washington, DC or Los Angeles, California. The transcripts for all of these hearing were posted on the Copyright Office's website shortly after their receipt.⁴⁴ Following the hearings, the 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 questions and post-hearing responses received by the Copyright Office were made

³⁹ <http://www.copyright.gov/1201/2003/petitions/index.html>

⁴⁰ 68 FR 6678.

⁴¹ <http://www.copyright.gov/fedreg/2003/68fr6678.html>

⁴² 68 FR 13652 and, see also, 68 FR 19966.

⁴³ 68 FR 15972.

⁴⁴ <http://www.copyright.gov/1201/2003/hearings/schedule.html>

available on the Office's website.⁴⁵ The entire record in this and the previous §1201(a)(1)(C) rulemaking are available on the Office's website.⁴⁶

The Register has now carefully reviewed and analyzed the entire record in this rulemaking proceeding, including all of the comments and the transcripts of the hearings in order to determine whether any class of copyrighted works should be exempt from the prohibition against circumvention during the next three years. The analysis of the record produced in this rulemaking, including the proposals recommended for exemption by the Register as well as those not recommended by the Register, is set forth herein.⁴⁷

III. Discussion

A. *The Four Exempted Classes*

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. For purposes of this exemption, "Internet locations" are defined to include "domains, uniform resource locators (URLs), numeric IP addresses or any combination thereof."**

⁴⁵ <http://www.copyright.gov/1201/2003/post-hearing/index.html>

⁴⁶ <http://www.copyright.gov/1201/index.html>

⁴⁷ In referring to the comments and hearing materials, the Register will use the following abbreviations and conventions: C - Initial Comment, R - Reply Comment, T- Transcript, and PHR - Post Hearing Response. When comments or reply comments include a parenthetical number, e.g., C25(2), this refers to the number of the proposal referenced within the comment (e.g., Proposed Class No. 2 in Comment 25). Citations to page numbers of the transcript refer to the pages of the official transcript that is currently posted on the Copyright Office website. References to post hearing responses will include the date only if there are multiple responses from the same individual or organization.

As in the previous rulemaking, initial comments proposed an exemption to the prohibition on circumvention in order to access the lists of blocked websites 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 was alleged that although the software is intended to serve a useful societal purpose, the emphasis of the programs is on blocking rather than accuracy. Critics contend that the result of this focus is that filtering software used to prevent access to objectionable material tends to over-block, thereby preventing access to legitimate information resources.

Unlike the last rulemaking, where there was no opposition to the proposed exemption, in the current rulemaking the proposed exemption drew some objections. Opponents to the exemption argued that filtering software companies serve a critical societal purpose and that an exemption would undermine the integrity of filtering software. They also argued that filtering software companies have responded to the concerns that led to the exemption in the previous rulemaking and now provide reasonable means for ascertaining the material or sites that a particular filtering software blocks. Opponents also argued that the proponents have not met their burden of showing substantial harm and that exemptions cannot be “renewed” in the absence of evidence that the conditions leading to a previous exemption have not been corrected. Such a “renewal,” it was argued, would shift the burden of proof to the opponents and undermine the *de novo* review intended by Congress in this triennial rulemaking.⁴⁸ Opponents also stated that even if the Register found that an exemption was warranted, the particular class articulated in the previous rulemaking was overly

⁴⁸ R33, pp. 6, 11; R34, p. 9.

broad and that repeating an exemption for that class could create adverse consequences for other types of software, such as antivirus and spam software.⁴⁹

At the outset, the Register disagrees with the commenters who suggested that an exemption can be “renewed” if the opponents of an exemption do not prove that adverse effects identified in a previous rulemaking have not been cured. 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*.⁵⁰ Congress anticipated that market conditions would be constantly changing and that the market would be viewed anew in each triennial proceeding.

While the Register rejects the argument that the previous exemption should be “renewed” in the absence of evidence that the adverse effects which led to the previous exemption have been cured in the marketplace, the Register finds that the record in the current rulemaking warrants a new exemption. The previous exemption covered “Compilations consisting of lists of websites blocked by filtering software applications.” For the reasons specified below, the Register recommends that the new class exempted should be designated as “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.” For purposes of this exemption, “Internet locations”

⁴⁹ See, e.g., R23, p. 13; T Steve Metalitz, May 14, 2003, p. 29; PHR Steve Metalitz, Joint Reply Commenters, June 30, 2003, p. 3-4; PHR David Burt, N2H2, Inc., et al., p. 4-7.

⁵⁰ Commerce Comm. Report at 37. Accord, NTIA letter.

are defined to include “domains, uniform resource locators (URLs), numeric IP addresses or any combination thereof.”

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 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.

Opponents argued that circumvention is not necessary because other alternative sources for the information sought to be obtained are available, but the proponents of the exemption successfully discredited this assertion. While it is true that limited “querying” of the databases is available on some of the filtering software companies’ sites, the circumscribed nature of this querying foreclosed comprehensive or meaningful results. Opponents produced evidence that many reviews of filtering software platforms reached conclusions based on these querying capabilities or by utilizing various sampling techniques, yet this evidence only proved that some parties were willing to settle for the results produced by such superficial tests. In light of the millions (or more) of potential URLs, it is indisputable that actually viewing the entire list of blocked Internet locations will produce data much more comprehensive than querying about one hundred URLs.

Had opponents been able to prove that the likely harm of an exemption would have outweighed the benefit of comprehensive testing, particularly given the availability of limited testing, a balancing of the interests might have favored opponents. Where, however, there is no indication of likely harm that would result from an exemption and where proponents have proven the inadequacy of existing alternatives (the limited queries that some filtering software providers permit) and the societal benefit of more extensive access that is available only through circumvention, the

balance favors the proponents of the exemption. The opponents' arguments that circumvention would undermine the integrity of the filtering software or that an exemption could have an adverse effect on other types of protective software are unpersuasive. The societal benefit of preventing children or others from viewing objectionable sites is likely to be unaffected or even assisted by an exemption. A computer which has filtering software installed will continue to block sites within its blocking list even if one knows the URLs for the sites. Proponents of an exemption pointed out that in the fiercely competitive filtering software market, one filtering software company has actually posted the URLs of blocked sites on its company website as a form of comparative advertising, in order to reveal that it was blocking objectionable sites which another competitor was failing to block. Thus, exposing what filtering software does not block or exposing over-blocking or questionable blocking does not undermine the goal of protecting children and others from harmful or objectionable material. In fact, the evidence tended to show that the results only obtainable by means of circumvention may in fact improve under- or over-blocking flaws in filtering software, thus furthering the potential benefit of such software. Since the end result of the circumvention is criticism, comment, and possibly news reporting on existing problems, filtering software companies may utilize the research to address problems revealed by such publicity. Given the competition in the filtering software market for market share, robust blocking currently appears to be more important than precision. The evidence tended to show that the incentive to continually verify the objectionable nature of the blocked sites appears lackluster at best – an important concern given the rapid pace and dynamic nature of the Internet – and is of less concern to filtering companies than is the concern for comprehensiveness.⁵¹ This may be understandable, but this focus on comprehensiveness does not alter the societal benefit of learning about over-blocking that may occur. Taken to an extreme, moreover, an obsession with comprehensiveness could lead to unnecessary or even harmful censorship of legitimate information that would adversely affect the usefulness of Internet research. While the marketplace might, in theory, limit excesses in the over-

⁵¹ T David Burt and Seth Finkelstein, April 11, 2003, p. 81-84.

blocking of legitimate information, the market can only correct problems that participants in the marketplace are aware of. That is at the heart of this exemption – allowing information to be made available to the public in a lawful manner. The exposure of alleged flaws by those with an incentive to learn about them can be utilized by the filtering companies themselves, if they so choose, to make their software more accurate. The exemption is likely to have the effect of encouraging legitimate public debate based on the information obtained through circumvention.

The ability to engage in legitimate research, criticism and comment about filtering software is even more compelling as a result of the recent Supreme Court decision upholding the constitutionality of the Children’s Internet Protection Act (CIPA).⁵² Since CIPA requires libraries to install “filtering software” in order to block access to objectionable material as a condition of receiving federal funds, it becomes all the more important for the public to understand potential problems in particular filtering programs that may be installed in public facilities. Since the Court found that an important safety valve within CIPA was the ability of a library patron to request the disabling of such software, it appears all the more important that the public be able to obtain objective information about the performance or potential limitations of such software in order to make the determination whether to request such disabling.

In contrast to the strength of the case in favor of an exemption, there was virtually no plausible evidence that such an exemption would have any relevant adverse effects on the market for or value of these copyrighted works.⁵³ While it is obviously true that the exposure of substantial flaws in a program will adversely affect the filtering software’s value by affecting market demand,

⁵² *United States v. American Library Association, Inc.*, ___ U.S. ___, 123 S.Ct. 2297, 156 L.Ed.2d 221 (2003).

⁵³ See e.g., T David Burt, Seth Finkelstein and Jonathan Band, April 11, 2003 p. 66-72.

such an adverse market effect is not a relevant concern in this rulemaking.⁵⁴ In assessing the likelihood of harm to filtering software that would result from an exemption, the absence of any identifiable harm that resulted from the previous exemption is informative. While there is no burden on the opponents of exemption to show that a similar preexisting exemption has caused harm, silence on the issue may raise inferences. While opponents raised the possibility that the lack of use of the prior exemption may have minimized the harm, they also claimed that such minimal or nonexistent use obviated the need for an exemption. As previously noted, however, this proposed exemption is not grounded on the need for widespread circumvention. In this factual setting, enabling the efforts of the few who will find sanctuary in the exemption will have the effect of remedying the adverse effects of the prohibition on the public generally by allowing those who circumvent measures that protect lists of blocked websites to comment publicly on their findings.

In response to the concern that the designation of this class in the previous rulemaking was overbroad and had the capacity to create unintended consequences for other types of software, such as antivirus or spam filtering software, the Copyright Office posed a post-hearing question to seek further clarification from the witnesses who testified on this subject. After considering these responses in conjunction with the comments and the testimony, the Register finds that rather than being too broad, the class of works previously exempted may be too narrow to encompass the facts introduced in this rulemaking.

In the previous rulemaking, the class was designated as “compilations consisting of lists of websites blocked by filtering software applications.” Despite the asserted concern that an unintended consequence of such a class designation could be that other forms of filtering software would be

⁵⁴Cf. *Campbell v. Acuff-Rose*, 510 U.S. 569, 591-592 (1994) (“We do not, of course, suggest that a parody may not harm the market at all, but when a lethal parody, like a scathing theater review, kills demand for the original, it does not produce a harm cognizable under the Copyright Act.”)

compromised by this class, the Register is skeptical of this argument. The prior exemption was narrowly tailored to allow circumvention of “lists of websites blocked by filtering software.” Since it seems unlikely that spam filtering software which filters email or antivirus software which protects against malicious or suspicious file types necessarily contain “lists of websites,” it is unclear how such a class could affect such other types of filtering software. Unfortunately, there was little evidence produced on this issue. The Joint Reply Commenters’ response to the specific post-hearing question posed by the Copyright Office stated “[i]t is important to note the broad array of critical network security tools that may employ lists of websites protected by access controls. These include for example, firewalls (which in effect filter traffic based on defined parameters contained in a compilation or database) and antivirus products (which perform a similar function using compilations or databases of virus definitions or characteristics).”⁵⁵ The Register agrees that the proposed exemption is intended to be limited to the type of filtering software known as “censorware” and that there is no intention to affect spam filtering software, virus protection software or other security software such as firewalls.

A representative of a number of the filtering software companies suggested that filtering software is often marketed in security “suites,” which are bundled packages of security software applications together with filtering software that provide a “layered” security approach. Filtering software companies attempted to create a circular argument that it would be unfair to exempt filtering software applications but then exclude such suites from the exemption, since this would provide the largest software companies with a market advantage; at the same time these same companies appear to argue that the Register could not recommend exempting the filtering software bundled in these suites, since such an exemption would compromise the integrity of the overall security suite. While the Register agrees that an exemption from the prohibition on circumvention for filtering software applications cannot distinguish between stand-alone programs and filtering

⁵⁵ PHR Steve Metalitz, Joint Reply Commenters, June 30, 2003, p. 3-4.

software incorporated into a suite, an exemption need not compromise the integrity of an entire suite in order to allow circumvention of the list of websites utilized by the filtering software program. The present exemption has existed for the past three years and would allow any person to circumvent any access control that bars access to the list of blocked websites, but no evidence has been introduced that there have been adverse effects on the filtering software market or the market for security software suites. Many of these suites have undergone development while the present exemption has been in place, thus making it implausible that such security suites relied primarily on the legal prohibitions of § 1201(a)(1) rather than robust technological protections. In addition, there appears to be no technological reason why the creators of suites must bundle their information behind only a single, omnibus access control measure. Since it could be expected that a security software suite should be a technologically robust system, the lists of Internet locations related to the filtering software could be a segregated database or the access controls could be layered to provide independent security to various components of the suites. Not only would such redundancy appear to make technological sense, but it would appear to be prudent under the law since an exemption for one part of a suite would not necessarily adversely affect other parts of the suite.

In an abundance of caution, however, the Register finds that some modification of the language of the previous exemption is compatible with the present record. The Register recommends exemption of “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.” For purposes of this exemption, “Internet locations” are defined to include “domains, uniform resource locators (URLs), numeric IP addresses or any combination thereof.” The changes in the wording are the result of two refinements in the record. First, the term “lists of websites” used in the previous exemption has been changed to “list of Internet locations” including domains, URLs,

numeric IP addresses. The record revealed that filtering software applications vary on how they block access – *e.g.*, by blocking specific URLs, or IP addresses, or some combination – and on what they block – *e.g.*, entire websites or individual pages, or some combination.⁵⁶ It therefore is appropriate to broaden the scope of that particular term.

Second, “filtering” is a term that may be used broadly, including filters for email or viruses. While there is no evidence in the record regarding how exempting lists of Internet addresses could implicate anti-virus filters or email addresses, the record created by proponents is limited to the need to circumvent filtering software that is commercially marketed to prevent access to Internet content. Using the term “commercially marketed filtering software” is an effort to limit the scope of the class of works to this particular type of filtering software without opening the door to other filtering systems. Although proponents have offered the term “censorware,” the Register finds that term pejorative and ambiguous. “Commercially marketed filtering software” is a more objective description of the particular class.

The analysis of the statutory factors in relation to this proposed exemption reveals:

- (1) The availability for use of the lists of blocked Internet locations is currently limited. While some querying and sampling is available, these methods do not allow a comprehensive means of determining what is being blocked and why these locations are being blocked. In addition, the market for filtering software has generally grown despite the fact that an exemption has been in place since the prohibition went into effect. There is no reason to believe that continuing the exemption will have an adverse effect on the availability of the software itself.
- (2) The availability for use for archival, preservation or educational purposes has not been addressed in this rulemaking.
- (3) The impact of the prohibition on criticism, comment, news reporting, teaching, scholarship, or

⁵⁶T David Burt, April 11, 2003, p. 80.

research in relation to these lists of blocked Internet locations is significant. If the prohibition were in effect for these works, the only criticism, comment, news reporting or research on these works that would be available would be the limited querying and sampling that was shown to be generally inadequate for more than superficial analysis. Given the broad use of such filtering software in schools and libraries, over-blocking could adversely affect scholarship and research performed on the Internet. (4) The effect of circumvention on the market for or value of these works appears to be minimal. The evidence of the past three years is instructive for the likelihood of future harm. The lack of harm is in part due to the fact that few took advantage of the exemption and in part due to the narrow scope of the exemption. While a new exemption requires taking into account of the present realities of the data assembled in these lists, e.g., IP addresses, URLs and combinations of these forms of addresses, it also requires limiting unintended consequences. Therefore, the new exemption exempts circumvention of lists of “Internet addresses” in commercially marketed filtering software rather than “lists of websites,” while at the same time excluding circumvention of lists of Internet addresses blocked by software applications that operate exclusively to protect against damage to a computer or computer network, e.g., antivirus or firewall applications, or lists of Internet addresses blocked by software application that operate exclusively to prevent receipt of email, e.g., spam filters.

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

Many commenters supported a renewal of the exemption made in 2000 for “literary works, including computer programs and databases, protected by access control mechanisms that fail to permit access because of malfunction, damage or obsolescence.”⁵⁷ Few commenters, however, provided any factual support for such an exemption. There was a complete absence of specificity regarding what works are involved, what type of harm has occurred, or the scope of such present or

⁵⁷ E.g., C29(4), C30(6), C32, C33, R10, R12, R15, R21

likely harm in many of the comments. Instead, many 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.⁵⁸ 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.

However, a few commenters and persons testifying at the hearings did provide some factual support, although such evidence focused on a narrower class of works.⁵⁹ In particular, 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. The Register has considered the totality of the evidence – including evidence of past harm, present needs, and likely future harm, as well as the concerns raised by opponents that the previous exemption was too broad – 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 is also instructive that an exemption has been in place for the past three years, but opponents did not cite any evidence of harm resulting from that exemption.⁶⁰ Viewed as a whole, the case was made for a new but more narrowly tailored exemption.

⁵⁸ Commerce Report, H.R. Rep. No. 105-551, pt.2, 37 (1998) and *accord*, letter from NTIA at 4.

⁵⁹ R15, T Joseph Montoro, May 2, 2003, p. 145 et seq.; T Brewster Kahle, May 14, 2003, p. 84ff; and PHR Brewster Kahle, The Internet Archive.

⁶⁰ See generally, T Emery Simon and Keith Kupferschmid, May 2, 2003, p. 224-229.

Because absolutely no facts were presented to the Register in support of this exemption relating to literary works other than computer programs, or to access control mechanisms other than dongles, consideration of the exemption in this rulemaking will be limited to computer programs protected by dongles.⁶¹

A significant part of the evidence presented by Mr. Montoro in support of such an exemption was his testimony about a client's concern about the potential malfunctioning of dongles which had failed in the past and which were manufactured by a company that was no longer in business. This client was the Nebraska Service Center of the Immigration and Naturalization Service office which was, at the time, a part of the U.S. Department of Justice.⁶² The letter received from the INS office stated: "[i]f those dongles had failed or become inoperable, there would have been an indefinite halt in travel document production." The letter also added that the time and training that would have been necessary to change to new software would have been prohibitive. If a person purchased software that should still work but for the failure of the technological protection measure controlling access, the continued use of that software would appear to qualify as a noninfringing use.

The letter submitted by Mr. Montoro presents a variation on the theme of damaged dongles, but the situation described does not appear to fall within the scope of the existing exemption. From the testimony and the letter, it does not appear that the technological measure was actually preventing access to the computer program, but rather that, based on experiences in the past, one

⁶¹ As discussed in the previous rulemaking, dongles are hardware locks attached to a computer that interact with software programs to prevent unauthorized access to that software. 65 FR at 64565.

⁶² In addition to testimony about this client's problem with dongles, Mr. Montoro supplemented the record at the hearing with documentary evidence which included a copy of a letter from a Program Analyst from the INS office. A public copy of this document is available for inspection at the United States Copyright Office.

might expect that it would prevent access at some time in the future. While the access control may have been obsolete, in that the software vendor was no longer in business and no replacement could be obtained, the fact that it was obsolete was not causing it to fail to permit access.

The exemption in place for the past three years did not include computer programs protected by dongles that *might* prevent access due to malfunction or damage, nor has any participant in this rulemaking proceeding suggested such an exemption. It required that the access control actually “fail to permit access because of malfunction, damage, or obsolescence.” However, the principal example presented by Mr. Montoro related to a fact situation that would not be covered by the current exemption – nor, as will be seen, would it be covered by the exemption the Register is recommending. Mr. Montoro’s testimony raises the question of whether access controls such as dongles which “may fail,” or which one fears might fail, have impeded or are likely to impede users of software in their ability to make noninfringing uses. As a matter of logic, it does not appear that this can be so, and as a matter of fact, it has not been proven. As long as a dongle is working properly, it is difficult to understand how it would be preventing noninfringing uses. The fear that it might cease to work properly does not adversely affect the user’s ability to engage in noninfringing uses; at most, it adversely affects the user’s confidence that he will be able to continue engaging in noninfringing uses. But section 1201(a)(1) (C) does not instruct the Librarian to take into account one’s fear that one will be unable to continue to engage in permitted uses. Especially when no showing has been made of the likelihood of failure, the Register is unwilling to recommend an exemption that has no objective criteria as its basis.⁶³ A claim that a dongle prevents access due to damage or malfunction is subject to verification, but no objective criteria have been suggested whereby one could establish whether dongles that currently work are likely to fail during the next three-year period. Indeed, because any dongle *could* fail within the next three years, an exemption

⁶³ Cf. 65 FR at 64566 (rejecting, in rulemaking proceeding in 2000, extension of exemption to situations involving lost dongles, due to difficulty in ascertaining whether a dongle has truly been lost – a claim that is easy to assert and virtually impossible to disprove).

that covered dongles that have not failed but may fail in the future would, in effect, cover all dongles.

Thus, the record does not support an exemption for computer software protected by dongles that are working properly. Indeed, the record does not support an exemption that would cover all malfunctioning dongles, since in many cases the manufacturer will readily replace or repair the dongle.⁶⁴ A limiting principle based on the evidence produced is warranted to avoid unnecessary harm to the market for or value of computer programs protected by dongles.

The evidence suggests that qualification of the exemption is appropriate. In the INS situation, the most significant fact was that the company that manufactured the software and dongle was no longer in business. Even though an exemption for prospective failure is not supportable, the fact that no support would be available to the user in the event of the dongle's failure is a critical concern to users of dongle-protected software. Other comments addressed this unavailability of support that was often the result of the sale or dissolution of the software company that originally marketed the software or the discontinuation of support by a software company or a successor company.⁶⁵ In some other cases where the software manufacturer was still in business, lengthy time delays in responsiveness or excessively high costs for replacement, sometimes equivalent to the purchase price of the software, were experienced.⁶⁶ Numerous instances were presented of users of dongle-protected software expressing concern about the unavailability of replacement or repair.⁶⁷

⁶⁴ T Keith Kupferschmid, May 2, 2003, p. 189-90.

⁶⁵ C32(5) and T Montoro, May 2, 2003, p. 156, and exhibits, e.g., p. 83 and 84.

⁶⁶ Montoro exhibit at 89.

⁶⁷ Montoro exhibits, e.g., INS letter and attached email.

There are at least four cited instances evidencing damaged or malfunctioning dongles for which repair or replacement was not reasonably available. In one case a user paid \$12,000 for a software that was protected by a dongle, but the program would not run due to a “defective” dongle. This user stated that the software company would not help remedy the problem and redirected the user to a dealer who did not answer the phone. In another case, an ambulance company running software that was protected by a dongle experienced crashes every time a dial-up session was initiated. Although both the software company and the dongle manufacturer acknowledged that the problem was known for approximately two years, no solution for this malfunction was provided. In another case, a U.S. business licensed software from a company in England that eventually ceased support, in the form of dongle drivers, for a DOS based program and only offered the sale of a program upgrade to the software at considerable cost without any significant increase in functionality for the business. Another person claimed that a supplied dongle did not function properly and that after three months, a replacement has not yet materialized. None of these examples were contradicted in the comments or testimony of opponents of an exemption.

After reviewing the record, the Register finds that the unavailability of dongle replacement or repair from the original vendor in and of itself is not sufficient to justify an exemption when the computer program and dongle are still providing access to the work. In this respect, the existing exemption is overbroad to the extent that it includes works “protected by access control mechanisms that fail to permit access because of ... obsolescence.” In considering obsolescence, the Register is unable to think of any instances where the fact that a dongle is obsolete has caused the dongle to fail to permit access. Certainly, no evidence has been presented of such a phenomenon.⁶⁸

⁶⁸ See, however, section III.A.3. below.

Nor does the Register believe that an exemption is warranted simply when a dongle is malfunctioning or damaged, but where a replacement is reasonably available. 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 noninfringing uses by users of software protected by these access control measures while also minimizing the adverse effects on copyright owners.

In applying the statutory factors to the record, the balance weighs in favor of this more narrowly tailored exemption. While the use of dongles, and the availability of legal remedies against those who unlawfully circumvent the protections offered by dongles, offers an incentive for software publishers (and, in particular, publishers of expensive software such as computer assisted design software) to make those works available, it is difficult to imagine that the limited exemption recommended here would adversely affect that incentive. No evidence has been presented with respect to the extent to which such works are available for nonprofit archival, preservation, or educational activity, or with respect to the effect of the prohibition on criticism, comment, news reporting, teaching, scholarship, or research. However, in the case of damaged or malfunctioning

dongles for which there is no reasonable availability of replacement or repair, it is evident that the availability for nonprofit archival, preservation or educational activity will be adversely affected and the prohibition will adversely affect those users in possession of such damaged or malfunctioning measures who seek to use the work for criticism, comment, news reporting, teaching, scholarship or research. While the second and third factor logically appear to favor the exemption, the absence of clear guidance in the record does not allow these factors to weigh heavily in this case. The fourth factor is more instructive. An exemption for all computer programs protected by dongles would adversely affect the market for and value of software. Similarly, an exemption for computer programs protected by dongles that may fail in the future or, alternatively, for which reasonable replacement or repair is available would have the potential of adversely affecting the market for and value of a significant portion of the market for computer programs protected by dongles at a point in time when adverse effects are not yet occurring or when reasonable alternatives exist. Both of these would weigh against an exemption. Yet the recommended class – computer programs protected by dongles that are obsolete and that prevent access due to malfunction or damage – minimizes the potential for adverse effects to the market for or value of these copyrighted works, thus weighing in favor of an exemption. Finally, the absence of evidence that the existing exemption has resulted in adverse effects further bolsters the evidence that this factor weighs in favor of an exemption in regard for this more narrowly tailored class. The Register recommends the exemption of this class for the next three-year period.

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. For purposes of this exemption, “formats that have become obsolete” may refer to particular media or operating systems and shall have the same meaning as in 17 U.S.C. 108(c): 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 proposed an exemption for “Literary and audiovisual works embodied in software whose access control systems prohibit access to replicas of the works.”

It submitted comments and testified about problems associated with gaining access to archived digital works. The Internet Archive describes itself as a non-profit library that maintains a collection of websites, software and other works in digital formats in a digital archive.⁶⁹ It has been given collections of copyrighted works in digital formats or media that are degrading and becoming obsolete with time. Because “[p]reservation of digital works poses a unique challenge because of the quick deterioration of digital media and the rapid obsolescence of digital formats,”⁷⁰ the Internet Archive desires to migrate the works to modern storage systems (e.g., by transferring a computer program from a floppy diskette to a hard drive) that are more stable and that will ensure continuing access to the works. Once a work has been copied to the new storage system, the Internet Archive must be able to gain access to the resulting reproduction in order to verify that the integrity of the transfer and backup was successful, complete, and functional.

The Internet Archive stated that works distributed in digital formats on physical media (such as floppy diskettes, CD-ROMs, etc.) have sometimes been accompanied by technological measures that, while technically permitting copies to be made, prevent those copies from functioning (so that, for example, a copy of a computer program made from the original floppy diskette will not run, or a copy of an audiovisual game made from the original CD-ROM cannot be played). Because of this, it asserts that archives should be permitted to circumvent those technological measures in order not only to load copies of the works into their storage systems, but also to be able to use those copies as though they were still on the original medium. A copy of a computer program that will not run, or a copy of a video game that will not play, is a copy in name only.

⁶⁹ T Brewster Kahle, May 14, 2003, p.84-85; C25.

⁷⁰ C25, p.2.

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 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.

The problem is particularly compelling when the physical format in which the copy was originally marketed has become obsolete. If the Internet Archive is given computer software that was marketed on 5 1/4 inch floppy diskettes, it will not even be able to access the work in its original format on the typical computer sold in the marketplace today, because computers sold today are not equipped with 5 1/4 inch floppy drives. However, Internet Archive also desires an exemption that addresses the “original only” problem even when the medium on which the original copy was marketed (*e.g.*, CD-ROM) is not yet obsolete, noting that it is crucial to archive digital works before they become inaccessible and before the information on the medium has degraded.

This proposal raises a host of questions. Is the specified preservation activity a noninfringing use? Is the “original only” check a technological measure that protects access to a work? If it is, would an exemption restricted to obsolete formats resolve the problem? Should the exemption extend beyond obsolete media to encompass media that are “becoming” obsolete? Should the class encompass all literary and audiovisual works? Is the proposed exemption merely another way of requesting a use-based exemption for preservation that would be more appropriately resolved by Congress?⁷¹

At the hearing on this issue and in the reply comments, there was a great deal of discussion of the nature of the technological protection measures involved. The Joint Reply Commenters stated that a “technology which allows copying but which renders the resulting copies less than fully functional should be classified, in DMCA terms, as a copy control subject to section 1201(b), not an access control,” and that it is “far from clear” that such technology is an access control.⁷² While it is true that the primary purpose of such technology appears to be to prevent copying, e.g., by allowing only nonfunctioning copies to be made, it does not follow that such a technology is not an access control.⁷³ Indeed, the technology in question does allow 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

⁷¹ See R7 at 5.

⁷² R23 at 41.

⁷³ Even the Joint Reply Commenters allowed that it is possible that it would be considered an access control. T Steve Metalitz, May 14, 2003, p. 149. See also R23 at 41 (“The submitter asserts that these are access controls, not copy controls, but that is far from clear,” an assertion that appears to allow the possibility that the technological measures in question are indeed access controls).

access to it.⁷⁴ It therefore appears that the primary purpose of a protection system does not necessarily determine whether it is an access control, or a copy control, or both.

Therefore, the Internet Archive appears to have identified technological measures that control access to works and that the Internet Archive claims have prevented it from engaging in noninfringing preservation activities. Before examining whether the Internet Archive has actually identified noninfringing activities affected by those access controls, however, we turn to whether it has identified a “particular class of works.”

On its face, the Internet Archive’s proposal relates to “literary and audiovisual works,” two major categories of works enumerated in section 102. While a “particular class of works” may include works from more than one section 102 category, designating such a class creates some tension with Congress’ instruction that a “particular class” be “a narrow and focused subset of the broad categories of works of authorship” identified in section 102. The starting point in determining a “class of works” may be a category of works, but usually the next step will be to narrow the class to some subset of that category. And although a “particular class” might also include works from more than one section 102 category, it probably would not include two categories in their entirety.⁷⁵

⁷⁴ By analogy, a CSS-encrypted DVD may be copied, yet in most situations, the copy of the DVD will not play in a DVD CCA-licensed DVD player. Were the reasoning of the reply comment applied to the CSS situation (if it allows copying, but not access to the copies, the measure is not an access control in DMCA terms), one might have to conclude that a CSS-encrypted DVD is not a technological measure that controls access, but rather was designed to prevent unauthorized duplication. 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).

⁷⁵ See 65 FR at 64560.

Moreover, the nature of the problem identified by the Internet Archive would appear, as a matter of logic and common experience, to be one that is likely to occur with respect to virtually all categories of works. In fact, the class proposed by the Internet Archive appears dangerously close to being an indirect way of attempting to achieve a “use-based” exemption for preservation activity. Although, as a matter of policy, there may be merit to the notion that exemptions from the prohibition on circumvention should be based on the circumventor’s intended use, that is not an option that Congress has given to the Librarian in this rulemaking. The statute requires that exemptions relate to “a particular class of copyrighted works,”⁷⁶ and as the Register concluded in the previous rulemaking, “[b]ased on a review of the statutory language and the legislative history, the view that a ‘class’ of works can be defined in terms of the status of the user or the nature of the intended use appears to be untenable.”⁷⁷ While, as discussed below in the discussion of the “other factors” that the Librarian may consider, consideration should be given to creating a statutory exemption permitting libraries and archives to circumvent access controls in particular circumstances for purposes of archiving and preservation, any exemption resulting from this rulemaking must relate to a “particular class” of works, and will be available to anyone engaging in a noninfringing use.

In any event, the Internet Archive has not made the case for a broad class of works encompassing two section 102 categories in their entirety. Rather, it has made the case for a class of works that is narrower in several respects: the class includes only works that are in formats that require the original media or hardware as a condition of access, that consists only of computer programs and video games, and only when they are in obsolete formats. The first two conditions are the consequences of the proof submitted by Internet Archive in making its case for an exemption;

⁷⁶ §1201(a)(1)(C).

⁷⁷ 65 FR at 64559.

the final condition is the result of the Register's analysis of the noninfringing uses the Internet Archive has been prevented from making.

One of these limitations was suggested by the Internet Archive in its submissions to the Register, although not in so many words. The proposed class consisted of "Literary and audiovisual works *embodied in software whose access control systems prohibit access to replicas of the works.*" (Emphasis added). In proposing such a class, the Internet Archive appears to have been guided by the Register's recommendation in the previous rulemaking, which stated that in determining the contours of a particular class of works, "the section 102 categories of works are, at the very least, the starting point for any determination of what a 'particular class of work' might be," and that "[s]uch 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 measures applied to them."⁷⁸

The Register believes that a class defined, in part, by reference to "software whose access control systems prohibit access to replicas of the works" is ambiguous. Indeed, the Register can fathom what the proposed class consists of only because the Internet Archive, in its comments, testimony and post-hearing responses, has elaborated on the nature of the access controls that have prevented it from making usable replacement copies. The principal form of access control identified by the Internet Archive, as described above, is the "original-only" access control which requires use of the original, authorized copy obtained by the user. The Internet Archive also identifies two other forms of access control that may prohibit access to archival copies: dongles and the "Lenslok lens-based access protection."

⁷⁸ 65 FR at 64560.

Dongles are discussed above, in connection with the second exemption recommended by the Register. For archives, however, dongles present a problem not only when they are damaged or malfunction, but also when “the peripheral ports to plug in the dongle do not exist on new computer models.”⁷⁹ Lenslok is described by the Internet Archive as “an exotic access protection system for Sinclair Spectrum systems” that “works by holding a plastic lens up to the screen to decode a password that allows the user to access the title.” Internet Archive alleges that the password is “impossible to read” on modern equipment and that “it is very difficult to locate the Lenslock plastic lens.”⁸⁰

The Register believes that a class delimited, in part, by a requirement that the covered works were distributed in formats that “require the original media or hardware as a condition of access” addresses precisely the types of access controls that have created difficulties for the Internet Archive. While this exemption is crafted with original-only access controls in mind, it also happens to cover the situations described by the Internet Archive relating to dongles and Lenslok when the work is in an obsolete format. The dongle and the Lenslok can fairly be described as “original hardware” that accompanied the original copy of the software and that must be used in order to gain access to the software. Thus, subject to the limitation to computer programs and video games and the requirement that the software be in an obsolete format, the recommended exemption addresses

⁷⁹ PHR Brewster Kahle, *The Internet Archive*, p. 2. The Internet Archives also asserts that “hardware dongles are difficult to find.” *Id.* While the Register would hesitate before recommending an exemption based only on the assertion that dongles are hard to find, just as she refrained from recommending an exemption in 2000 that would extend to “lost” dongles, see 65 FR at 64566, the additional difficulties Internet Archive has encountered with dongles, as well as the additional requirements included in the recommended exemption, make it unnecessary to decide whether difficulty in finding the appropriate dongle would by itself justify an exemption.

⁸⁰ *Id.*, p. 2.

the works for which Internet Archive has sought an exemption.

The Register recommends limiting the types of works exempted to computer programs and video games, rather than the Internet Archive's requested class of literary and audiovisual works, because the evidence in the record of this rulemaking does not support such a broad class of works. The Internet Archive presented a great deal of evidence relating to computer programs.⁸¹ There is also evidence in the record showing that a significant number of computer and video games are available only in obsolete formats, a characteristic that, for reasons discussed below, is important for purposes of this exemption.⁸² The case for other types of literary or audiovisual works is far less clear. The Internet Archive has made passing references to works like "Shogun" and to "Ephemeral Films," the "Voyager Archive," and the "Macromedia Archive," but there is virtually no explanation of how these references apply to the argument, the classes of works involved, the quantity of works for which there is a problem, or the technological protection measure applied to these works. For example, "Exhibit A" to the Internet Archive's post-hearing response to questions is a list of numerous titles stated to be in the Voyager Archive, but no information is provided beyond the titles.⁸³ A title such as "Beethoven: Symphony No. 9" suggests a sound recording, but its relevance is completely undecipherable. The lack of meaningful information about the nature of these works, the formats that they are on, or the technological measures preventing noninfringing uses frustrates the ability to evaluate these works and the need for an exemption for such works. Similarly, although one early computerized book was mentioned in the testimony,⁸⁴ the scope of any problem relating to digital books is unknown; one example is insufficient to exempt an entire class of copyrighted works

⁸¹ C25, R15, T Brewster Kahle, May 14, 2003, p. 88-90 and 124-39, and PHR Brewster Kahle, *The Internet Archive*.

⁸² *Id.*

⁸³ PHR Brewster Kahle, *The Internet Archive*, p. 2 and 5.

⁸⁴ T Brewster Kahle, May 14, 2003, p. 88 ("Shogun").

even if that class is limited to obsolete formats. Accordingly, because Internet Archive was able to demonstrate more than de minimis problems only with respect to computer programs and video games, the Register recommends that the exempted class of works be limited to those two types of works.

The final limitation recommended by the Register is that the works must have been “distributed in formats that have become obsolete.” Obsolete formats include particular media, as well as operating systems, that are no longer manufactured or reasonably available in the marketplace. A likely example of an obsolete medium is the 5 1/4 inch floppy diskette;⁸⁵ a likely example of an obsolete operating system is the Commodore Amiga operating system. As with the exemption for computer programs protected by dongles, which is limited to damaged or malfunctioning dongles that are obsolete, the definition of “obsolete” is taken from 17 U.S.C. §108(c).⁸⁶ Adapted to the context of this exemption, a format shall be considered obsolete if the machine or system necessary to render perceptible a work stored in that format is no longer

⁸⁵ Whether 5 1/4 inch floppy diskettes actually are obsolete today is unclear. No commenters or witnesses have stated whether they are obsolete; it seems to have been tacitly assumed that they are. While the Register can take administrative notice that computers are not typically sold today with 5 1/4 inch floppy disk drives, see Nat'l Classification Comm. v. United States, 779 F.2d 687, 695 (D.C. Cir. 1985) (“[i]t is beyond dispute that an agency may provide the factual predicate for a finding by taking ‘official notice’ of matters of common knowledge”), nevertheless it may be that floppy disk drives are still manufactured or are still reasonably available in the commercial marketplace. In any dispute in which a library or archive relies on the exemption recommended herein to justify circumvention of access controls on software fixed on a 5 1/4 inch floppy diskette, it would be a matter of proof whether 5 1/4 inch drives are indeed obsolete.

⁸⁶ “For purposes of this subsection, a format shall be considered obsolete if the machine or device necessary to render perceptible a work stored in that format is no longer manufactured or is no longer reasonably available in the commercial marketplace.”

manufactured or is no longer reasonably available in the commercial marketplace. A work is not considered “reasonably available” if it can only be purchased in second-hand stores.⁸⁷

This final limitation to works distributed in formats that have become obsolete is based on the Register’s analysis of the noninfringing uses that original-only access controls have adversely affected. The Internet Archive asserts that its preservation activity is a noninfringing use under sections 107, 108, and 117(a)(2) of the Copyright Act. Section 117(a)(2) addresses the reproduction and adaptation of a copy of a computer program by its owner for archival purposes. Section 108 specifically deals with recurring operations that are necessary for the certain preservation and other activities of libraries and archives. Section 107 is the codification of the fair use defense.

Because §108 was enacted specifically to address reproduction by libraries and archives, and was amended by the Digital Millennium Copyright Act to address certain digital issues,⁸⁸ analysis of noninfringing archival and preservation activities logically begins with that section. Since the proposed noninfringing use of these works relates to the making of replacement copies of published works for preservation and use by libraries and archives, the particular subsection of section 108 that would govern such activity is §108(c). 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 –

- (1) the library or archives has, after a reasonable effort, determined that an unused replacement cannot be obtained at a fair price; and

⁸⁷ S. Rep. No. 105-190 at 62. (1998). See also House Manager’s Report 48.

⁸⁸ Pub. L. No. 105-304, §404 (1998).

(2) 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.

Section 108(c) does not authorize generalized preservation activities; it is limited by its terms. While the Internet Archive appears to be in lawful possession of the digital copies of the works it seeks to preserve, the safe harbor of §108(c) does not encompass all of the works sought to be archived. The Internet Archive has not suggested that the original copies or phonorecords of the works it intends to reproduce have been damaged, lost or stolen. While it may be asserted that some of these works are “deteriorating,” that is a factual question that would have to be determined on a copy-by-copy basis. It would not be reasonable to interpret this term in the extremely broad sense that all works are, to a certain extent, deteriorating or in the process of becoming obsolete from the moment of creation, since this would be an interpretation that would swallow the rule. Some meaningful evidence of specific deterioration would appear to be necessary. The Internet Archive has not asserted that any work is deteriorating (apart from the broad sense discussed above), but rather that the formats are or are becoming obsolete. In its 1998 amendments to §108, Congress chose to exempt formats that have “become obsolete,” not to exempt formats that are becoming obsolete. Therefore, the only digital reproduction of published works that would be noninfringing under §108 relates to copies or phonorecords that are damaged, deteriorating, lost, or stolen, or those works distributed on formats that have already become obsolete. Based on the record in this rulemaking, only the last condition has been put before the Register in relation to preservation activity – works stored on existing formats that have become obsolete.⁸⁹

Even in cases where the format is obsolete, §108(c) imposes two additional requirements before a library or archive is permitted to make copies: (1) the library or archives must have

⁸⁹ Proposals and evidence for malfunctioning and damaged *access controls* (as opposed to *works*) on computer programs are dealt with separately. See discussion *supra*, Section III.A.2.

determined that an unused replacement cannot be obtained at a fair price and (2) the digital reproduction of a copy or phonorecord may not be made available to the public “outside the premises of the library or archives in lawful possession of such copy.”⁹⁰ For purposes of the inquiry in this rulemaking, the first condition is an important one for determining whether or not such activity is a noninfringing use.⁹¹ The proponents of the exemption have produced no evidence on this question, but this is understandable because even if a reasonably priced replacement were available, it would not satisfy the intended use by the Internet Archive – migration to a different medium, e.g, a hard drive. Still, to fall within the scope of permitted uses under §108(c), a library or archive must have determined that an unused replacement cannot be obtained at a fair price.

Even though a library or archive must have determined that an unused replacement cannot be obtained at a fair price in order to qualify for the § 108(c) exemption, it can safely be assumed that there will be many occasions when an unused replacement will not be “reasonably available.” For example, it is very likely that many early video games that were produced in now-obsolete formats are not available today. Similarly, twenty year old computer programs are highly unlikely to be available, in their original versions, in the marketplace. Indeed, the Internet Archive’s testimony indicated that in many cases, the original producers of software no longer have any copies of old versions of the software that the Internet Archive has.⁹²

⁹⁰ 17 U.S.C. §108(c).

⁹¹The latter condition is, of course, important to a determination of whether the circumvention was limited to a noninfringing use, e.g., on site use. The proponent of the exemption, the Internet Archive, has stated that it limits access to its archive in conformance with this requirement. A library or archive that made copies of the archived material available to the public outside its premises would be exceeding the privilege afforded by §108 and, unless some other defense to infringement were available, would be unable to avail itself of the recommended exemption that would permit it to circumvent the “original-only” access control when engaging in noninfringing uses.

⁹² T Brewster Kahle, May 14, 2003, p. 152.

In addition, it must be acknowledged that in enacting the DMCA, Congress specifically amended section 108 (c) to provide for the digital reproduction of works for certain preservation and use purposes. As the Senate Judiciary Committee's report on the DMCA states:

The amendment to subsection (c) also broadens its coverage to allow the updating of obsolete formats. It permits the making of such copies or phonorecords of a work "if the existing format in which the work is stored has become obsolete." This provision is intended to permit libraries and archives to ensure that copies of works in their collections continue to be accessible and useful to their patrons. In order to ensure that the provision does not inadvertently result in the suppression of ongoing commercial offerings of works in still-usable formats, the amendment explicitly provides that, for purposes of this subsection, a format will be considered obsolete only if the machine or device necessary to render perceptible a work stored in that format is no longer manufactured or reasonably available in a commercial marketplace. Under this language, if the needed machine or device can only be purchased in second-hand stores, it should not be considered "reasonably available."⁹³

This statement in the legislative history supports the view that Congress' amendment was intended to allow digital reproduction of works in obsolete formats.

Although §108(c) could reasonably suffice to qualify the preservation of obsolete formats of works as a noninfringing use, the Internet Archive seeks a broader exemption that would extend to formats that are not yet obsolete. For that reason, it is necessary to examine the other bases relied on by Internet Archive in support of its contention that such archival activity is noninfringing: sections 107 and 117(a)(2).

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

⁹³ S. Rep. No. 105-190 at 62. (1998). See also House Manager's Report at 48.

constitute a fair use, it is improper in this context to generalize about the parameters of §107. Fair use involves a case-by-case analysis⁹⁴ that requires the application of the four mandatory factors to the particular facts of each particular use.⁹⁵ 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. Also, the fact that Congress specifically addressed the making of preservation copies by libraries and archives when it amended §108 – a section that contains express limitations on the exemption that were an important ingredient in the balance achieved, e.g., digital reproductions may not be made available beyond the premises of the library or archives, and, as noted above, an unused replacement at a fair price must be unavailable – necessitates caution before resorting to §107 for broader uses.⁹⁶ This is particularly true in light of the fact that Congress enacted the amendment to §108 as part of the DMCA, the same legislation that enacted §1201. Unless particular facts about the use of particular works are presented to reveal that the §108(c) exemption is insufficient, and unless these particular facts could be analyzed under §107 to establish a likelihood that fair use is applicable, it would be improper in this rulemaking to go beyond the express congressional parameters contained in the DMCA amendments to §108.

The Register reaches a similar conclusion with respect to §117(a)(2). The limitation on the exclusive rights of copyright owners contained in §117(a)(2) is limited to “computer programs.” The term “computer programs” is defined in the Copyright Act as “a set of statements or instructions to

⁹⁴ H.R. Rep. No. 94-1476, at 66 (1976); Campbell v. Acuff-Rose Music, Inc., 510 U.S. 569, 577 (1994); Nimmer on Copyright §13.05[A][4].

⁹⁵ H.R. Rep. No. 94-1476, at 65 (1976) (“each case raising the question must be decided on its own facts”).

⁹⁶ In explaining why the proposed exemption would not harm the interests of copyright owners the Internet Archive itself pointed out that “We’re regulated just like everybody else within the sort of 108 work. [Sic.] We are a library. So the use is protected.” T Brewster Kahle, May 14, 2003, p. 91.

be used directly or indirectly in a computer in order to bring about a certain result.”⁹⁷ Section 117(a)(2) permits the owner of a copy of a computer program to make or to authorize the making of another copy or adaptation of that computer program when “such copy or adaptation is for archival purposes only and all archival copies are destroyed in the event that continued possession of the computer program should cease to be rightful.”

While a superficial reading of §117(a)(2) might lead to the conclusion that activities such as those of the Internet Archive fall within its scope, case law construing §117(a)(2) requires caution in applying the exemption, and the leading treatises confirm that the construction of this exemption may be narrow. The Internet Archive states that “[s]ection 117(a)(2) allows software owners to make reproductions for archival use” and asserts that it is engaging in archival use; therefore, its activity is covered by this exemption. But the bulk of the authority construing §117(a)(2) suggests that the actual scope of that exemption does not extend to the systematic migration to modern storage systems⁹⁸ of a wide variety of works by, in the Internet Archive’s own words, a nonprofit library that provides free access to an enormous and wide-ranging collection of web pages, movies, books, sound recordings and software in order to provide an historical record to future generations.⁹⁹ As one appellate court recently stated, “ Under the Copyright Act, the phrase ‘copy for archival purposes’ has established meaning with reference to computer programs: to make a backup copy to guard against the risk of damage to or destruction of the original caused by mechanical or electrical failure. See 17 U.S.C. § 117(a)(2).”¹⁰⁰ The major treatises are in accord. “Courts have generally construed this exemption narrowly and in light of the concern that occasioned its

⁹⁷ 17 U.S.C. § 101.

⁹⁸ C25, p. 2.

⁹⁹ C25, p. 1.

¹⁰⁰ Operating System Support, Inc. v. Wang Laboratories, Inc., 52 Fed.Appx. 160, 169, 2002 WL 1791101 (3rd Cir. 2002).

adoption--specifically, 'to guard against destruction or damage by mechanical or electrical failure.'"¹⁰¹ "It has been held that this archival copy privilege may be invoked only where the copy purchased by the 'owner' may be destroyed or damaged by 'mechanical or electrical failure.'"¹⁰²

It is far from clear that the purpose of the archival activity by Internet Archive and by other libraries and archives is to guard against destruction or damage by mechanical or electrical failure. Rather, the primary purpose of the Internet Archive's activity appears to be, in the words of its [director], that "formats become obsolete and the platforms change."¹⁰³ At least in part, Internet Archive wishes to create archival copies of computer programs due to the "rapid obsolescence of digital formats."¹⁰⁴ Thus, to the extent that case law and treatises suggest that archiving of computer programs for other purposes is not permitted under §117, it is questionable whether that section applies to such archival activity. To be sure, the Internet Archive also states that it wishes to migrate digital works to its modern storage system because they are on media that are "degrading," and that this "must be done before the formats or media become obsolete or damaged."¹⁰⁵ Thus, it appears that the Internet Archive's systematic reproductions have a dual purpose: to ensure that the works are accessible on modern equipment and to ensure that intact reproductions of the work will be available in the event that the original copy is damaged.

¹⁰¹ II P. Goldstein, Copyright §5.2.1.4 (2003).

¹⁰² 2 M. & D. Nimmer, Nimmer on Copyright §8.08[C] (2003). See also Micro-Sparc, Inc. v. Amtype Corp., 592 F. Supp. 33 (D. Mass. 1984); Atari, Inc. v. JS&A Group, Inc., 597 F. Supp. 5 (N.D. Ill. 1983); Vault Corp. v. Quaid Software Ltd., 655 F. Supp. 750, 759 (E.D. La. 1987), *aff'd*, 847 F.2d 255 (5th Cir. 1988). But see Vault Corp. v. Quaid Software Ltd., 847 F.2d 255, 267 (5th Cir. 1988) ("Congress imposed no restriction upon the purpose or reason of the owner in making the archival copy; only the use made of that copy is restricted").

¹⁰³ T Brewster Kahle, May 14, 2003, p. 86.

¹⁰⁴ PHR Brewster Kahle, The Internet Archives, p. 2.

¹⁰⁵ C 25, p. 2.

Ultimately, however, the Internet Archive's purpose is not to make a backup copy; rather, it is to make a "use" copy. The copies that are migrated to the Internet Archive's modern storage system are, in fact, the copies that will be used – and not only by the Internet Archive, but also by members of the general public. "The Internet Archive and all of its collections are open to the public either directly or through a straightforward registration process."¹⁰⁶ "The Archive now provides free access to an enormous and wide-ranging collection of web pages, movies, books, sound recordings and software."¹⁰⁷ Thus, the activity which is the basis for the Internet Archive's requested exemption is not simply archival activity. See Allen-Myland, Inc. v. International Business Machs. Corp., 746 F. Supp. 520, 537 & fn. 19 (E.D. Pa. 1990) (§117(a)(2) "protects solely those copies used "for archival purposes *only*", and not copies made for use). As the statute states, the exemption applies to copies made "for archival purposes only."¹⁰⁸

Because it seems unlikely at best that the activities asserted by the Internet Archive as a justification for exempting a class of works fall within the scope of §117(a)(2), the Register cannot conclude that that provision would justify exempting a class of works broader than that which is justified based on an application of §108(c). Moreover, the fact that the activity for which an exemption is sought fits far more comfortably within the scope of §108 than that of §117 persuades that Register that reliance on §117 to exempt a potentially broader class than could be supported under §108 would be unjustified. The fact that §117 was not created to enable libraries and archives to perform their important public functions – that is the purpose of §108 – leads to the

¹⁰⁶ C 25, p. 7.

¹⁰⁷ *Id.*, p. 1. See also Internet Archives post-hearing response, p. 2 ("Like a paper library the Archive also provides free access to researchers, historians, scholars and the general public").

¹⁰⁸ The restriction to "archival purposes only" also suggests that when, as discussed above, the reproductions are made only in part to guard against mechanical or electrical failure, the reproduction is not within the scope of the exemption.

conclusion that any exemption designed to address the concerns raised by the Internet Archive should be limited to the congressionally-chosen parameters of section 108, especially when Congress redefined those parameters as part of the DMCA.

A review of the mandatory statutory factors of § 1201(a)(1)(C) to assess the proper balance based on the record confirms the Register's judgment that an exemption should be granted for 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.

The availability for use of copyrighted works.

Works in the proposed class of literary and audiovisual works are, broadly speaking, available for use in a number of unprotected formats. This is not true, however, with respect to certain kinds of works, *i.e.*, many works produced solely in digital formats, such as computer programs and video games, for which there is obviously no alternative analog substitute. Many such works are accompanied by access controls, and the proponents of an exemption have demonstrated that many computer programs and video games have been protected by "original-only" access controls. Such controls do, in theory, limit the availability for use of such works, but the only circumstances under which the proponents have shown that use has actually been restricted relate to preservation activity (discussed below) where the access controls require the use of physical or software formats that are not available to the user. The constraints on availability for use that are created by such access controls militate in favor of an exemption.

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.¹⁰⁹ Because many providers of software and video games have elected to use “original-only” access controls to ensure that unauthorized copies of their works may not be disseminated and displace the market for legitimate copies, care must be taken, in fashioning any exemption, to limit the scope of the exemption so that it does not serve as a disincentive to continue to make such works available. Restricting the exemption to software and videogames that are (1) protected by such access controls and (2) in obsolete formats, serves this end while permitting noninfringing uses in the cases where users have no other (or, at best, very limited) options if they wish to gain access to the works. The restriction to obsolete formats also helps ensure that use of the exemption will likely be made only or at least largely by some libraries and archives, since consumers are less likely than libraries and archives to have an interest in using and copying out-of-date software and video games.

The availability for use of works for nonprofit archival, preservation, and educational purposes.

When the focus is shifted from availability for general use to availability for nonprofit archival, preservation, and educational purposes, the core concerns of the proponents of this exemption are apparent. “Original-only” access controls necessarily affect preservation activities. Works that are “born digital,” such as computer programs and video games, can best be preserved in digital formats, and as hardware and software formats fall out of use, preservation can best be accomplished by migrating the works to modern storage media and in formats that modern devices can access. Even for works that exist in both analog and digital formats, the archivist has a legitimate interest in preserving all editions, including the electronic editions, for posterity. The archivist confronted with access controls that prevent preservation of digital works must either circumvent those access controls or refrain from making a usable copy of the digital work. The latter option obviously does not serve the interests that the second statutory factor is intended to advance.

¹⁰⁹ See 65 FR at 64564.

The interest in making works available for preservation purposes is highest when the work can no longer be accessed in its original digital format. For works that can still be accessed in that format (such as new versions of software distributed on CD-ROMS with original-only access controls that require that the original CD-ROM be in the computer's CD-ROM drive), the interest in preservation is not so great, or at least not so urgent. Moreover, as noted above, the provision of the copyright law specifically intended to address the needs of nonprofit libraries and archives, §108, limits its permission to make digital copies of published works to situations where the existing format in which the work is stored has become obsolete (or to replacement of copies or phonorecords that are damaged, deteriorating, lost or stolen), and imposes the additional prerequisite that an unused replacement cannot be obtained at a fair price.

In principle, these considerations apply to a wide variety of works, but proponents of an exemption have provided sufficient facts to justify only the narrower class recommended herein. Moreover, to the extent that this factor warrants exempting all works (or all works in digital formats) from the prohibition of §1201(a)(1) in order to enable preservation activities, it actually would warrant rejection of the exemption since the purpose of this rulemaking is to determine whether there are “particular class[es] of works” which should be exempted – not whether particular *uses* should be exempted. Paradoxically, the failure of the proponents of this exemption to justify the need to circumvent access controls for all the types of works they proposed to be exempted may have salvaged what otherwise would have been an overly broad proposal that failed to identify the “particular class of works” that the statute requires.

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.

If works are not preserved, but are instead lost from the cultural history of our society, there will be an adverse effect on all of the uses on which this factor focuses: criticism, comment, news

reporting, teaching, scholarship, or research. However, it is equally important to consider that preservation activity such as the work of the Internet Archive is not the sole means of enabling these fundamental uses. As long as access to works is currently possible, their use for criticism, comment, news reporting, teaching, scholarship, or research will generally be available. Access to a work may be available in alternative, unprotective formats, or the protected version may be readily available for these uses. Criticism, comment, news reporting, teaching, scholarship, or research on computer programs and video games are not hindered with respect to much of the class consisting of computer programs and video games. The primary problem arises with obsolete formats that are not available on the market. In such a case, libraries and archives may be the only resort for access to these historical works. Therefore, it appears that criticism, comment, news reporting, teaching, scholarship, or research are likely to be adversely affected only with respect to the subset of computer programs and video games that are obsolete.

The effect of circumvention of technological measures on the market for or value of copyrighted works.

Circumvention of all literary or audiovisual works or even of all computer programs and video games could cause significant harm without some limiting principle. Of course, §1201(a)(1)(D) has the effect of limiting the scope of any exemption to noninfringing uses, yet the evidence of likely adverse effects in the record before the Register suggests that a more carefully tailored class would more appropriately remedy the adverse effects on established noninfringing uses while also minimizing the potential adverse effects on the market for or value of these works. Such a decision to tailor the class carefully is supported by clear evidence in the marketplace that computer programs and video games are a significant part of the works distributed unlawfully over the Internet and through the reproduction and distribution of unauthorized copies. Sensitivity to such widespread illegal trafficking is obviously critical to this rulemaking process, since these concerns formed the impetus for providing copyright owners with the protections afforded by the DMCA.

Such other factors as the Librarian considers appropriate.

The Register recognizes that many of the important concerns that libraries and archivists have about the preservation of our digital heritage may not be satisfied by the scope of this class. The exemption for this tailored class is intended to prevent the loss of digital works that have been distributed in formats that have become obsolete, but not to permit preemptive archival activity to preserve works before they become obsolete. While this may be important to libraries and archivists in a digital age, particularly as works are increasingly “born digital,” the resolution of that issue is beyond the scope of this rulemaking. Since preemptive archival activity is not currently exempted under §108, it is not categorically a noninfringing use. To the extent that such activity might qualify as a noninfringing use under some other exemption, such as fair use, it could apply to all categories of works and presumably would be engaged in on an ongoing basis. In essence, the problem confronting archival activity in the digital age is a “use-based” concern that is more appropriate for congressional consideration and properly crafted legislative amendment than it is for this rulemaking. Since certain forms of protection technology such as “original-only” measures are inconsistent with reproduction of works for purposes of preservation because they prevent use of reproductions, there is a tension created by the DMCA that is likely to grow and that should be considered by Congress in a comprehensive fashion. Although the remedy is beyond the scope of this rulemaking since it is a problem that relates to all digital works and is a problem that is not resolved by three-year exemptions, the potential adverse consequences raise serious concerns. As works are increasingly created and distributed exclusively in digital formats, the likelihood that rapid technological change will render the formats of today obsolete tomorrow is a problem that is likely to increase. At present, the Register has received evidence of a problem that may well increase in the future. In the absence of congressional action, the problems could well exceed the scope of this rulemaking and create a tension between evidence of harm to noninfringing uses and the insufficient authority to remedy the problem found. At present, and due to the limitations of the §1201 rulemaking process, the Register finds that the problem established in the record can best be addressed in this rulemaking by exempting the recommended class.

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." For purposes of this exemption, "specialized format," "digital text" and "authorized entities" shall have the same meaning as in 17 U.S.C. §121.**

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. The public's reception of ebooks has been tentative, and currently a small percentage of all works published are distributed in ebook formats, e.g., Microsoft Reader, Adobe Reader or Palm Reader. Although this is still a nascent 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 Reader (renamed in the current version 6.0, but formerly known as the Adobe Ebook Reader) and the Microsoft Reader (currently available in version 2.0). Both of these ebook readers contain read-aloud functionality that can render¹¹⁰ the written text of the book into audible, synthetic speech. Ebooks may also permit accessibility to the work by means of screen reader software (e.g., JAWS by Freedom Scientific), 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 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.

¹¹⁰ In this context, and throughout this memorandum, "render" means the process by which the digital representation of sounds and/or images is converted back into those sounds and/or images. See DMCA Section 104 Report 108 fn.330 (2001).

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 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.

The information submitted has shown that a substantial number of ebooks have been distributed to the public with the read-aloud function and the screen reader accessibility function disabled. Since it is claimed that ebooks may be the only existing format of a book that is potentially accessible to the blind and visually impaired, commenters have proposed an exemption for literary works, including ebooks, which are protected by technological measures that block or inhibit

perception via a “screen reader” or similar text-to-speech or text-to-braille device utilized by a person who is blind or visually impaired.¹¹¹

The primary proponent of this exemption was the American Foundation for the Blind (AFB).¹¹² Other commenters¹¹³ have supported this exemption and have noted that fewer than ten percent of published books are ever provided to the blind and visually impaired in accessible formats.¹¹⁴ The disabling of the “read-aloud” function on ebooks or the disabling of accessibility to screen reader software that provides accessibility to the blind and visually impaired is alleged to prevent these users from engaging in particular noninfringing uses such as private performance. Even more significant, the disabling of these functions is alleged to prevent access to these works by blind and visually impaired users altogether.

In her analysis of this proposal, the Register concludes that technological measures that control access to copyrighted works have a role in the disabling of the read-aloud function and of screen reader accessibility. She then determines that the uses that the proponents seek to enable are noninfringing uses. The Register then proposes a particular class of works that should be exempted from the prohibition on circumvention in order to enable the noninfringing uses, and determines that an exemption for that particular class of works is warranted based on a review of the factors set forth in §1201(a)(1)(C).

¹¹¹ This formulation of the proposal is a close restatement of the class proposed by the Library Associations in Comment 33, which more precisely states a class related to the evidence of adverse effects on noninfringing uses demonstrated by the American Foundation for the Blind.

¹¹² C26

¹¹³ C9, C13 and C33.

¹¹⁴ C33 at 7.

As a preliminary matter, however, it is necessary to address an issue raised by opponents of the proposed exemption: whether the issue presented by the proponents of an exemption is one of access or of accessibility. As the Association of American Publishers (AAP) put it, “‘access’ ... refers only to a person’s ability to obtain a sufficient level of contact with or proximity to a copy of copyrighted work for that person to be able to make some ‘use’ of it,” while “‘accessibility’ ... describes both a specific need and goal of persons with disabilities to overcome those disabilities in order to make the same or comparable use of something as could a person without those disabilities.”¹¹⁵ Moreover, to the extent that “accessibility” is an issue, AAP argued that the enactment of the “Chafee Amendment” in 1997, adding §121 to the Copyright Act, was Congress’s specific response to concerns about accessibility for the blind and visually impaired. Therefore, it would be inappropriate for the Librarian to use this rulemaking as a means to address such “accessibility” concerns, especially if to do so would go beyond the solutions offered by Congress when it enacted §121.¹¹⁶

Section 121 provides that it is not an infringement of copyright for an authorized entity to reproduce or distribute copies or phonorecords of published nondramatic literary works in specialized formats exclusively for use by blind or other persons with disabilities. “Authorized entities” are nonprofit organizations and governmental agencies with a primary mission to provide specialized services relating to training, education, or adaptive reading or information access needs of blind or other persons with disabilities. “Specialized formats” means “braille, audio, or digital text which is exclusively for use by blind or other persons with disabilities.”¹¹⁷

¹¹⁵ R 25, p. 13. See also T Allan Adler, May 1, 2003, p. 22 (“the access issue that is dealt with in Section 1201 is not the same as the accessibility issue that is dealt with under the Chafee Amendment”).

¹¹⁶ R25, pp. 13-15.

¹¹⁷ 17 U.S.C. §121(c).

While the Register understands the distinction made by AAP between “access” and “accessibility,” that distinction has little impact on the Register’s recommendation. In determining whether to exempt a particular class of works in this rulemaking, the Register is not required to ascertain whether users of that particular class of works are able to gain access to those works. Rather, the question is whether the prohibition on circumvention has had a substantial adverse effect on users’ ability to make noninfringing uses of the works. “Access” may be relevant when the noninfringing use consists of gaining access, but other noninfringing uses are also relevant to the inquiry. The real relevance of “access” is based on the requirement that the prohibition against circumventing technological measures that control *access* to copyrighted works be adversely affecting the ability of users to make those noninfringing uses. The threshold issue in evaluating that requirement is whether there are any access controls. If there are, and if the inability to circumvent them without running afoul of §1201(a)(1) is preventing noninfringing uses, then it is appropriate to determine whether, considering the factors set forth in §1201(a)(1)(C), the affected class of works should be exempted. In making that analysis, the existence and effect of §121 are certainly relevant, but the fact that §121 exists does not disqualify blind and visually impaired persons from seeking an appropriate exemption in this rulemaking, even if that exemption permits acts not expressly included within the scope of §121.

Thus, the alleged distinction between “access” and “accessibility” is a red herring. To say that a blind person technically has “access” to a work that he cannot perceive does not assist in resolving whether to recommend an exemption. Moreover, to return to AAP’s definition of “access” – “a person’s ability to obtain a sufficient level of contact with or proximity to a copy of copyrighted work for that person to be able to make some ‘use’ of it” – it is far from apparent that a blind person does have “access” to an work in an ebook format that can be perceived only by viewing it on the ebook’s screen. Nor does the blind person necessarily have access to the book just because it may be available in traditional print formats. The potential availability of mechanisms to

make works “accessible” under §121 hardly ensures that any particular work will in fact be made available in a way that is usable for the blind and visually impaired.

As noted above, a threshold issue in considering the proposed exemption is whether the works in question are protected by access controls. The record in this rulemaking proceeding is less clear than desirable on that point. However, there appears to be consensus among the relevant participants in the rulemaking that access controls are involved.¹¹⁸ The specific technology that enables and disables the read-aloud function or the accessibility to screen reader software does not appear to be, in itself, an access control measure. Rather, it appears to be a measure that controls particular uses of the work. However it also appears that an access control measure serves to protect the integrity of the use control measures, e.g., a password that protects the security features of the file. The publisher of an ebook would decide whether to enable the “read-aloud” function and screen reader accessibility – perhaps by checking a box on a password-controlled menu controlling the document’s security settings.¹¹⁹ As a representative of a major publisher stated, “If you look at the Acrobat approach, you set the permissions in advance and one of the permissions is text-to-

¹¹⁸ The representatives of AFB and of McGraw-Hill, a leading publisher, expressly stated that the inability to convert text to speech is because of a technological measure that controls access. T Paul Schroeder, May 1, 2003, p. 49; T Robert Bolick, May 1, 2003, p. 51. The other witnesses at the hearing on this issue appear to have implicitly agreed. See the Transcript of the May 1, 2003 hearing, at 51 et seq. [Question: “Everyone agrees that what we're talking about here, the circumstances when you're not able to use that screen reader to convert text to speech, for example, the reason you can't do it is because in fact there is a technological measure that is controlling access. Is that the problem? Because if it isn't, of course, there's no reason to talking to it. I just want to make sure it's understood.” Mr. Schroeder and Mr. Bolick responded in the affirmative; none of the remaining witnesses expressed any disagreement.] In addition, the AAP representative stated that the proposed exemption “would allow for the ability to circumvent specific access controls that are used in the context of e-book simply because those access controls do not enable the use of text-to-speech software.” T Allan Adler, May 1, 2003, p. 47.

¹¹⁹ See Adobe Acrobat 6.0 Professional Help, pp. 390-01 (“Adding passwords and setting security options” and “Security options”).

speech. Then the encryption of DRM is applied and wraps the package.”¹²⁰ To enable the read-aloud function or the accessibility to screen reader software, a user would have to circumvent the access control that protects these functions. The prohibition on circumvention, therefore, may under certain circumstances prohibit activation of these DRM functions (screen reader accessibility and the read-aloud function) of the ebook.

Having concluded that the prohibition is preventing the desired uses by persons with disabilities, the Register must consider whether the desired uses are noninfringing. When a blind person activates the “read-aloud” function on an ebook, or uses a screen reader to “read” the text to himself or herself, such a use typically will be a noninfringing use. A private performance of a work for which one has obtained lawful access will always be noninfringing, since the exclusive rights of the copyright owner do not extend to private performances. See 17 U.S.C. §106(4). Use of a screen reader to convert the text of a lawfully obtained ebook into braille may pose a more complicated question, since it implicates the copyright owner’s exclusive right of reproduction. Because an individual user of screen reader software is not an “authorized entity,” § 121 does not apply to this conduct. Nevertheless, if such an intermediate reproduction is for the purpose of the private rendering of an lawful copy of the work into a “specialized format” in order to permit a blind person to perceive the work, purely for personal use, and does not include any distribution of the work that could harm the potential market for the work, such conduct clearly would be within the spirit of §121 and most likely would, in such circumstances, appear to constitute a fair use of the work. The Register believes that the intended uses of the work by the blind and visually impaired are noninfringing uses.

Opponents of the exemption argued that the §121 was the congressional expression of the scope of limitations on copyright owner’s exclusive rights in relation to noninfringing uses by the

¹²⁰ T Robert Bolick, May 1, 2003, p. 50.

blind and visually impaired. While it is true that Congress enacted §121 to enable certain nonprofit organizations and government agencies to make copies of nondramatic literary works in specialized formats and distribute them to the blind and disabled, there is no indication that Congress intended to strip an individual who is blind or visually impaired of traditional defenses, such as fair use, when that individual takes actions to make such a work perceptible to himself for his own personal use.¹²¹ The Register considers it highly unlikely that a publisher would even consider accusing such a person of copyright infringement, and even more unlikely that a court would find such conduct to be infringing.

It is also significant to note that the purpose of § 121 to exempt certain conduct for making otherwise inaccessible versions of published copyrighted works accessible. The question before the Register in relation to ebooks is entirely different. The digital format of books needs no adaptation in order to be accessible to the blind and visually impaired. Unlike the works addressed in §121, the digital text format of ebooks enhances accessibility, with built-in features that benefit the blind and visually impaired, unless the technology that enables such accessibility has been disabled. There is no reason to believe that in enacting §121, Congress foresaw that publishers or authors would act affirmatively to prevent accessibility from an otherwise accessible format, and no reason to believe that Congress intended to give its blessing to such conduct. This is not to say that there are not legitimate reasons for disabling accessibility, *e.g.*, concern that such accessibility will allow circumvention by other devices or the desire to prevent an ebook from competing with an audio version of the same work, but such concerns do not eliminate the legitimate nature of the intended use by the blind and visually impaired. Similarly, §121 cannot be read as a statement that Congress did not intend accessibility for the blind and visually impaired to extend to ebooks. Section 121

¹²¹ Indeed, there is no indication that in enacting §121, Congress was even considering works already in digital formats, such as ebooks, which perhaps for the first time offer an individual blind person the possibility of “self-help” in making a copy of a literary work perceptible.

addresses accessibility for works that were published but not accessible due to the nature of the format in which they were published. The proposed exemption to the prohibition addresses published works in formats for which there is no inherent obstacle to accessibility except for the choice to deploy a technological restriction on accessibility. Section 121 therefore offers little guidance for the present analysis.

The proponents of an exemption have, therefore, made the case that the prohibition on circumvention is adversely affecting noninfringing uses. But is there a particular class of works with respect to which noninfringing uses have been adversely affected? AFB requests that the class of works be designated as “literary.” Such a class clearly is overbroad. The joint comments of the library associations proposes a more narrowly tailored class: “Literary works, including eBooks, which are protected by technological measures that fail to permit access, via a “screen reader” or similar text-to-speech or text-to-braille device, by an otherwise authorized person with a visual or print disability.”

The Register finds that the class proposed by the library associations is closer to the mark. Unlike the class proposed by the AFB, which consists of an entire section 102 category of works, the library associations’ proposed class commences with a section 102 category but, drawing on the guidance offered in the previous rulemaking, 65 FR at 64561, narrows it by reference to attributes of the technological measures that control access to the works.

The Register recommends exempting a class of works that takes the library associations’ proposal as its starting point, but with some additional refinements. First, the Register cannot recommend a class of “literary works, *including* ebooks” (emphasis added), since that class of works includes literary works other than ebooks. A class of works must be determined based on a factual showing of substantial adverse effects on noninfringing uses, and the only facts submitted by

proponents of an exemption related to ebooks.¹²² Accordingly, the class should be defined initially as consisting of “Literary works distributed in ebook format.” But a class of “literary works distributed in ebook format,” without further refinement, would be too broad. It would include ebooks which are accessible to screen readers or which have the “read-aloud” feature enabled. There is no reason to permit circumvention of access controls on such ebooks, because the noninfringing use is already permitted. Moreover, although a class of works cannot be defined by reference to particular uses or users,¹²³ the class should be defined in a manner that is calculated to benefit the types of users and uses for which a showing of harm has been made, and that is calculated not to benefit other uses for which no showing has been made. Because the case has not been made for a cognizable adverse effect outside the context of use by the blind and visually impaired, it is appropriate to further tailor the class to that particular harm. The optimal designation appears to be “literary works distributed in ebook format when all existing ebook editions of the work (including digital text¹²⁴ editions made available by authorized entities¹²⁵) contain access controls that prevent

¹²² See, e.g., C 26 , pp. 3-6, PHR Janina Sajka, AFB, pp. 1-2.

¹²³ For this reason, the library associations’ proposal to further define the class of works by reference to “an otherwise authorized person with a visual or print disability” cannot be accepted. As AAP pointed out, “the intended use or users of the work” is “an unacceptable measure for an exempt ‘class.’” R26, p. 15. To acknowledge that, however, is not to say that in determining how to define a “particular class of works,” the noninfringing uses that are adversely affected by the prohibition on circumvention may not be taken into account. Indeed, to the extent that the statutory scheme permits, the Register attempts to define an exempted class of works in a way that will not overbroadly include works for which there has been no showing that the prohibition is hindering noninfringing uses.

¹²⁴ “Digital text” is the specialized format referred to in §121(c)(3): “digital text which is exclusively for use by blind or other persons with disabilities.”

¹²⁵ “Authorized entities,” defined in §121(c)(1), are nonprofit organizations and governmental agencies with a primary mission to provide specialized services relating to training, education, or adaptive reading or information access needs of blind or other persons with disabilities.

the enabling of the read-aloud function and the enabling of screen readers to render the text into a specialized format.”¹²⁶

Such an exemption is closely tailored to the noninfringing uses which have been prevented by the pertinent access controls. For example, the only ebooks whose access controls could be circumvented are those that prevent both use of the read-aloud function and accessibility to screen reader software. If an ebook enables either of these features, the Register believes that it would represent meaningful accessibility for the blind and visually impaired. It is conceivable that copyright owners might have legitimate reasons for disabling one of these features, and while there may well be legitimate reasons for disabling both, the Register believes that the evidence of harm outweighs any justification for disabling both of these features that has been put forward in the record in this rulemaking.

Another important component of the exemption is that it would not apply to a work if, at the time of circumvention, an ebook version is on the market for which either the read-aloud function or screen readers are enabled. Should publishers make accessible formats of a particular work available by enabling either of these functions, the exemption would no longer be applicable to that particular work. Additionally, if the ebook or an accessible “digital text” is available through an “authorized entity” under §121, such as Bookshare.org,¹²⁷ the exemption to the prohibition will not apply.

¹²⁶ “Specialized format” is defined in §121(c)(3): “braille, audio, or digital text which is exclusively for use by blind or other persons with disabilities.”

¹²⁷ Bookshare.org is an arm of a California not-for-profit organization known as the Benetech Group that allows persons and organizations qualified under the provisions of 17 U.S.C § 121 to download digital text and contribute scanned versions of books and certain printed material to the program. Those digital versions are made available to blind and disabled persons. As of March 2003, Bookshare.org was reported to have over 11,000 titles available on its service. See <http://www.bookshare.org/web/PressReleaseC.html>.

Formulating the exempted class as recommended would also ensure that it addresses harm that is not limited to isolated occurrences or mere inconveniences. The evidence suggests that the problem of accessibility is an adverse effect that would likely affect the vast majority of blind and visually impaired persons. Also, under the recommended formulation of the class, circumvention is not a matter of convenience or simply a question of the preferred means of accessibility. Although, as opponents of the exemption have pointed out, organizations like Bookshare.org exist to facilitate the conversion of books into digitized text for accessibility to the blind and visually impaired, the exemption specifically addresses whether such digital text versions of a work currently exist for use. If an accessible ebook edition of a work is available in the marketplace or a digital text is available through a §121 authorized entity, then the exemption does not apply. As the exempted class is framed, affected users are likely to consider circumvention only as a last resort and only where the work is unavailable for the intended noninfringing use. The exemption also serves to encourage publishers to make accessible versions available: when such a version is available, the publisher need not worry that users may lawfully circumvent access controls applied to the work. Thus, the recommended exemption gives the publisher ultimate control over whether any user can ever take advantage of the exemption with respect to that publisher's work.

The evidence in the rulemaking suggests that a significant number of ebook titles are not accessible to the blind and visually impaired. Although follow-up questions were asked of the witnesses testifying both in support of and in opposition to the proposed exemption for more precise data, the record on the precise number of works that prevent accessibility, such as the read-aloud function, is far from clear. Neither proponents or opponents of the exemption provided the Register with definitive details on the number of works or the particular works that prevented accessibility.¹²⁸

¹²⁸ AFB's post-hearing response offers some statistics from www.ebooks.com indicating that the percentage of ebook titles with the read-aloud function enabled was 62% of the titles in Adobe "Ebook" format, 28% of the titles in Microsoft Reader format and 0% of the titles in Mobipocket and Palm format. PHR Janina Sajka, AFB, p. 2. The reason for the last statistic

Despite the difficulty in establishing the exact scope of the problem, the evidence that has been submitted by both proponents and opponents of the exemption establishes that a significant number of ebook titles are currently offered to the public for which accessibility to the blind and visually impaired has been disabled.¹²⁹ The compelling nature of the noninfringing use that such users seek – the ability to perceive the works – as well as the established scope of the problem weigh in favor of an exemption.

In considering whether an exemption is necessary, the availability of alternative formats must also be addressed. There was no evidence introduced that titles available in ebook format are not also available in traditional book form as well. In addition, some titles available in ebook form that have the accessibility features disabled also exist in audio book format, although the record is vague on the extent to which this is true. It is necessary to consider whether the availability of these alternative formats eliminates the need for an exemption. Although the traditional book format is “available” in the marketplace, books in that format nevertheless are not necessarily available for use by the blind and visually impaired. In order for a hard copy of a book to be accessible, it must be converted into some other form that is perceptible to the blind and visually impaired. While §121 allows authorized entities to undertake such a process, there is no question that this process has not kept pace with the publication of works in general and there is no evidence that such authorized entities have provided accessible formats of all of the works that are published in ebook format.

would seem to be that the devices on which these formats are most often used often do not contain audio output. The post-hearing response refers to ebooks.com as an “Australian on line bookseller,” but the company’s contact information on its website also lists a U.S. corporate address and the website appears to have separate sections serving different regions, including the United States, so it is not entirely clear to what extent these percentages relate to U.S. editions of ebooks. In any event, it is probably reasonable to assume that statistics for the United States are similar to or the same as those for Australia.

¹²⁹ AFB post-hearing response at p. 2 (ebook.com statistics); AAP post-hearing response at 2 (one publisher whose default setting for Adobe Reader is “read-aloud off” has 1650 titles available).

Bookshare.org, an entity that expressly operates under the auspices of § 121,¹³⁰ uses volunteers who scan books into digital formats and makes those digital texts available to qualified members, who must be blind or disabled. It has been argued by opponents of the exemption that entities such as Bookshare.org can make text versions of all books accessible to the blind and visually impaired since anyone can scan a book and submit it to Bookshare.org. However, the fact that *any* book *might* conceivably be made available does not mean that *all* books *are* or *will be* made available through such organizations. Resources are limited, and, as noted above, as of March 2003, Bookshare.org was reported to have over 12,000 titles available on its service – a fraction even of the number of ebook titles (not to mention all book titles) in circulation. In contrast, 280,590 ebook titles are reportedly on sale.¹³¹ The Register’s recommended exemption addresses whether the work is *currently* available in a format accessible to the blind and visually impaired. To the extent that the digital text, with the read-aloud function or screen readers enabled, is available in the commercial or noncommercial marketplace, the Register agrees that the exemption is not appropriate. To the extent that it is not available, but when ebooks without those functions enabled are available, the blind and disabled should be permitted to circumvent the access controls that prevent them from making the texts perceptible to them. Since a significant percentage of the ebooks on the market deny access to the blind and visually impaired by deactivating the read-aloud function and accessibility through screen readers, access to this significant segment of the population is, for practical purposes, unavailable for a large number of works.

Audio books or books-on-tape are another form of books on the market that are accessible to the blind and visually impaired. Despite questions by the Copyright Office that attempted to clarify the extent to which commercially distributed audio books are available for the same titles in ebook

¹³⁰ <http://www.bookshare.org/web/Legalities.html>.

¹³¹ “OeBF Releases eBook Sales Statistics,” EContent, Sept. 19, 2003 [http://www.econtentmag.com/Articles/ArticleReader.aspx?ArticleID=5495].

format that deny accessibility to the blind and visually impaired, the record remains unclear.¹³² Nevertheless, there is sufficient information to conclude that the availability of audio book formats does not resolve the problem. For instance, AAP's post-hearing response stated that one of its publisher members who generally disables the read-aloud function on ebooks publishes "roughly one-half" of its ebook titles in audio book format as well.¹³³ Therefore, there are some significant number of "inaccessible" ebooks on the market for which there is no audio book substitute.

In addition, AFB noted in its post-hearing response to the same question that while these audio books are useful for certain types of works, e.g., best sellers and novels, they are not available or useful for many other types of books. For instance, textbooks, scientific books or reference books are generally used in a manner that requires the content to be accessed at specific places within the work, and these works are not generally read from beginning to end.¹³⁴

It also may be legitimately assumed that to the extent that an audio book version of a work exists, it is unlikely that a user will opt for the synthesized speech of the read-aloud feature that is available in an ebook reader or a screen reader unless there is a purpose of the use that is not compatible with an audio book. While opponents have stated that the read-aloud feature is sometimes deactivated in order to avoid competition for the same title that is marketed in an audio book format, it appears very unlikely that the former is a marketplace substitute for the latter.¹³⁵ In

¹³² AAP's post-hearing response stated that it could not obtain specific statistics on the number of ebooks that have the read-aloud function deactivated, and therefore was unable to determine how many of these unquantifiable titles were also available in audio book format. PHR Allan Adler, AAP, p. 1-3.

¹³³ *Id* at 2.

¹³⁴ PHR Janina Sajka, AFB, p. 1.

¹³⁵ See T Jonathan Band, May 1, 2003, p. 13 ("Screen readers do not compete with books on tape because of the synthetic quality of the sound").

any case, the issue is not determinative since there is evidence that a substantial number of ebooks that disable accessibility functions are not available in audio book format.

Before turning to the consideration of the statutory factors, one marketplace development that was raised late in the rulemaking warrants some additional discussion. AFB's post-hearing response added some important, albeit cryptic, information. This response noted that the new version of the Adobe Reader 6.0 "incorporates access and read-aloud functionality" and that "[o]ur issues with the Adobe Ebook Reader itself appear to have been substantially resolved with this new release."¹³⁶

This appeared to be a significant marketplace development, but the extent to which it had resolved the root of the problem was unknown. Does this mean that Adobe Reader 6.0 necessarily provides access? Can read-aloud functionality or accessibility to screen readers still be disabled? Were the responses in the AAP post-hearing response on default settings related to Adobe Reader 6.0 or some earlier version? What is the significance in the context of the overall ebook market?

Rather than move forward with incomplete information, the answers were sought in the Adobe Acrobat 6.0 software itself, which packages the work and allows digital rights management preferences to be chosen. A review of this software revealed that the default setting for documents saved in this format is that accessibility is enabled, thereby allowing both read-aloud functionality and accessibility by screen reader software. These defaults can be disabled, however, such that both accessibility options will be disabled. It therefore appears that although the default setting is favorable to accessibility and would make it unlikely that a publisher would *inadvertently* disable the read-aloud and screen reader functions, the fact remains that accessibility can still be denied if a

¹³⁶ PHR Janina Sajka, AFB, p. 1.

publisher chooses to disable those functions. Thus, AFB's statement that its "issues with the Adobe Ebook Reader *itself* appear to have been substantially resolved" (emphasis added) cannot be read as admitting that its "issues" with ebooks in general have been resolved. In addition, there was no evidence that any changes had occurred in other ebook reader formats that would warrant an assumption that the market has abruptly changed course. Therefore, the Register does not find that the problems raised have been resolved by the market. The evidence weighs in favor of an exemption during the next three-year period, and a review of the statutory factors applied to the class of works recommended supports this view.

Under the first factor – the availability for use – the record is clear that a significant number of ebook titles are distributed only in formats that are not perceptible to the blind and visually impaired.¹³⁷ Not only does the evidence introduced by proponents support this conclusion, but the statements by the opponents of an exemption corroborate this fact.¹³⁸ These ebook versions of this work are therefore unavailable for use by the blind and visually impaired. Although other formats of these works are "available" in the marketplace, they are nevertheless unavailable for use to the blind and visually impaired. The existence of a statutory exemption that allows works to be converted into accessible formats is relevant to this inquiry, but it is not determinative. This factor addresses the current availability for use rather than the potential availability for use. At present, this potential is

¹³⁷ AAP points out that it has taken many steps that have assisted in making literary works more available to the blind and visually impaired. R26, at 12-13. The Register recognizes those efforts and commends AAP for its continuing activity in this area. However, the fact remains that for the blind and visually impaired, a substantial proportion of literary works remain, as a practical matter, unavailable.

¹³⁸ Based on AAP's own submissions, it is clear that a substantial number of ebooks are not "accessible" to the blind. AAP reports, for example, that "One such publisher, which indicated that its own default setting for Adobe Reader at this time is 'read-aloud off,' stated that it currently has about 1650 ebook titles available and that about 25% of those titles are also available for purchase as an audiobook." AAP post-hearing response, at 2. Thus, there appear to be at least 1650 ebooks (from one publisher alone) that have "read-aloud off."

all that §121 provides. The analysis must, however, consider the extent to which particular works are currently available in other accessible formats. To that end, the class has been tailored to encompass only the works that are unavailable in any ebook or digital text format that would allow accessibility to the blind and visually impaired.

The second factor looks more particularly to the availability for use of works for nonprofit archival, preservation, and educational purposes. The two considerations dealing with archival or preservation purposes have not been specifically addressed at all in this rulemaking. Although the availability for educational purposes has not been expansively addressed in the record, it may be noted that the Library Associations' comments and testimony have cited concerns for accessibility to required readings by blind and visually impaired students.¹³⁹ Without a clearer record on the nature of this problem, this factor is of limited value.

The third factor requires consideration of the impact that the prohibition on circumvention of technological protection measures applied to copyrighted works has on criticism, comment, news reporting, teaching, scholarship, or research. While there is little specific evidence of an adverse effect on these uses, it is apparent that to the extent that ebooks exist in the market but are not accessible to the blind and visually impaired and cannot be made accessible to them as a result of the prohibition, the prohibition will have an adverse impact on all of these uses by the blind and visually impaired. The record indicates that some significant number of works that exist in ebook format are not currently available in accessible formats. Therefore, but for the prohibition, these works might be available for such uses.

¹³⁹ C33, p. 11.

The fourth factor analyzes the effect of circumvention of technological measures on the market for or value of copyrighted works. While a broad exemption on ebooks generally could create significant harm to this emerging market by facilitating Napster-like distribution of ebooks over the Internet, a refinement of the class will serve to minimize or even eliminate likely adverse effects. As discussed above, by limiting the class to “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 read-aloud function and the enabling of screen readers to render the text into a ‘specialized format,’” the exemption gives publishers control over whether users will be able lawfully to circumvent access controls on ebooks. Publishers, while opposing an exemption, have made no concrete showing that such an exemption would deter them from distributing literary works in ebook form, and it is difficult to imagine that the recommended exemption would provoke such a reaction. To the extent that the exemption may be used, its scope is restricted to a manner which minimizes the potential for unintended consequences.

B. Other Exemptions Considered, But Not Recommended

A number of other proposed exemptions were considered, but for the reasons set forth below, the Register does not recommend that any of them be adopted. In most cases, proponents failed to propose a true “particular class of copyrighted works” and failed to demonstrate that users of such works have been or will be adversely affected in their ability to make noninfringing uses of those works.

1. Proposed class: All works should be exempt for noninfringing uses, e.g., fair use and private uses, and other use-based proposals¹⁴⁰.

¹⁴⁰ C7, C8, C43, and C44.

Many commenters proposed classes of works that were defined primarily or solely by reference to the uses that are made of the works. As noted above and in the 2000 rulemaking, the Register cannot read §1201 as permitting the exemption of a class of works that is based on attributes of the users of those works or uses made of those works. Rather, a class must be defined initially by reference to common attributes relating to the works themselves.

A number of comments declined to specify a “class of works” and instead designated the class to be exempted as “all works.” Some of these comments cited facts which offered anecdotal support for a much narrower class, but did not factually buttress the claim to show the rationale for such a broad classification, except to the extent that the comments were critical of the DMCA generally. Such comments were considered by the Office as support for a narrower class to the extent that they cited any particular evidence of present or likely harm.

In the last rulemaking, after an extensive review of the statutory language and the legislative history, the Register reached the conclusion that the term “class of works,” as applied to this rulemaking process in section 1201, refers to some subset of the section 102 categories of works. The section 102 categories are a “starting point” for any determination of what a particular class of works might be.¹⁴¹ Determining the precise contour of the scope of a “particular class,” so that it is neither too broad or too narrow, is one of the principal functions of the rulemaking process. The factual record established in the rulemaking process creates the means for appropriately tailoring the scope of the class. It is therefore incumbent upon commenters to create a factual record to support a

¹⁴¹ 65 FR at 64560.

proposed exemption. The factual evidence of present or likely adverse effects on noninfringing uses will generally dictate the scope of the exemption. On the other hand, the lack of an evidentiary foundation will undermine the legitimacy of any proposal for an exemption in this process.

Because the proponents of an exemption for “all works” have utterly failed to propose “a particular class of copyrighted works,” but have simply asked, in effect, for a blanket exemption for all works – in effect, an administrative abrogation of §1201(a)(1) – these proposals must be rejected.

2. *Proposed classes: Several, including “Per se Educational Fair Use Works” and “Fair Use Works.”*¹⁴²

Another group of proposals defined the class of works primarily by reference to the type of use of works or the nature of the users, e.g., fair use works. A “use-based” or “user-based” classification was rejected by the Register in the last rulemaking, because the statutory language and the legislative history did not provide support for classification on this basis.¹⁴³ Defining a class in such a manner would make it applicable to all works and would not provide any distinctions between varying types of works or the measures protecting them. If an exemption encompassing all works is to be granted, it is more appropriately a matter for Congressional action. This “use-based” or “user-based” classification is inconsistent with the narrowly tailored authority provided to the Librarian of Congress to exempt particular classes of adversely affected works in this rulemaking process. Had Congress wished to exempt all circumvention when it is for the purpose of

¹⁴² C28, C30(7), C37(2), and C43.

¹⁴³ 65 FR at 64560.

“noninfringing use,” or “fair use,” it could easily have done so. Giving the Librarian authority to exempt “a particular class of copyrighted works” is not designed to accomplish that end, or even to accommodate such an end.

The statutory exemptions in section 1201 contain carefully crafted, use-based and user-based exemptions. Importantly, Congress considered and declined to enact certain use-based exemptions virtually identical to some of the proposals raised in this rulemaking. The statutory text and the legislative history provide no evidence that Congress intended this rulemaking to second-guess congressional determinations. Rather, Congress created this rulemaking as a “fail-safe” mechanism to focus on evidence of adverse effects in particular sub-categories of works that could be ameliorated by appropriately crafted, short-term exemptions.¹⁴⁴ By their nature, use-based exemptions are not limited in time and would require recurring remedial treatment – a scenario at odds with the three-year term of exemptions in this rulemaking. It is also of note that several bills currently before Congress incorporate use-based revisions of section 1201. If Congress finds that an expansion to the existing statutory exemptions is warranted, it will accomplish that through legislation.

Some commenters have packaged their proposed use-based exemptions by referring to certain types of works in an attempt to transform an essentially use-based exemption into a class of works more consistent with the requirements identified in the last rulemaking proceeding. For example, the comment on behalf of Association of American Universities (“AAU”) and other

¹⁴⁴ Commerce Comm. Report at 36.

educational organizations (C28), while critical of the Register's determination that a "class of works" must, as a starting point, be based on attributes of the works themselves, simply lists several subcategories (e.g., scientific and social science databases, textbooks, law reports, and educational audiovisual works) of virtually every section 102 category of works ("the following subcategories of literary works, musical works, pictorial, graphic, and sculptural works, audiovisual works, and sound recordings"). These types of works are proposed as a class of "*Per se* Educational Fair Use Works."¹⁴⁵ One of the fatal flaws in this designation becomes obvious when the types of works listed are matched with this broad use-based proposal. While there might be certain instances in which the unauthorized reproduction or adaptation of a textbook in an educational setting could be a fair use, such a determination would be unusual since the primary market for textbooks consists of students and teachers. The comment assumes that, but fails to show why, the unauthorized use of these types of works will be "per se" fair use. Indeed, the comment sets forth no facts regarding the proposed class of works, the technological measures that are applied to them, or the ways in which the use of those technological measures has adversely affected users of those works or is likely to adversely affect those users. The complete absence of any factual showing precludes serious consideration of this proposal. The same analysis applies to each of the "classes" proposed by AAU.

3. ***Proposed classes: (1) Musical recordings and audiovisual works protected by access control mechanisms whose circumvention is reasonably necessary to carry out a legitimate research project where the granted exemption applies only to acts of circumvention whose primary purpose is to further a legitimate research project.***¹⁴⁶

¹⁴⁵ A similar class was proposed and rejected in 2000. See 65 FR at 64571-72.

¹⁴⁶ C27; R23, pp. 46-47; R28, p. 4.

(2) Musical recordings and audiovisual works protected by access control mechanisms whose circumvention is reasonably necessary to carry out a legitimate research project.¹⁴⁷

We discuss these two related classes together. Both were proposed by Professor Edward Felten, who proposed the second class as an alternative to the first, in the event that “Class 1 does not constitute a valid ‘class of works’ as defined in the Notice of Inquiry.” Professor Felten also observed that although he believes his second proposed class “likely is a viable ‘class of works,’ ... I recognize that the Librarian may find otherwise.” This observation was perspicacious.

Each of Professor Felten’s two proposed classes consist of broad categories of works named in section 102 of the Copyright Act, subject to a condition relating to the intended use by the person circumventing the access control. While it is appropriate in determining a “class of works” to begin with the categories of works set forth in section 102, it is unlikely that a class of works could consist of an entire section 102 category, not to mention large portions of three categories. Here, each of the two proposed classes consists of “musical recordings and audiovisual works,” apparently occupying virtually the entire field of works in the category of audiovisual works (§102(6)) and a substantial part of the categories of sound recordings (§102(7)) and musical works (§102(2)).¹⁴⁸ Thus, unless

¹⁴⁷ Id.

¹⁴⁸ Musical works are necessarily included because all musical recordings will be recordings of musical works.

In fact, it is difficult to understand in principle why Professor Felten has chosen to limit his proposed class to these three section 102 categories of works. Because his concern is with the ability to engage in legitimate research on technological measures that control access to copyrighted works, his proposed exemption logically should include *all* section 102 categories of works, subject to the further use-based conditions set forth in his descriptions of the proposed class.

the remainder of the defining characteristics of the proposed classes of works reduces the scope of the classes to that which is required to comprise a “particular class of works,” Professor Felten’s proposal must be rejected at the outset. Professor Felten does attempt to further delimit each class, but in each case, the proposed class is further narrowed only by reference to the necessary or intended use by persons wishing to circumvent the access controls. In one case, the intended use is to “carry out a legitimate research project,” and the exemption would be available only when the person engaging in circumvention did so primarily in order to carry out such a legitimate research project. Professor Felten appears to recognize that the Librarian may not have the power to restrict the benefit of an exemption only to persons engaging in certain kinds of activity – and he is correct in recognizing that problem. As a result, his alternative proposal removes the condition that the exemption is available only to persons engaging in circumvention primarily in order to carry out a legitimate research project, but retains the restriction that the musical recordings and audiovisual works in the class must be protected by access controls whose circumvention is reasonably necessary in order to carry out a legitimate research project. The difference between the two proposals appears to be that the second applies an objective standard to determine whether intended uses (legitimate research) are likely to be necessary, while the first adds a subjective standard requiring that anybody taking advantage of the exemption actually have such a purpose.

Because each of these proposed classes is defined largely in terms of the purpose of the circumvention, they cannot be considered. They are simply variants of the type of use-based class that is beyond the scope of this proceeding. The purpose or necessity of carrying out a legitimate research project is not an attribute of the works themselves. Nor, contrary to Professor Felten’s assertion, is it even an attribute of the access controls. Presumably, every technological measure that

controls access to copyrighted works is a legitimate subject of research, and presumably circumvention of the access control measure would be a reasonably necessary part of such research.

For purposes of analysis, the Register can accept Professor Felten's assertion that legitimate research such as his own research on the Secure Digital Music Initiative (SDMI) involves noninfringing uses of copyrighted works. The Register also acknowledges Professor Felten's belief that "research on access control technologies provides many benefits to the public and to copyright holders" and his belief that the existing statutory exemptions in §1201 are insufficient to permit researchers such as Professor Felten to engage in their research.¹⁴⁹ The problem is that this rulemaking is not intended to be a vehicle for creation of new exemptions (or expansion of existing exemptions) for particular *uses*, no matter how beneficial they might be.

4. *Proposed class: Any work to which the user had lawful initial access (and variations)*

Some comments repeated or modified the class proposed three years ago by the Digital Future Coalition.¹⁵⁰ Although the Register fully explained why this proposed exemption does not constitute an appropriate class within the context of this rulemaking three years ago,¹⁵¹ commenters sought to re-assert this proposal without providing any factual support whatsoever. Even assuming that the proponents have crafted a proper "class" for purposes of this rulemaking, it is impossible to assess such a proposal without evidence of any harm (or even any attempt to produce evidence of

¹⁴⁹ Professor Felten did not even address §1201(j), which covers security testing.

¹⁵⁰ C28(5), C30(7)

¹⁵¹65 FR at 64572 - 64573 (October 27, 2000).

insubstantial harm or harm that rises beyond mere speculation and conjecture). Moreover, it appears (from the absence even of any assertions to the contrary) that the speculative fear of harm that was the impetus for this proposal three years ago has, in the ensuing period, failed to materialize in the marketplace. Had the fears been justified, it is quite evident that such examples would have been brought to the Copyright Office's attention in this second rulemaking.

While the Register's "assessment of adverse impacts on particular categories of works is to be determined de novo,"¹⁵² that does not mean that decisions as to legal interpretation made in the previous rulemaking are to be ignored. The requirement of a de novo determination means that the Register's evaluation of the facts relating to adverse impacts on particular categories of works must be based on facts presented to the Register in the current rulemaking proceeding, regardless of what facts might have been presented to and found by the Register in previous proceedings. But the decisions made in the previous rulemaking on such fundamental matters as the requirement of (and definition of) a "particular class of works" and the burden of proof that proponents of exemptions must bear are precedential decisions, and they continue to guide the Register in her analysis of proposed class and ought to guide participants in the rulemaking process. That is not to say that the Register will not reconsider such previous interpretations of law in the face of a persuasive legal argument, but no such arguments have been presented to the Register in this proceeding.

The proponents of this exemption appear to have overlooked the fact that an assertion that noninfringing uses have been or will be adversely affected by the prohibition is only the starting

¹⁵² Commerce Comm. Report at 37.

point for the relevant analysis. Identifying what specific noninfringing uses are prevented in relation to which specific class of works is necessary in order to determine either the appropriate scope of the class or whether such use could have been accomplished without the necessity of circumvention. Similarly, the identification of the particular technological measure to which the prohibition applies is necessary to examine whether the use was in fact prevented by the technological measure protecting access or whether such use was prevented by something unrelated to the prohibition, *e.g.*, a measure protecting use or a contractual agreement. Proponents of this exemption also overlooked other required considerations, such as the nature or scope of the adverse effect or the effect of an exemption on the market for such works.

Although one derivation of the proposed exemption argues for an exemption only “during the period of lawful access,”¹⁵³ others are not so limited.¹⁵⁴ These expansive derivations would preclude copyright owners from pursuing “use-facilitating” distribution models that would replicate short-term loan or rental of works at a less expensive price than outright sale of the entire work. As the House Manager’s Report stated, “[i]n assessing the impact of the implementation of technological measures, and of the law against their circumvention, the rulemaking proceedings should consider the positive as well as the adverse effects of these technologies on the availability of copyrighted materials. . . . These technological measures may make more works more widely available, and the process of obtaining permission easier.” The Report noted that, for example, “[t]echnological measures are also essential to a distribution strategy that allows a consumer to purchase a copy of a

¹⁵³ C28(5)(i)

¹⁵⁴ C30(7)

single article from an electronic database, rather than having to pay more for a subscription to a journal containing many articles the consumer does not want.”¹⁵⁵

Not only would the proposed exemption invariably limit the alternatives available to users and consumers of copyrighted works, but it would also most likely increase the prices. No longer could a copyright owner allow time-limited or scope-limited access to works at a portion of the sale price. All loans, rentals, or conditional access would be required to be priced the same as the full sale price of the work, since users would be free to circumvent the access controls that enforced the limitations as to time or scope.

In the final analysis, however, the requested exemption must be denied because proponents of this exemption have failed to identify a “particular class of works,”¹⁵⁶ have failed to specify

¹⁵⁵ House Manager’s Report at 6-7.

¹⁵⁶ As the Register concluded in the previous rulemaking with respect to the same proposed class, in an analysis equally applicable to the current proposal:

“First, none of the proposals adequately define a ‘class’ of the type this rulemaking allows the Librarian to exempt. As discussed above in Section III.A.3, ‘a particular class of work’ must be determined primarily by reference to qualities of the work itself. It cannot be defined by reference to the class of users or uses of the work, as these proposals suggest. Second, although the commenters have persuasively articulated their fears about how these business models will develop and affect their ability to engage in noninfringing uses, they have not made the case that these fears are now being realized, or that they are likely be realized in the next three years.”

particular access controls that have caused adverse effects on noninfringing uses, and have failed to describe what noninfringing uses have been adversely affected. This rulemaking proceeding is not a forum for arguments of pure policy. Any exemption must be based on a factual showing by its proponents. Proponents of this “class” did not even make the attempt.

5. ***Proposed class: Copies of audiovisual works, including motion pictures, and phonorecords of musical sound recordings that have been previously licensed for reproduction but can no longer be reproduced for private performance after the lawful conditions for prior reproduction have been met.***

In contrast to most of the proponents of an exemption for “any work to which the user had lawful initial access” and its variations, one proponent did provide some specificity, and at least arguably formulated a “particular class of works.” The class, identified above, was proposed by a commenter seeking an exemption to permit persons who have obtained digital copies of motion pictures or sound recordings, under agreements that limit the circumstances (typically, a time limitation) under which they may view or hear them, to circumvent access controls that enforce those agreements.¹⁵⁷

The examples cited by the commenter relate primarily to online services that deliver music or movies to subscribers under an agreement that permits the subscriber to obtain access to the work only so long as the subscriber continues to subscribe to the service.¹⁵⁸ The commenter also refers to an announced new product that would permit time-limited access to motion pictures on DVDs by

¹⁵⁷ C30(1).

¹⁵⁸ See C30, pp. 3-4 (citing pressplay, Musicnet, and Movielink).

treating the DVD with a “Reading Inhibit Agent” that is activated when the DVD is first removed from its package and that causes the DVD to be unplayable after a certain period of time.¹⁵⁹

The proponent of this exemption states the question as follows: “The fundamental question here is whether the Copyright Act gives copyright holders the right to destroy or render unusable lawfully made copies or phonorecords belonging to others. The answer, clearly, is ‘no’.”¹⁶⁰ The commenter seeks to exempt such works from the prohibition on circumvention so that users of such works would be able to continue to play them even when the agreed-on conditions for their use no longer apply.

In reality, this proposal appears to be a variation on the proposed class of “any work to which the user had lawful initial access,” reworked in an attempt to comply with the requirements for stating a “particular class” and supported by some examples of actual instances where technological measures have cut off access to works for which access was initially granted.

The Register is skeptical whether the commenter has in fact stated a “particular class of copyrighted works.” In an effort to meet the requirements of a “particular class,” he has limited the proposed class to audiovisual works and sound recordings, two section 102 categories of works, that have access controls that are activated under certain circumstances. However, the fact that the class

¹⁵⁹ *Id.*, p. 4.

¹⁶⁰ C 30(1), p. 4.

appears in reality to be defined by the use that (1) is intended by the user and (2) activates the access control, is troublesome and raises the question whether this is, in reality, a use-based exemption. Moreover, although the proponent has chosen to limit the proposed class to a subset of two section 102 categories, the situation that his proposal addresses is one that in principle can occur, and most likely in reality does occur, with respect to most or all categories of works. Just as the proposal to exempt “any work to which the user had lawful initial access” failed to state a “particular class,” in substance if not in form this reformulation may suffer from the same shortcomings.

Because there are other grounds to reject this class, the Register declines to determine whether a “particular class” has in fact been proposed in this case.

The proponent asserts that an exemption for this class is necessary in order to permit the noninfringing use of private performance. It is, of course, true that a private performance is, in general, noninfringing. What the proponent appears to ignore is that it appears that in the cases which the proponent has raised, the performance probably would be unlawful, since it appears that in each case the user would be performing the work in violation of a term of the agreement he entered into in order to gain access to the work in the first place. Although the version of §1201 approved by the House Commerce Committee would have permitted an exemption from the prohibition on circumvention only in order to permit “lawful uses”¹⁶¹ – and therefore probably would have required rejection of this proposed exemption because it seeks to enable unlawful, albeit

¹⁶¹ Commerce Committee Report at 3.

noninfringing, uses – §1201 as enacted requires that the inquiry focus on “noninfringing uses.”

Therefore, it appears that the proposal has passed this threshold.

The Register reaches a different conclusion, however, with respect to the substantiality of the adverse effect on noninfringing uses. The Register cannot place a high value – or, indeed, any value at all – on the desire of someone to get more than he bargained for. A consumer who enters into an agreement to pay a particular sum for the right to listen to or view a copyrighted work for a limited period of time can have no reasonable expectation of continued access once that time has expired. Just as a person who rents a video has no right to continue possession and use of that video once the rental period has expired, a person who knowingly purchases a DVD that is designed – and priced – to last for only a few days (perhaps as long as the typical video rental) cannot complain when the DVD is no longer viewable after that time has expired. A person who subscribes to an internet music service and agrees that he will have access to the digital phonorecords he receives only as long as his subscription is current has no right to complain if he no longer has access once the subscription expires.

The calculus might be different if there were evidence that we are living in a “pay-per-use” world. But the record in this proceeding does not offer any indication that we are approaching such a world.¹⁶² To the contrary, the works that are the subject of this proposed exemption – motion

¹⁶² In this respect, the situation does not seem to have changed significantly since the last rulemaking, where the Register observed that “The record in this proceeding does not reveal that ‘pay-per-use’ business models have, thus far, created the adverse impacts on the ability of users to make noninfringing uses of copyrighted works that would justify any exemptions from the prohibition on circumvention. If such adverse impacts occur in the future,

pictures and sound recordings – are widely available for purchase in formats (CDs, DVDs, videocassettes and, recently, downloads of phonorecords) that have no time restrictions on use.

In fact, as noted in the immediately preceding section, the types of services that are the targets of this proposed exemption are exactly the type of “use-facilitating” services that the DMCA was enacted, in part, to encourage. As the legislative history relates,

“an access control technology under section 1201(a) would not necessarily prevent access to a work altogether, but could be designed to allow access during a limited time period, such as during a period of library borrowing. Technological measures are also essential to a distribution strategy that allows a consumer to purchase a copy of a single article from an electronic database, rather than having to pay more for a subscription to a journal containing many articles the consumer does not want.”¹⁶³

The Register cannot see how users of copyrighted works could be adversely affected by the offering of differentiated services. On-line service offerings do not place users in a “take-it-or-leave-it” negotiating position, but add to the users’ options in ways that were not available at the time the DMCA was enacted.

The Register’s recommendation is consistent with, and based on, the factors in §1201(a)(1)(C). First, with respect to the exemption’s impact on availability for use, motion pictures and sound recordings are widely available in a variety of formats. It is likely that the

they can be addressed in a future rulemaking proceeding.” 65 FR at 64564.

¹⁶³ House Manager’s Report, at 7.

proposed exemption would actually decrease the variety of means in which these works are made available. Copyright owners would hesitate to continue offering such works for transmission on the Internet if they could not be assured that they could rely on the technological measures used to protect various business models. No impact on nonprofit archival, preservation, and educational uses or criticism, comment, news reporting, teaching, scholarship, or research has been alleged. The proposed exemption probably would have an adverse effect on the market for or value of copyrighted works, for the reasons outlined above. It could easily eliminate the market for conditional downloads and thus would negatively affect the variety of options in the market for copyrighted works.

6. Proposed class: “Thin copyright” works

As in the previous rulemaking, the AAU proposed an exemption of a class of works consisting of “thin copyright works.”¹⁶⁴ This proposal suffers from the same flaws as the proposals to exempt classes such as “fair use works.” Although it was stated that these “thin copyright” works contain “limited copyrighted subject material,” there was no showing of any present or likely harm to users wishing to engage in noninfringing uses. While the “class” of works was narrowed, in one derivation, to certain types of works “most often” used in the educational environment, there was no showing that any such works were unavailable in an alternative, unprotected format. In fact, it seems likely that many of these works are currently available in unprotected formats, e.g., encyclopedias, dictionaries and newspapers. Without any allegation of an adverse effect during the relevant three-year period, any specific allegation of any particular technological measure protecting access to

¹⁶⁴ C28(3) &(4).

works, or any discussion of the unavailability of the material cited in unprotected formats, there is little basis for consideration of this proposal by the Register. Circumstantially, it is informative to note that no evidence was presented that the fears anticipated during the previous three-year period have materialized.

7. *Proposed class: Public domain works or works distributed without restriction.*

This formulation of the proposed class takes into consideration several comments which made essentially the same proposal, seeking an exemption for works that are either public domain, open source or “open access,” but to which access controls are applied.¹⁶⁵ Aside from the proposal relating to public domain material on DVDs (discussed below), there was a paucity of information related to other public domain works. The commenters addressing open source and open access works provided absolutely no information in support of their requests. Of the few commenters addressing public domain works, only one cited even a few ebooks, e.g., Robert Lewis Stevenson’s *Treasure Island* and collected poems of Keats and Whitman, that contained some use restrictions.¹⁶⁶

What the comments relating to public domain works appear to have overlooked is that if a work that is entirely in the public domain is protected by an access control measure, the prohibition on circumvention will not be applicable. Section 1201 only applies to “a work protected under this title” [title 17]. A wholly public domain work is, therefore, no longer protected under title 17 and any protection measures on such a work do not implicate section 1201(a)(1). While a wholly public

¹⁶⁵ C2, C3, C14(1), C22, and C35(4).

¹⁶⁶C14(1).

domain work is not protected by copyright and also, therefore, is not protected by section 1201, there is nothing that precludes one from placing a technological access or use control on a public domain work. When a work enters the public domain, there is no affirmative obligation for an author, publisher or distributor to offer free access to that public domain work. The author, publisher or distributor is simply precluded from claiming copyright on a public domain work and is precluded from using section 1201(a)(1) to prevent circumvention of technological protection measures placed on a public domain work. If the works at issue are, as the commenter states, public domain works without any new original authorship, then neither section 106 nor section 1201 apply and no exemption is necessary.

Moreover, there is considerable doubt whether the Librarian has the power to grant an exemption the sole purpose of which is to enable “noninfringing” uses of public domain works.¹⁶⁷ The purpose of this rulemaking is to determine whether the prohibition on circumvention has adversely affected users “in their ability to make noninfringing uses under this title *of a particular class of copyrighted works.*” (Emphasis added.) Because public domain works are not copyrighted works, it does not appear that adverse effects on users’ abilities to use public domain works can be considered.

Even if such adverse effects could be considered, however, proponents of an exemption have not made their case. It is, of course, possible that a public domain work may exist side-by-side with copyrighted material, e.g., on a CD-ROM, and that access controls may be applied to all the content

¹⁶⁷ Of course, since a public domain work cannot be infringed, all uses of such works will be noninfringing.

on the medium. But outside of the context of motion pictures on DVDs, (discussed below), the proponents of a “public domain” exemption did not address that scenario, and if an exemption had been sought for that scenario, further information would be required. For example, is an access control preventing these uses? Are the public domain works in question available in other non-protected formats? Even assuming that the cases cited in support of a “public domain” exemption were to establish that the cited works were bundled with copyrighted works and protected by access controls, the works of Stevenson, Whitman and Keats are all currently available in alternative non-protected formats. As long as this is the case, noninfringing uses appear to be unaffected by the prohibition on circumvention. Although the “digital” version of a work may prevent certain noninfringing uses of that particular copy, that fact alone does not justify an exemption if other versions are unrestricted. Unless one can show that a particular noninfringing use can only be accomplished by using the digital version, the existence of a public domain or other work in alternative, unprotected formats provides a safety valve for noninfringing uses. Users should recognize that works in digital formats may be protected by the copyright owner differently than hard copy or analog versions of the same works and should consider this in making their purchasing decisions.

In the DVD context, proponent Electronic Frontier Foundation (EFF) provided a series of lists of audiovisual works that EFF contended are in the public domain, some of which EFF alleged are distributed bundled with copyrighted material.¹⁶⁸ However, opponents of the proposed exception indicated that many if not all the works named by the proponent are available in unencrypted (VHS)

¹⁶⁸ C35(4), TGwen Hinze, May 15, 2003, p. 155-56, PHR Gwen Hinze, EFF.

format, are not bundled with copyrighted material, are themselves still subject to copyright protection, or are not encrypted by the Content Scrambling System (“CSS”) or otherwise subject to an access control.¹⁶⁹

Thus, in the final analysis, as with the other categories of works, proponents have provided virtually no examples of public domain audiovisual works that are protected by access controls and not otherwise available. There is insufficient evidence to demonstrate that any problem exists and at most, to the extent that any problem might exist, the record leads to the conclusion that it is not more than de minimis.

8. *Proposed class: Musical works, sound recordings, and audiovisual works embodied in media that are or may become inaccessible by possessors of lawfully-made copies due to malfunction, damage, or obsolescence.*

Most of the commenters proposing this class or some variant of it concentrated their factual discussion on musical works and/or sound recordings.¹⁷⁰ However, two commenters¹⁷¹ specifically addressed backup copies of audiovisual works on DVDs subject to access controls.

With respect to musical works and sound recordings, the comments indicate that the proponents of the exception want to be able to transfer sound recordings and musical works from

¹⁶⁹ R23, T Steven Metalitz, May 15, 2003, p. 187; PHR Steve Metalitz, Joint Reply Commenters.

¹⁷⁰ C4, C6, C39(1), C48, and C49.

¹⁷¹ C47 and R21.

one medium to another. Some commenters also believe that they should be able to convert these works to new or different formats or to back up the works for archival purposes, e.g., to “refresh” the media from time to time to ensure that the works are available both for their use and for future generations.¹⁷²

However, 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.¹⁷³ Concerns about the practical difficulties or the copyright implications of copying works in order to achieve interoperability with new devices are not within the scope of this rulemaking unless there is a technological measure protecting access to the work. 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.

The case made for audiovisual works on DVDs is entirely different. The Content Scrambling System, commonly known as CSS, has been identified as the particular access control protected by the prohibition against circumvention. This encryption renders DVDs unplayable in a device without corresponding decryption technology.¹⁷⁴

¹⁷² See C4, C6, C48, and C49.

¹⁷³ See the discussion below of rejected class no. 18 (“Published sound recordings of musical works on compact discs that use technological measures that prevent access on certain playback devices”).

¹⁷⁴ In Universal City Studios v. Corley, 273 F.3d 429 (2d. Cir. 2001), the United States Court of Appeals for the Second Circuit described CSS as follows:

“The movie studios were reluctant to release movies in digital

form until they were confident they had in place adequate safeguards against piracy of their copyrighted movies. The studios took several steps to minimize the piracy threat. First, they settled on the DVD as the standard digital medium for home distribution of movies. The studios then sought an encryption scheme to protect movies on DVDs. They enlisted the help of members of the consumer electronics and computer industries, who in mid-1996 developed the Content Scramble System ('CSS'). CSS is an encryption scheme that employs an algorithm configured by a set of 'keys' to encrypt a DVD's contents. The algorithm is a type of mathematical formula for transforming the contents of the movie file into gibberish; the 'keys' are in actuality strings of 0's and 1's that serve as values for the mathematical formula. Decryption in the case of CSS requires a set of 'player keys' contained in compliant DVD players, as well as an understanding of the CSS encryption algorithm. Without the player keys and the algorithm, a DVD player cannot access the contents of a DVD. With the player keys and the algorithm, a DVD player can display the movie on a television or a computer screen, but does not give a viewer the ability to use the copy function of the computer to copy the movie or to manipulate the digital content of the DVD.

"The studios developed a licensing scheme for distributing the technology to manufacturers of DVD players. Player keys and other information necessary to the CSS scheme were given to manufacturers of DVD players for an administrative fee. In exchange for the licenses, manufacturers were obliged to keep the player keys confidential. Manufacturers were also required in the licensing agreement to prevent the transmission of 'CSS data' (a term undefined in the licensing agreement) from a DVD drive to any 'internal recording device,' including, presumably, a computer hard drive.

"With encryption technology and licensing agreements in hand, the studios began releasing movies on DVDs in 1997, and DVDs quickly gained in popularity, becoming a significant source of studio revenue. [*Footnote: By the end of 1997, most if not all DVDs that were released were encrypted with CSS. Moreover, DVD players were projected to be in ten percent of United States homes by the end of 2000. In fact, as of 2000, about thirty-five percent of one studio's worldwide revenue from movie distribution was attributable to DVD sales and rentals.*] In 1998, the studios

The proponents of this exemption desire to make backup copies of their DVDs for a variety of purposes: they claim that DVDs are inherently fragile and subject to damage; they are concerned about loss or theft of the original during travel; they wish to duplicate collections to avoid the burdens and risks of transporting DVDs; they assert that some titles are out of print and cannot be replaced in case of damage; and they claim that the duration of a DVD's lifespan is limited.¹⁷⁵

Since there is no question that many DVDs are currently distributed with CSS as a technological measure protecting access to the works contained on the medium and because the comments and testimony have established that a significant number of users say they have been experiencing problems with DVDs, the inquiry must examine the nature of these problems to determine whether the prohibition is adversely affecting noninfringing uses. The common denominator in all of the comments endorsing an exemption for DVDs appears to be the need to make backups of the original copy due to the alleged fragility of the medium. The question therefore becomes whether making a backup copy of a DVD is a noninfringing use.

secured added protection against DVD piracy when Congress passed the DMCA, which prohibits the development or use of technology designed to circumvent a technological protection measure, such as CSS. The pertinent provisions of the DMCA are examined in greater detail below.”

273 F.3d at 436-37.

¹⁷⁵ See R21 and T Robert Moore, May 2, 2003, p. 18 et seq.

The creation of a backup copy of a work implicates the reproduction right. While the Copyright Act contains an exception 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.¹⁷⁶ 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

¹⁷⁶ Sony Corp. of America v. Universal City Studios, Inc., 464 U.S. 417 (1984).

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 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.¹⁷⁷ 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.

¹⁷⁷ See, T Shira Perlmutter, May 2, 2003, p. 52; T Dean Marks, May 15, 2003, p. 42.

9. Proposed class: Audiovisual works released on DVD that contain access control measures that interfere with the ability to defeat technology that prevents users from skipping promotional materials.

This class as put forth by its proponent would encompass all access controls that interfere with private performance, including the ability to skip promotional material,¹⁷⁸ but the substance of the comment addresses only unskippable promotional materials. As the proponent succinctly states the problem, “Movie studios are able to make certain DVD content ‘unskippable’ during playback. Some studios have abused this feature by preventing the skipping of advertising shown prior to the start of the feature presentation.”¹⁷⁹

Since no one asserts that the technology which deactivates the fast-forward function of DVD players (UOP – or user operation – blocking) is an access control (and, therefore, the §1201(a)(1) prohibition would not extend to circumvention of the UOP blocking feature) – the only measure which might implicate the prohibition is CSS. Therefore, the central question is: must CSS be circumvented in order to disable the UOP blocking on a DVD or on the player?

Although the disabling of the fast forward function is clearly upsetting to some consumers, it is not, on its own, an access control within the meaning of subsection 1201(a). The users gain access to the work without the application of any information, process, or treatment– they simply

¹⁷⁸ C35(3).

¹⁷⁹ C35, p. 25.

have to wait for the promotional material to run its course.¹⁸⁰ However, the proponents argue that defeating the UOP block cannot be accomplished without the prerequisite step of circumventing CSS. Thus, they would require an exception to circumvent CSS in order to reactivate the fast forwarding function of their DVD players.

Of course, if the UOP block can be defeated without circumventing CSS, no exemption is needed as the UOP block is not an access control protected by §1201(a)(1). On the record established, the Register must conclude that it is not necessary to circumvent CSS in order to disable or bypass the technology that prevents fast forwarding through the promotional material on DVDs. No one has proved that circumvention is necessary and from the evidence in the record it appears that it is technologically possible to re-enable the fast forwarding functions of a player without circumventing CSS.¹⁸¹

¹⁸⁰ Section 1201(a)(3)(B) provides: “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.”

¹⁸¹ One commenter asserts that “for all practical purposes” one must circumvent the CSS, but also admits that the controls on the player may be bypassed without circumventing CSS (PHR Robert Moore, 321 Studios). Two other witnesses assert that CSS need not be circumvented (PHR Bruce Turnbull, DVD CCA; PHR Dean Marks, AOL Time Warner), and the chief proponent of the exception admits uncertainty on this point (PHR Gwen Hinze, EFF).

In response to a post-hearing question on this issue,¹⁸² there was generally unanimity that the fast-forwarding function can be disabled without circumventing CSS. AOL Time Warner's response stated that while AOL Time Warner's works do not limit fast forwarding, it is their understanding that this functionality can be restored without circumventing CSS.¹⁸³ The DVD Copy Control Association's (DVD CCA) reply to a related question¹⁸⁴ stated that the CSS license has no requirement that relates to this particular function and that it is the understanding of the DVD CCA that "there would be no effect on the CSS-related performance of a DVD playback system or DVD disc due to modification of a playback system to ignore the UOP blocking commands."¹⁸⁵ The Joint Reply Commenters' answer to the latter question was similar,¹⁸⁶ stating that, to the best of the commenters' knowledge, it was technologically possible to modify a licensed DVD player to ignore the UOP functions. The reply added that because the navigational functions of a DVD are not encrypted and are unrelated to the CSS license, they are not aware of any way in which such enabling of the UOP functionality would impact the performance of a CSS-encrypted DVD other

¹⁸² "Can the disabling of the fast-forward function or the UOP blocking commands of a DVD be reversed or altered, thus reactivating the fast-forward function, without decrypting CSS?"

¹⁸³ PHR Dean Marks, AOL Time Warner, p. 2.

¹⁸⁴ "Is it technologically possible for a person to modify a licensed DVD player to ignore the UOP blocking commands in order to reactivate the fast-forward function of a lawful copy of a DVD? If so, would the performance of a CSS-encrypted motion picture on that lawful DVD be affected or prevented by such a modification? Does such a modification of the player affect the legal status of the performance of the motion picture on the DVD, either under section 106 or section 1201(a)(1)? Please explain fully."

¹⁸⁵ PHR Bruce Turnbull, DVD CCA, p. 5.

¹⁸⁶ PHR of the Joint Reply Commenters at 5-6.

than enabling these navigational tools. The Joint Reply Commenters also stated that in their view, such a modification would have no effect on the legal status of the performance of a motion picture on a DVD under either § 1201(a)(1) or under § 106.¹⁸⁷ The post-hearing response from the Electronic Frontier Foundation (EFF) stated that even if the UOP function were not encrypted, it would not be possible to alter these functions on the DVD since such discs are distributed as “read only.” Yet, EFF stated that it is possible to modify a DVD *player* to ignore the fast-forwarding restriction without violating § 1201(a)(1) as long as this restriction was not encrypted within CSS. Since it has been unrebutted in the record that UOP blocking is not encrypted within CSS and that enabling navigational functionality in a player does not violate the prohibition on circumvention, it appears that the intended use can be accomplished without circumvention of CSS.

321 Studios’ post hearing response provides additional, albeit qualified, support for the conclusion that it is technologically possible to enable the fast-forwarding capability by modifying a DVD player.¹⁸⁸ While 321 Studios corroborated EFF’s statement that the DVD disc itself cannot be modified (without the additional act of reproducing the disc and deleting the UOP directive on the copy – a function performed by software marketed by 321 Studios), 321 Studios agreed that it is theoretically possible to modify a DVD player to ignore the UOP blocking. 321 Studios added, however, that this is not practical for users since “such a modification would require a substantial reverse engineering effort.”¹⁸⁹

¹⁸⁷ *Id.*

¹⁸⁸ PHR Robert Moore, 321 Studios, p. 5-6.

¹⁸⁹ *Id.* It is worth noting that 321 Studios has an interest in asserting that users have to copy the DVD itself, and circumvent CSS in doing so, rather than modify their players,

While the record in this rulemaking is not as clear as the Register would like it to be, the Register concludes that technological modification of a DVD player to ignore or bypass navigational blocks such as fast forwarding can be accomplished without circumventing CSS. Since this noninfringing use can be accommodated without an exemption and is therefore not adversely affected by the prohibition, the Register finds that an exemption is unwarranted.

Even if it were not possible to disable the UOP block without also circumventing CSS, an exemption for this particular use would not be warranted. Even though a quantitatively substantial number of commenters (over 20 percent of those submitting comments) expressed annoyance with being prevented from fast forwarding through advertising material, it did not amount to a qualitatively significant adverse effect. At most, being forced to play (not necessarily watch) the promotional material constituted no more than a mere inconvenience for users in possession of such works.¹⁹⁰ While such fast forwarding could be reasonably assumed to be a noninfringing use, simply showing that any noninfringing use is adversely affected is not determinative. At a minimum, the adverse effect on the noninfringing use must be more than *de minimis* and more than a mere inconvenience.

because the software marketed by 321 Studios (potentially in violation of §§1201(a)(2) or 1201(b)), or both) facilitates the former act.

¹⁹⁰ It is also relevant to note that there was no evidence produced what percentage of DVDs contain this UOP blocking function, but proponents certainly failed to indicate that the practice is widespread or even common. At least one studio asserted that it has never used this function on any release. The scope of the use of this function by other studios is unclear, but to the extent that consumers dislike this feature, the market is likely to affect its continued implementation.

Although the Register understands the proponents' objections to DVDs which have the fast forward feature disabled, she will not recommend an exemption based on a showing of *de minimis* inconvenience. This decision is reinforced by an application of the four §1201(a)(1)(C) factors. Because the only access control alleged to be involved is CSS, granting an exemption presumably would permit circumvention of CSS.¹⁹¹ The Register has rejected exemptions that would permit circumvention of CSS in the past¹⁹² and, elsewhere in this recommendation, she continues to reject such exemptions. Granting an exemption in this context would not in any way increase the availability of copyrighted works. The Register can discern no impact on nonprofit archival, preservation, and educational uses or on criticism, comment, news reporting, teaching, scholarship, or research. And motion picture studios were willing to distribute copies of motion pictures in the DVD format in part because of the protection offered by CSS.¹⁹³ Permitting circumvention of CSS could, therefore, have a negative impact on the market for or value of motion pictures on DVDs, since motion picture studios might have a reduced incentive to utilize that format.

In sum, the adverse effects on the noninfringing use must be balanced with the effect of circumvention on the market for or value of the copyrighted works. Where the harm is a mere inconvenience experienced with an unknown – but apparently small – quantity of available DVD titles and an exemption might entail allowing circumvention of the access control contained on a

¹⁹¹ This, of course, is not necessarily the case, since it has not been established that it is necessary to circumvent CSS to disable UOP blocking. But for purposes of the following analysis, the Register assumes that is the case.

¹⁹² 65 FR at 64567-70.

¹⁹³ R23, pp. 7, 22, 36.

majority of DVDs, the balance weighs against an exemption. The benefit to users is the avoidance of a mere inconvenience. The harm, on the other hand, would be to threaten the security of the DVD format. This would seem to be an instance far better suited to a marketplace solution than an exception to broad statutory protection. Finally, as noted above, it appears likely, although not certain, that it is not necessary to violate the prohibition against circumvention in order to disable UOP blocking. For these reasons, the Register does not recommend an exemption.

10. Proposed class: Ancillary audiovisual works distributed on DVDs encrypted by CSS.

This is a slight rewording of an exception proposed and advanced primarily by one commenter,¹⁹⁴ although at least one other commenter proposed a somewhat similar class.¹⁹⁵

As discussed above, CSS is an access control as that term is defined in subsection 1201(a). In addition to the evidence presented, it is virtually uncontested that there are ancillary works on DVDs that are not available in another, unprotected format.¹⁹⁶ As the Register explained in the previous rulemaking, such ancillary material includes “matter that is available along with the motion picture in DVD format but not available in videotape format, such as outtakes, interviews with actors and directors, additional language features, etc.”¹⁹⁷

¹⁹⁴ C21.

¹⁹⁵ C5.

¹⁹⁶ C21 and R23.

¹⁹⁷ 65 FR at 64568 n.13.

The proponent of an “ancillary works” exemption asserts that the use of CSS on DVDs reduces the availability of ancillary audiovisual works for nonprofit archival, preservation and educational purposes, but offers no facts to support the assertion. His primary point, however, is that CSS prevents “quotation, for purposes of commentary and criticism, of ancillary audiovisual works.”¹⁹⁸ “Quotation” in this context means reproduction of portions of the ancillary audiovisual material, in particular by reviewers who post their reviews of motion pictures and ancillary materials on websites.¹⁹⁹

There is little doubt that the desired use for comment and criticism by weblog critics can be within the fair use exception.²⁰⁰ It is conceded by the key proponent of this exception that users, nonetheless, have the ability to make copies of these works by circumventing the Macrovision copy control protection to record the analog output of DVD players.²⁰¹ The record also indicates that analog copies can be made by using digital camcorders to record the rendering of these works on an ordinary television screen.²⁰² Because users already have access to an analog copy of the work, they have the ability to engage in the desired activity. Nonetheless, the proponents of this exception seek the ability to circumvent CSS so as to be able to use direct digital-to-digital copies of the work for

¹⁹⁸ C21, p. 9.

¹⁹⁹ See C21, p. 14.

²⁰⁰ Of course, the specifics of each case, such as the length of the portion of the work that is copied and the need to copy that amount in relation to the purpose, can alter the outcome of the fair use analysis.

²⁰¹ C21.

²⁰² T Fritz Attaway, May 2, 2003, p. 69 et seq.

their comment and criticism. They assert that the improved quality of the picture and sound is constitutionally mandated and is particularly desirable for connoisseurs of motion pictures.²⁰³

Existing case law is clear that there is “no authority for the proposition that fair use, as protected by the Copyright Act, much less the Constitution, guarantees copying by the optimum method or in the identical format of the original.”²⁰⁴ That is not to say that the proposed use is necessarily infringing. Indeed, the use of direct digital-to-digital copies described in these comments may well constitute fair use.

In the three years since the last rulemaking, the availability of DVDs and their ancillary audiovisual works has increased dramatically.²⁰⁵ Many factors are likely to have combined to generate that trend. There is little doubt that the prohibition on circumvention has contributed to rightholders’ confidence in the security of the DVD format and that such confidence has been a factor in the increased availability of works in that format. Fears of piracy of works in digital format are not hypothetical – the scope of that problem is the subject of extensive public discussion and is frequently reported in major media.

The balance of interests pits the incremental benefit of improved sound and picture quality of ancillary material for purposes of comment and criticism against the risks of increased unauthorized

²⁰³ T Ernest Miller, May 15, 2003, p. 170, 201 et seq.

²⁰⁴ Universal City Studios v. Corley, 273 F.3d 429, 458 (2d. Cir. 2001) (“Corley”).

²⁰⁵ R23.

reproduction and distribution of all of the material on DVDs. In addition, there was little specific evidence of why this material was required to be reproduced in enhanced digital format in order to comment or criticize. Without such a showing of verifiable need for this format and the specific types of works for which such comment or criticism is needed, the commenters present a balance of interests with little substance. As the United States Court of Appeals for the Second Circuit has concluded, “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 technique or in the format of the original.”²⁰⁶ Fair use allows reproduction of an amount, both quantitatively and qualitatively, necessary to achieve the purpose of the use. While it is true that CSS prevents digital reproduction through a digital output and therefore may prevent some fair uses, without specific information about why this digital content is necessary for the purpose, without information about what type of audiovisual or ancillary work is needed for this purpose, and without specific information about the purpose and character of the use, it is impossible to assess the merits of the proposal. Even with that information, the harm to the potential market for or value of these works would have to be considered. Given the risks of unauthorized reproduction and distribution over the Internet, it is obvious that a compelling case would have to be made in order to outweigh the potential adverse effects.

A review of the factors set forth in §1201(a)(1)(C) confirms that the case has not been made for an exemption. While it appears to be true that many of the ancillary works in question are available only in the DVD format, they likely would not exist at all but for that format, due both to

²⁰⁶ Corley, 273 F.3d at 459.

its greater storage capacity over VHS tapes and the greater security it offers. As the Register noted in the previous rulemaking:

[T]his ancillary material traditionally has not been available in copies for distribution to the general public, and it appears that it is only with the advent of the DVD format that motion picture producers have been willing or able to include such material along with copies of the motion pictures themselves. Because of this and because motion picture producers are generally unwilling to release their works in DVD format unless they are protected by access control measures, it cannot be said that enforcing section 1201(a)(1) would, in the words of the Commerce Committee, result “in less access, rather than more, to copyrighted materials that are important to education, scholarship, and other socially vital endeavors.” See Commerce Comm. Report, at 35. Thus, it appears that the availability of access control measures has resulted in greater availability of these materials.²⁰⁷

As noted, apart from a bald assertion of harm, no case has been made that the availability for use of ancillary works for nonprofit archival, preservation, and educational purposes has been adversely affected. While the proponents have demonstrated inconvenience with respect to some uses involving criticism and comment, the Register’s analysis has shown that acceptable alternatives exist to permit “quotation” by those who wish to review such material. Finally, permitting circumvention of CSS in order to enable digital “quotation” would be likely to have an adverse effect on the availability of such works on DVDs to the public. As noted above, the motion picture industry’s willingness to make audiovisual works available in digital form on DVDs is based in part on the confidence it has that CSS will protect it against massive infringement. Encouraging circumvention of CSS even for laudable goals threatens to undermine that confidence.

²⁰⁷ 65 FR at 64568 fn. 13.

Given the vague benefit and the much clearer large potential harm, the Register believes that the equities weigh against the proposed exemption.

11. *Proposed class: Audiovisual works stored on DVDs that are not available in Region 1 DVD format and access to which is prevented by technological measures.*

An exemption for this class of works was proposed by several commenters,²⁰⁸ although this particular formulation, which articulated the issue presented by the comments collectively, was proposed by a single commenter.²⁰⁹ Additionally, there were over one hundred reply comments received in this rulemaking in support of the proposed exception.²¹⁰

Implicit in the proposed class is either the assumption that region coding is an access control or the assumption that it is necessary to circumvent an access control (CSS) in order to disable the region coding. Since the Register previously concluded that region coding is an access control,²¹¹ and since motion picture studios who use region coding and oppose the exemption appear to agree that it is an access control²¹² – there is no reason to consider whether access to the region coding function itself is blocked by CSS.

²⁰⁸ See C15(1), C17, C35(2), and C36.

²⁰⁹ See C35(2).

²¹⁰ See C83-203.

²¹¹ 65 FR at 64569.

²¹² See R23, pp. 25-27, R19, p.10.

There are two components to the region coding system – the region code flag on a DVD and the region code check conducted by a licensed DVD player. The region code check performed by a licensed player is designed to prevent the player from rendering the content of a DVD unless the correct region code flag is found on that DVD. In the ordinary course of its operation, the process of applying the flag to the region code check results in access being granted where the region of the disc matches the region of the player.²¹³

It is uncontested that merely watching a lawfully obtained copy of a non-region 1 DVD is a noninfringing use.²¹⁴ So, the next step in the analysis is to consider whether the proponents have demonstrated that the prohibition is adversely affecting this noninfringing use.

²¹³ The comments contain reference to a new type of region coding, namely enhanced region coding. The evidence is that to the limited extent this technology is used to protect DVDs, it is only used on region 1 DVDs, which U.S. viewers need not circumvent to have access to the work, as licensed players sold in the U.S. are set to region 1. Therefore, it does not appear to be relevant to this rulemaking, which is concerned only with impacts in the United States. Moreover, the purpose of enhanced region coding is to prevent the playback of single region coded DVDs on multi-region players. Persons with multi-region players are able to watch non-region 1 DVDs, but multi-region players appear to violate the prohibition on circumvention. They are, however, widely available in the online marketplace, and there is no indication that copyright owners or others have made any efforts to stop their distribution or use. Persons who use multi-region players to watch non-region 1 DVDs probably would be circumventing a technological protection measure that prevents access. When enhanced region coding is employed, a person with a multi-region player would not be able to view region 1 DVDs.

²¹⁴ See PHR Steve Metalitz, Joint Reply Commenters., Aug. 5, 2003; PHR Bruce Turnbull, DVD CCA. Those comments note that a public performance of the work could be infringing. This is not the type of activity in which the proponents have asserted an adverse effect. Accordingly, the analysis of this proposed exception is based upon a model of private viewing.

In the course of this rulemaking, the Office received more comments on this proposed exception than any other. As already noted, over one hundred of those comments were in support of the proposed exception. The overwhelming majority of those comments were from individuals who had acquired DVDs from a region outside the U.S. and then encountered difficulty in playing those DVDs on devices purchased in the U.S.

In the previous rulemaking, the Register determined that region coding did not adversely affect noninfringing uses because of the options available to those who wish to play foreign content, such as VHS versions of the works, non-region 1 DVD players, and the ability to reset the region code setting of DVD-ROM drives in computers.²¹⁵ If VHS substitutes are still available today, it is reasonable to presume that they will be substantially less so in the next three years.²¹⁶ However, while the option of analog alternatives may diminish, there continue to be options available to consumers who wish to view non-region 1 DVDs. A user may still obtain DVD players for other regions from which the user wishes to watch DVDs.²¹⁷ A more practical approach is the ready availability of DVD-ROM drives for computers²¹⁸ which can be switched from one region to another

²¹⁵ 65 FR at 64569.

²¹⁶ See, T Shira Perlmutter, May 2, 2003, p. 72; T Dean Marks, May 15, 2003, p. 72-73; T Steven Metalitz, May 15, 2003, p. 71-72.

²¹⁷ PHR Steve Metalitz, Joint Reply Commenters, August 5, 2003.

²¹⁸ While it is likely that not every person who wishes to view non-region 1 DVDs has a computer, there has been no showing to what extent the likely limited number of foreign DVD connoisseurs own only stand-alone DVD players. All of the commenters and reply commenters in this rulemaking commented via computer and therefore it can be assumed that their concerns could be addressed with a computer hardware solution.

for a limited number of times.²¹⁹ The record indicates that those DVD drives are available for as little as \$19.95.²²⁰ Those users who prefer to view DVD content on their television screens rather than their computer monitor may connect their computers or laptops to most recently manufactured television sets via S-Video, Composite Video or standard RCA jacks. These options allow the content of non-region 1 discs to be accessed and render allegations of adverse effects mere inconveniences. Therefore, it is not true that the prohibition against circumvention of region coding prevents access to any motion picture on DVDs from any region.

While the prohibition may prevent a potentially more convenient means of accessing non-region 1 encoded DVDs,²²¹ it is uncontested that non-region 1 DVDs may be accessed by other available means. As long as such relatively inexpensive options remain available to those users who seek to view foreign DVDs, it does not appear that an exemption is necessary to preserve this noninfringing use.

An analysis of the §1201(a)(1)(C) factors might well militate in favor of an exemption if one who wanted to view a non-region 1 DVD had no choice other than to circumvent the region coding.

²¹⁹ Indeed, this ability provides more to users than was stated in the previous rulemaking. Not only can the drive be set to different regions five times, but we now understand that the drive can be reset so that the user may switch regions up to a total of twenty-five times with the assistance of an authorized dealer or service representative. See T Dean Marks, May 15, 2003, p. 288.

²²⁰ T Bruce Turnbull, May 2, 2003, p. 48.

²²¹ How convenient that means would be, however, is questionable, since it may not be likely that most users would be able to circumvent the region coding except with a multi-region player.

However, in light of the fact that there are a number of ways to view non-region 1 DVDs in the United States, there is no reason to grant an exemption in this case.

12. *Proposed class: Video games stored on DVDs that are not available in Region 1 DVD format and access to which is prevented by technological measures.*

Although numerous comments addressed region coding with regard to movies, only one discussed region coding with regard to video games.²²² The formulation above of the proposed class is a more accurate representation of the concerns expressed by that commenter than is the text of the class he proposed.

In the previous rulemaking, the Register noted that there was not enough evidence to support an exemption. Thus, the proponents were on notice that they needed to supply more and better evidence in order to sustain the proposed exception. Such evidence has not been produced in this rulemaking.²²³ As a result of the paucity of evidence in the record before us, there is less information on this issue than there was three years ago. Thus, as in the previous rulemaking, there is inadequate evidence to support an exemption.

²²² C15(2).

²²³ The record contains a reference to the removal of something called “story mode” from the U.S. release of one game and an assertion that another game will never be released in the U.S.

13. Proposed class: Audiovisual works embodied in DVDs encrypted by CSS.

The comments in support of this exception sought to engage in a variety of sometimes unspecified claimed fair uses with respect to audiovisual works on DVDs that do not necessarily appear to fall within the scope of the proposed exemptions discussed above.²²⁴ The above formulation of the proposed class represents a combination of individual proposals and encompasses all of them.

While it has already been reaffirmed that CSS is an access control as that term is defined in subsection 1201(a), the proponents failed to provide evidence of actual or likely harm. Unless a proponent can show that the particular use to be made of an audiovisual work required use of the DVD version of that work and that the prohibition on circumvention prevents that use, an exemption is unsustainable. While some commenters mentioned uses that may theoretically qualify as a fair use, specific facts were not provided and it was not shown that this work was unavailable in an unprotected format. Moreover, these comments tended to be vague and brief in their discussions of the facts.

The one comment that appears to have provided an actual example failed to indicate any specifics and was even unclear as to whether the commenter was speaking from personal experience or merely theoretically.²²⁵

²²⁴ See C1, C10, and C11(2).

²²⁵ C1.

Given the insufficient evidence of what use of the DVD was required by the commenter and whether alternative sources for the material existed, these proposed exceptions cannot be sustained.

14. Proposed class: Software designed for use on dedicated video game players.

This proponent of this exception provided almost no evidence in support of his proposal.²²⁶ The Register does not understand the specifics of the complaint or the nature of the desired use. To the extent that this proposal addresses region coding for video games, it is addressed in our discussion of region coding. To the extent it attempts to raise further issues, the proponent has failed to identify a technological measure that controls access to copyrighted works²²⁷ and failed sufficiently to identify what noninfringing activity is adversely affected.²²⁸

15. Proposed class: Literary works (including ebooks), sound recordings, and audiovisual works protected by access controls that prevent post-sale uses of works; “tethered” works.

Some commenters proposed an exemption for a class of literary works or ebooks stating that the technological measures used in connection with ebooks tether the works to particular devices and also that they prevent a number of noninfringing uses, including fair use, private performances, and

²²⁶ C15(2). The comment admits that “This class of works was hard to define.” *Id.*, p. 5.

²²⁷ The comment states that “A video game will not play in the machine unless certain information on the disk, *possibly* including an encryption checksum, is correct.” *Id.* (Emphasis added).

²²⁸ Apart from foreign region-coded video games, the comment simply refers to “playing unauthorized software (such as Xbox Linux),” and provides no facts that would provide the Register with a basis for evaluating the claim of noninfringing use or of adverse effects on such use. See *id.* at 6.

lending or redistribution traditionally falling within the scope of the first sale doctrine.²²⁹ This same argument was applied to other categories of works, such as sound recordings and audiovisual works.²³⁰

Similarly, these same categories or subsets of works were proposed for exemption in a different formulation of the class, namely literary works, sound recordings and audiovisual works restricted by access controls that limit access to and post-sale uses of the work.²³¹ On closer examination, it appears that the two arguments are different ways of stating the same problem. Tethering means limiting access to certain hardware or software. The purpose of limiting access to particular devices or hardware is to enable varying degrees of control over certain uses. Since there are other ways of limiting post-sale uses, tethering appears to be a subset of the broader formulation of access controls that limit lawful access and post-sale uses of the work. It is therefore useful to analyze these proposals together.

Ebooks

Tethering of ebooks is a means of establishing a secure platform on which digital works will be accessed by the user. By placing an ebook in a particular format for access only on a particular

²²⁹ See, e.g., C11(3), C13, C14(1), and C20(1)&(4).

²³⁰ See e.g., C20(2) and (3).

²³¹ C20(4), (5), and (6). These proposals by IP Justice added the further qualification to the class: “where circumvention of the technology allows the lawful possessor to use the work in a non-infringing way.” *Id.* Since an exemption can only apply to noninfringing uses by users, this qualification appears to be superfluous.

reader, the copyright owner has some assurance that this digital version of the work will obtain a predictable degree of protection. Using a closed or restricted system – one that will allow access only on a particular device or software platform – reduces the opportunities for redistribution of digital works on open systems, such as the Internet. In part, this is achieved by allowing access only on platforms that provide the copyright owner with some control over authorized uses. In such a closed or restricted system, access is therefore authorized only on software or hardware that may limit the scope of permissible uses. Since limiting access to particular hardware or software may have an effect on noninfringing uses, this situation may be one that requires review in this rulemaking proceeding.

Tethering is not the only way to limit the uses of a work. Works may be distributed with self-contained limitations on uses. For instance, works may be distributed with copy protection measures that are wrapped with an access control in such a manner that in order to circumvent the copy protection, a user must first circumvent an access control to get to the measures controlling use. Digital rights management permissions are often wrapped by some form of access control, e.g., passwords or encryption. In order to alter the settings on the restrictions on use, it would be necessary to circumvent the access control that protects these DRM settings.

Commenters have referred to this as “dual purpose technology.”²³² In the last rulemaking, the issue was referred to as “merged” access and use controls. The Register had expressed a desire for further clarification from Congress on this issue, since in a broad sense, protecting uses of a work by

²³² See, e.g. C20, p. 6.

an access control measure blurs the disparate treatment Congress afforded each of these types of technology, i.e., providing a prohibition on circumvention to one but not the other. Despite the fact that Congress has not provided additional guidance in this matter, particular instances of the prohibition's adverse effect on noninfringing uses of "particular classes of works" may be addressed in this proceeding. The rulemaking is only authorized to recommend particular classes of works for exemption and thus cannot address the issue of tethering or dual purpose technology generally, but only the impact of the prohibition on particular classes of copyrighted works.

Ebooks were one of the examples provided as evidence that works that are tethered or that limit post-sale uses of the work have been or are likely to be adversely affected by the prohibition on circumvention. It is necessary to examine whether the prohibition is adversely affecting noninfringing uses of the copyrighted works that are distributed in ebook format. It is important to note, however, that the inquiry is not limited to whether the prohibition is adversely affecting noninfringing uses of the ebook format, but rather whether the prohibition is adversely affecting noninfringing uses of these copyrighted "works" in any format available in the marketplace.

In many cases, ebooks are available for purchase in alternative digital formats. The consumer often has choices between various ebook formats as well as between ebook formats and alternative formats for books, e.g., hard copies or audio versions. Some commenters, however, appear to believe that this is not enough.²³³ These commenters believe that users should be able to "space-shift" any work they purchase in order to access this work on any device of their choosing. Although, as a

²³³ C13 and C20(1).

practical matter, this option has historically been unavailable for most types of works, the distribution of works in digital file formats now creates the potential for such space-shifting. Yet no court has held that “space-shifting” is a fair use,²³⁴ and the Register is skeptical of arguments that it is. Certainly, where the online distribution of works is a potential concern, space-shifting will be incompatible with fair use.²³⁵ The potential for widespread online distribution of digital works was precisely the type of concern that led to the enactment of §1201. Denying copyright owners the ability to limit the device on which a particular digital work will be rendered would necessarily foreclose the most useful protections afforded by the DMCA. The purpose of tethering is to limit subsequent redistribution. While this may limit a user’s options, as long as alternative formats of the work are available for noninfringing uses, such user limitations would appear to represent only an inconvenience – an inconvenience that is the result of a choice made by the consumer to purchase that particular electronic version because of its other conveniences. If the user purchased this format, it may be assumed that some benefit drove the purchase despite any possible inconveniences. 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. Stating that copyright law “has never been construed to allow authors to prevent a reader’s freedom to read a lawfully purchased literary work where and how they choose”²³⁶ overstates the case; the prohibition

²³⁴ Recording Industry Association of America. v. Diamond Multimedia Sys. Inc., 180 F.3d 1072, 1079 (9th Cir. 1999), cited in C20, did not hold that “space-shifting” is fair use. It did state, in dicta, the view that “space-shifting” of digital and analog musical recordings is noncommercial personal use consistent with the Audio Home Recording Act.

²³⁵ See, e.g., A & M Records, Inc. v. Napster, Inc., 239 F.3d 1004, 1019 (9th Cir. 2001).

²³⁶ C20(1), p. 2.

on circumvention does not prevent this choice. Users may still choose the paperback version of a book to read anywhere they would like.²³⁷ What the prohibition does accomplish is to encourage copyright owners to provide works in new use-facilitating business models that provide users with new choices and different options that were previously unavailable.

Commenters also discussed the problems associated with tethered ebooks when users try to upgrade their computers or reading devices.²³⁸ One commenter states that although the Microsoft Reader allows up to 8 machines to access a book, other readers, e.g., Gemstar and Adobe, limit each book to one machine. While upgrading computers, handheld devices or other dedicated portable reading devices is a legitimate noninfringing use, the fact that there are variations in the market provides some insight. If one format allows more choices and if consumers find those choices valuable, it is likely that more consumers will opt for the device with the more liberal DRM policies. The market will therefore have an important role in resolving this issue as long as choices are available. In addition, when unprotected choices are also available, as is the case with books, the user as a consumer will not only have choices, but in the purchasing decisions made, will have substantial leverage over the commercial success or failure of particular protection systems.

The case for other noninfringing and post-sale uses of ebooks contains similar flaws. Unlike the situation where ebooks are sought to be used by the blind and visually impaired, these commenters have not presented any evidence why alternative formats such as hard copies and audio

²³⁷ The user may also read an ebook wherever he likes if it has been downloaded to a portable device.

²³⁸ C13, p. 1.

books are unable to fulfill such noninfringing uses. Moreover, these commenters have failed to identify specific noninfringing uses of specific works that the prohibition on circumvention has adversely affected. Merely showing that ebook formats restrict certain uses is a starting point for the inquiry, but alone does not provide sufficient factual information necessary to analyze and balance the factors. For example, stating that certain ebook formats prevent uses such as printing, read-aloud, or “space-shifting,” without explaining whether other formats of a particular work are available for such uses, makes it impossible to fully assess the proposal. Without an identification of which particular works were necessary for which particular uses, the manner in which the prohibition prevented uses, and why such uses were unavailable from alternative formats, the factual basis for an exemption is uncertain. There is clearly no affirmative obligation for copyright owners to make all uses available in all formats in which a work is distributed. The question is whether noninfringing uses of particular classes of works are being adversely affected and whether, on balance, an exemption is warranted based on the evidence provided.

For users who are not blind or visually impaired, it is not clear how an access control on an ebook is adversely affecting noninfringing uses of the works themselves. Since books are available in many alternative formats, some of which are completely devoid of any technological protection, it would appear that traditional noninfringing uses are unaffected in some of these formats. When purchasing an ebook, often the user has multiple choices of formats, e.g., Adobe Reader, Microsoft Reader, Palm Reader, etc.. The user also has the choice of whether to purchase an ebook or an alternative format of the work, e.g., hardcover, paperback, or audio book. Should the user choose to purchase an ebook, he or she may choose the appropriate format for the ebook reader software that he or she possesses. While the digital rights management in the ebook format may limit what one

can do with the ebook, and even though these use permissions are “wrapped” within an access control, virtually all works currently available in ebook format are also available in unprotected formats as well, e.g., books and audio tapes. There was no evidence introduced in this rulemaking regarding particular works solely available in protected ebook formats.

Ebooks, like many other digital works, offer certain advantages to the user, e.g., the ability to fit a library of books into a pocket or to search the text. By placing the work in digital format, however, the author and publisher face added risks. If an ebook is redistributed widely over the Internet, the market for that work could diminish substantially. It is not surprising, therefore, that along with the benefits of ebooks, there are also some limitations imposed to protect the copyright owner who chooses to distribute a digital version. In the case of hard copy books, the practical limitations on copying and redistribution (e.g., imperfect copies, time consuming to make copies, or the availability of relatively inexpensive new copies) limited the potential harm to the copyright owner. In the case of ebooks, the practical limitations on copying are eliminated. It becomes a simple matter to redistribute the entire works in perfect copies around the world.

Given the potential for harm to the market for or value of a work if it should be re-distributed over the Internet or placed on a peer-to-peer file sharing service, an exemption for a class of works cannot be taken lightly since the result may be that the incentive to distribute the work in digital formats may be diminished. Whatever adverse effects the prohibition in §1201 might have on users of the proposed class of works – and in this case, no concrete adverse effects have been shown – users of the proposed class of works would be adversely affected to a much greater degree if

publishers choose not to publish works in that class. As long as alternative versions are available that allow these noninfringing uses, consumers have a choice between accepting the benefits as well as the restrictions of the digital versions and electing to obtain the analog or hard copy version without such restrictions. Due to the lack of specificity regarding the particular works alleged to be adversely affected by the prohibition and the failure to show that such works are unavailable in alternative formats for noninfringing uses, there is no basis on which to recommend an exemption.

The most frequently discussed adverse effect among commenters is the disabling of the “read aloud” function. Some commenters appear to believe that this restriction means that the author is trying to prevent the purchaser of the ebook from reading it aloud and therefore restrict private performances.²³⁹ Despite this confusion, it is apparent that the user’s ability to read the text aloud is not technologically prohibited – it is difficult to imagine how that might be accomplished – but rather it simply means that the “read aloud” function on the operating system or the particular ebook reader – a synthesized voice rendering of the text – has been disabled by the digital rights management either selected by the author or publisher, or left at its default setting.²⁴⁰ While it is true that a private performance is a noninfringing use, unless a person is blind or visually impaired, the person in possession of the ebook may read it aloud to himself or herself in precisely the same manner that this could be accomplished with a hard copy of the book. If a person wishes to hear a

²³⁹ See, e.g., C14, p. 2, C30, p. 20.

²⁴⁰ The default setting for the read aloud function varies with particular ebook reader programs and with different versions of the same program. For example, the default setting in some versions of Adobe Acrobat was that the read aloud was disabled, whereas with Adobe Reader 6.0, the default setting is enabled.

book, an audio version of the book may well be available. The fact that every noninfringing use is not available in every format is not, in and of itself, a basis for an exemption.

Similarly, the “lending” feature may be turned off on some ebooks, limiting the program’s permission to redistribute a work electronically to another. Yet for these uses to be adversely affected, a proponent must show not only that the intended use is noninfringing, e.g., permitted by the first sale doctrine,²⁴¹ but must also show that this intended use was unavailable by other means. As long as hard copies are still available at the bookstore or library, transfer of a copy by transfer by sale, rental, lease or lending may still be accomplished.²⁴² It is only when the ebook is unavailable in other formats or when the intended use requires the ebook version that the prohibition’s effect on use could conceivably rise to a level of significant concern. In addition to the wide availability in alternative formats, the proponents offered no evidence that a particular noninfringing use required the ebook version of the work in order to accomplish such a noninfringing use, nor was there any evidence that the prohibition on circumvention was adversely affecting use for archival, preservation, or education, purposes or for purposes of criticism, comment, news reporting, teaching, scholarship or research.²⁴³

²⁴¹ The applicability of the first sale doctrine is questionable where the possessor of a digital copy attempts to transfer the copy by electronic transmission. See DMCA Section 104 Report 78-80 (2001).

²⁴² An ebook stored in an electronic device may also be transferred as part of a transfer of the device itself.

²⁴³ Cf. section III.A.4. *supra*, discussing the class of ebooks proposed by advocates for the blind and visually handicapped, who did make such a showing.

Another problem cited was the inability to print a page or parts of a work. While the reproduction of a page or portion of a book may well be a noninfringing use in appropriate circumstances, the fact that this is unavailable in some ebooks does not adversely affect noninfringing uses of the works in general.²⁴⁴ One may still quote from the ebook or re-type portions of the text. The fact that an ebook may prevent portions to be directly printed or may limit the amount that can be printed does not equate with an adverse effect on noninfringing uses. It does limit what a user can do with the ebook technology, but it does not prevent or limit the availability of noninfringing uses of the “work.” A user may still quote the work. In fact, a user may still re-type the entire work if such a reproduction is believed to be a fair use. Fair use does not, however, require a copyright owner to provide the most efficient means of engaging in a noninfringing use. Certainly, a user may even use technology, e.g., a photocopier, to reproduce a portion of the hard copy version of the work. Evidence has not been presented to show that these noninfringing uses of a particular class of works have been or are likely to be adversely affected by the prohibition.

Finally, although the class recommended for exemption, “ebooks,” is a subset of literary works, the true focus of the exemption is the use rather than the “class of works.” The harm alleged is applicable to all types of works rather than a particular class. While the purpose of this rulemaking is to review the prohibition’s effect on noninfringing uses, it must do so with more specificity than the commenters have provided. Merely reciting the exemptions in title 17 without discussing specific facts is unproductive. The Librarian does not have authority to create general use-based exemptions for even subsets of works. The Librarian must exempt classes of works and without

²⁴⁴ Compare the ebook to a traditional book. One cannot “print” a page of that book, either.

information about specific factual situations in which persons have been or are likely to be adversely affected in their ability to use works in the proposed class, it is impossible to tailor a class to address the harm. To the extent that a commenter succeeds in proving that all works are adversely affected by the prohibition, he or she may have proved too much – and be beyond the scope of this rulemaking which is limited to recommending designations of particular classes of works.

For all of these reasons, the Register declines to recommend these proposed exemptions relating to literary works.

Sound Recordings and Audiovisual Works

The arguments on tethering of sound recordings of musical works and on the tethering of motion pictures to particular devices or software platforms are very similar to those relating to ebooks. As with the space-shifting of ebooks, commenters seek to “platform-shift” their sound recordings or motion pictures. Some four commenters seek broad use for works in digital form, and perceive no problem with granting such use in all digital forms.²⁴⁵ Others specifically would exempt access-restricted compact discs.²⁴⁶ All proponents criticize the inability of consumers freely to choose playback devices and online media players.

Some proponents of this class seek to be able to perform musical sound recordings and motion pictures generally, online and otherwise, on any platform and through any playback

²⁴⁵ See, e.g., C8, C20(2)and (3), C30(2) and (3), C34, and C38(1) and (2).

²⁴⁶ See, e.g., C11.

device.²⁴⁷ Some complain that customers of music and motion picture services are unable to use any media player to playback the works distributed online, but instead must use proprietary players, e.g., RealOne Player for MusicNet and Windows Media Player for Pressplay, through which the copyright owner offers online services that require the installation or use of a specific player, denying the user the choice of alternative players.²⁴⁸ Essentially, the argument is that whenever a digital work is purchased, a user should be able to move and access that copy of the work to any device or software platform of the user's choosing. It is the same argument that was made for ebooks and the commenters rely on the same legal support to establish the noninfringing status of this space-shifting.²⁴⁹

Just as the arguments are the same, the reasons against recommending an exemption are largely the same. First, the opponents have not really identified an adversely affected class of works, but rather have identified a problem affecting noninfringing uses generally that is applicable to most categories of works. As discussed above, 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 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. In the

²⁴⁷ See, e.g., C8, C20, and C38.

²⁴⁸ C30(2)and (3).

²⁴⁹ RIAA v. Diamond Multimedia Systems, Inc., 180 F.3d 1072 (9th Cir. 1999) and Sony Corp. of America v. Universal City Studios, Inc., 464 U.S. 417 (1984).

case of sound recordings of musical works, this encouragement serves the public by increasing the availability of legitimate online music services.

Second, proponents have not established that space-shifting or platform-shifting is a noninfringing use. The cases cited do not support the claim and are quite reasonably read as being limited to the particular facts involved. Recording freely available, over-the-air broadcasts for purposes of time-shifting viewing (but not librarying) as a fair use in a pre-Internet age does not lead to the conclusion that all “shifting” is noninfringing, particularly considering that these works may just as easily be shifted to a peer-to-peer network. The Diamond case, cited as support for space-shifting as a noninfringing use, referred to shifting as being consistent with the spirit of the Audio Home Recording Act (AHRA). The AHRA specifically does not apply to computer hard drives at issue in platform shifting. Nor does it apply to audiovisual works. As has been noted before, there is no unqualified right to perform a copyrighted work on any device or platform. Without a clear legal argument addressing why such consumer preferences are noninfringing uses, the proposals fail to provide an essential ingredient in the analysis for an exemption.

Third, although it is very likely true that access controls are used on many of the services or formats presented and that these access controls limit the uses that can be made of a work, e.g., reproduction and distribution, the proponents have not identified any particular “works” for which other formats are unavailable for accomplishing proven noninfringing uses. In addition, as indicated with ebooks, consumers have choices of which formats to select or whether their intended use is best served by a digital online version or by another available version of the work. While it appears that

some believe the choices are contracting, it is more likely that providing a measure of security for copyright owners will increase the availability of use-facilitating options. For example, while the growth of legitimate online music services was slow (particularly when unfairly contrasted with the illegitimate services), the pace of alternative services is growing much more rapidly and the options available from these services is beginning to show signs of greater variety, e.g., Listen.com's Rhapsody service or Apple's iTunes services (which was recently opened to Microsoft Windows users). Given these expanding options in the online environment as well as the continued availability in existing formats, the claim that the prohibition is adversely affecting noninfringing uses appears wanting. Simply stating that all versions of a work are not available for all desired uses is an inadequate basis for an exemption. A proponent must show that the prohibition is adversely affecting noninfringing uses of the work and must consider the various formats of that work that are available for the desired noninfringing use. A consumer choice to purchase a more restrictive digital format is still a choice as long as alternative outlets for noninfringing uses of the "class of works" are available. At present, it appears that the prohibition is increasing users' choices rather than diminishing them.

The same is true of audiovisual works. One commenter claims that Movielink and SightSound.com tether lawfully made reproductions to the hardware upon which they are first accessed.²⁵⁰ Despite these charges, user options for the availability of motion pictures in new formats

²⁵⁰ C30, p. 14. Only one specific title of a work was given as an example of motion picture tethering, SightSound's "Dead On Arrival." The Joint Reply Commenters report that no film with that title was available on Sightsound, but that a film entitled "D.O.A.," copyrighted in 1950, starring Edmond O'Brien was available on Sightsound and that it is also available in DVD and VHS formats on Amazon.com. R23, n. 44.

is increasingly growing and is rapidly outpacing the formats that are diminishing, e.g. VHS. Online availability of motion pictures is in its infancy, yet pay-per-view, on demand, and premium channel options are steadily growing. At the same time theatrical release, videotape release and the massively successful DVD format continue to be available for these works. Although it is possible that a time may come when digital formats are the only source available, it would be speculative at this time of expanding options to assume that the ability to make noninfringing uses will decrease. Nevertheless, if specific facts reveal that to be the case, this rulemaking serves as a check on the developing market. At present, however, the proponents have not provided evidence that noninfringing uses from available sources of these classes of works are being adversely affected by the prohibition.

For all of these classes, the evidence has shown that the availability for use has been restricted in certain digital “formats,” but the overall availability for use of these classes of “works” has not been adversely affected. There has been no evidence that these works are unavailable for nonprofit archival, preservation or educational uses. Similarly, the impact on criticism, comment, news reporting, teaching, scholarship and research appears to be enhanced by the increasing number of formats available to satisfy choices for use. 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.

16. Proposed class: Audiovisual works, including motion pictures, the DVD copies of which are tethered to operating systems that prevent rendering on alternative operating systems

A number of commenters²⁵¹ sought exemption of a class of works consisting of motion pictures on DVDs tethered to particular operating systems, e.g., the Windows or Macintosh environment, that prevent rendering of the motion pictures on alternative systems, such as Linux.

The general argument of the proponents of an exemption is that DVDs with CSS, increasingly the principal physical media on which feature films are currently released for sale or rental in the United States following theatrical exhibition, are tethered by CSS to particular machines or, in the case of computers, to particular operating systems, making it impossible, as a practical matter, for users to play DVDs on Linux operating systems.²⁵² At least four commenters and one witness sought a general exemption to view DVDs on the Linux operating system. One Linux proponent sought to view DVDs using that system, without further specification.²⁵³ One commenter noted that “The main CSS-related reason why in ‘practice’ Linux players can’t be licensed is that though technically, Linux DVD players are allowed, they are only allowed in a way incompatible with how Linux is used in reality.”²⁵⁴

²⁵¹ C15(1), C20, C37(1). See also T Phil Gengler, May 2, 2003. One commenter (C8) sought to copy DVDs to VHS to view in his car. This is addressed in the discussion of rejected class no. 8 above.

²⁵² As an example, one commenter listed the first 15 DVD titles released at a popular online site for sale in January 2003, and found that fewer than one-half of those titles were available in VHS. C15, at 3.

²⁵³ C15.

²⁵⁴ C15, p. 2.

The proponents have successfully identified a “particular class of works,” and they have also identified an access control that prevents them from doing what they wish to do. Moreover, they wish to engage in private performances of the motion pictures on DVDs, a noninfringing use.

The incompatibility of DVDs protected by CSS with Linux was one of the major issues addressed in the previous rulemaking. On that occasion, an exemption was denied when the Register concluded that “The reasonable availability of alternate operating systems (dual bootable) or dedicated players for televisions suggests that the problem is one of preference and inconvenience.” She observed:

“[T]here 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.”²⁵⁵

The same is true today; in fact, as DVDs occupied a more significant place in the market for sale and rental of motion pictures in the past three years, availability of devices (and at lower costs) to play DVDs has increased.

In 2000, the Register also observed that “with the rapidly growing market of Linux users, it is commercially viable to create a player for this particular operating system,” and that “[t]here is evidence that Linux players are currently being developed (Sigma Designs and Intervideo) and should be available in the near future. It appears likely that the market place will soon resolve this

²⁵⁵ 65 FR at 64569.

particular concern.”²⁵⁶ That prediction may have been overly optimistic. Sigma Designs is no longer producing the hardware that was in development three years ago.²⁵⁷ Intervideo’s software solution is on the market, but it is only sold to original equipment manufacturers (OEMs) such as computer manufacturers, and is not sold directly to consumers.²⁵⁸ The IBM Thinkpad T22 model for Linux also included DVD player software.²⁵⁹ The record thus indicates that persons who wish to view CSS-protected DVDs on their computers running the Linux operating system have few, and probably unsatisfactory, options.

The fact remains, however, that the licensors of CSS are willing to license a Linux player. Licenses to incorporate the CSS system into players are apparently royalty free, but one commenter alleges that the license requires a prohibitively expensive annual administrative fee.²⁶⁰ However, the same commenter confirms a basic incompatibility between open source philosophy and the nondisclosure agreements required by DVD CCA as a condition of receiving a CSS license.²⁶¹ While the Register recognizes that one of the reasons Linux appeals to many of its users is the fact that it is open source software, DVD CCA cannot be held responsible for the hostility in the Linux

²⁵⁶ 65 FR at 64569.

²⁵⁷ T Dean Marks, May 15, 2003, pp. 74.

²⁵⁸ *Id.*, p. 74-5.

²⁵⁹ *Id.*, p. 75. But see T Robin Gross, May 15, 2003, p. 377-78 (explaining her understanding that due to the threat of litigation, this model of Thinkpad was withdrawn from the market.)

²⁶⁰ C15, p. 2.

²⁶¹ *Id.* (“Being legally licensed to make a player involves signing a non-disclosure agreement which is inherently incompatible with open source (since publishing source code amounts to disclosing all the specifications it uses)”).

community to nondisclosure agreements, nor should it be required to permit trade secrets about CSS to be made public simply because Linux licensees (or, for that matter, Linux's GNU General Public License) prefer or require public disclosure. Without trade secret protection, CSS likely would be a very ineffective access control. See DVD Copy Control Ass'n, Inc. v. Bunner, 31 Cal.4th 864, 75 P.3d 1, 4 Cal.Rptr.3d 69 (2003).

While it is unfortunate that persons wishing to play CSS-protected DVDs on computers with the Linux operating system have few options, the fact remains that they have the same options that other consumers have. The Register concludes, as she concluded three years ago, that the harm to such persons is *de minimis*, amounting to no more than a mere inconvenience. When the factors set forth in §1201(a)(1)(C) are taken into account, the balance falls fairly decisively against an exemption.

Considering the availability of copyrighted motion pictures as a general proposition, the Register recognizes that they have only limited availability for use on Linux-based computers. However, as a general proposition the DVD medium has increased the availability of motion pictures for sale and rental by the general public, and as noted above, the motion picture studios' willingness to distribute their works in this medium is due in part to the faith they have in the protection offered by CSS. Permitting circumvention to enable playability in Linux-based players would undermine that faith and put strains on the motion picture studios' commitment to this popular form of distribution. Moreover, all motion pictures on CSS-protected DVDs remain

available even to Linux users. The Linux users simply must use the consumer electronic devices used by most consumers to view those DVDs. That does not seem to be a substantial burden.

No serious argument has been offered that the inability to play CSS-protected DVDs on Linux-based computers has had or will have a negative impact on the availability for use of works for nonprofit archival, preservation, and educational purposes or on criticism, comment, news reporting, teaching, scholarship, or research.

Finally, when examining the effect of circumvention of technological measures on the market for or value of copyrighted works, as stated above, the value of copyrighted works could likely be negatively affected by any exemption permitting circumvention of CSS. The major countervailing interest expressed by opponents of the exception is the increased threat of piracy. Given that the proposed use is on a computer, which is easily capable of ripping and distributing copies over the Internet, those concerns are reasonable. The balancing of the incremental benefit of allowing circumvention for the purposes of watching a movie on a Linux-based computer is outweighed by the threat of increased piracy that underlies Congress' motivation for enacting §1201. Therefore, the statutory factors in §1201(a)(1)(C) disfavor granting an exemption.

17. *Proposed class: Sound recordings, audiovisual works and literary works (including computer programs) protected by access control mechanisms that require assent to End-User License Agreements as a condition of gaining access.*

One commenter proposed an exemption for the class of sound recordings, audiovisual works and literary works (including computer programs) protected by access control mechanisms

employed by or at the request of the copyright holder which require, as a condition of gaining access, that the prospective user agree to contractual terms which restrict or limit any of the limitations on the exclusive rights of the copyright holder.²⁶² Factual examples provided in support of this class include licenses for the making of a musical work into a sound recording, the purchase of copies of sound recordings for a limited period of time, and “end-user licensing agreements” (EULAs) for medical information on a website and for a EULA required by an ebook.

At the outset, it must be noted that the evidentiary support for the scope of this class is meager. There is slight evidence provided for support of an exemption for audiovisual works. For sound recordings, the evidence appears to be limited to one particular service that was distributed in 1999 by a service that has since become defunct – a problem seemingly remedied by the market – and a CD-ROM sound recording/multimedia product and service for computers running on Windows 3.1 and Windows 95. Both appear to be early experiments into the digital market and have little relevance during the current three-year period.

In addition, a proposal for the broad class of all literary works is without factual support. The comment expressly states that the example cited for the exemption based on ebooks is “not so troublesome,” since the work was restricted by someone other than the copyright owner and because the work was readily available in an unrestricted medium.²⁶³ Although the commenter states that ebooks are protected by EULAs, the citation of the hyperlink in support of this claim appears to

²⁶² C30(4)

²⁶³ C30, p. 20.

reveal a misunderstanding of the nature of DRM “permissions” and their differences from EULAs.²⁶⁴

After reviewing the evidentiary foundation for this proposal, it is apparent that the scope of the perceived problem may be much narrower than the scope of the proposed class. The sole relevant evidence provided appears to be related to information on literary works: text material on a website and computer programs. In a broader context, however, this comment may be understood as a general attack on the use of clickwrap, clickthrough, or shrinkwrap licensing on mass market products and services.

In the case of the cited website requiring agreement to a EULA as a condition precedent to permitting access to certain information, the website purports to be a derivative work of the author’s book.²⁶⁵ That book is available for purchase from the author’s site, presumably without a EULA, and

²⁶⁴ A few commenters appeared to be confused about the “read aloud” feature on ebooks. While the description of an ebook’s features may state “Off – Reading aloud is not available for this book” or “Off – Lending options are not available for this book,” these are not contractual conditions that preclude an individual from reading the book aloud or loaning a person one’s ebook reader. See, e.g., C14, p. 2. Rather, these descriptions are statements about the technological functions that are permitted within the ebook reader. The statement: “this book cannot be read aloud” does not mean that private performances are prohibited, but rather it indicates that, for example, the Adobe Reader will not render that ebook in audible form. As indicated elsewhere, it is difficult to imagine technology that could force a user to be silent. It is similarly difficult to imagine a contractual term that would forbid a user to read a book to his or her family.

²⁶⁵ See <http://www.backache.md/eula.htm> (accessed December 16, 2002), and W.T. O’Connor, Jr., *Making Your Back Better With the O’Conner Technique™: How to Become Your Own Chiropractor*, as described at C30, p. 20.

is also available through other sites. It would appear that any restrictive contractual verbiage could be avoided by a consumer's choice of an alternative format.

Even if this were the only format in which the information could be found, the question arises as to whether such contractual limitations are causally related to the prohibition on circumvention or are separate legal considerations. It appears that in a case such as this, the prohibition on circumvention is not enforcing the contractual terms of the EULA. Section 1201(a)(1) prohibits circumvention of a technological measure that controls access, but does not refer to contractual conditions imposed on access. A user's agreement to additional terms as a condition to receiving access is a separate issue, and violations of such terms are not prohibited by §1201(a)(1), but rather would be actionable as a breach of contract or in a traditional copyright infringement suit. To the extent that the commenter is arguing that such terms are so restrictive as to be unenforceable, these terms would have no effect whatsoever if that were adjudged to be the case. Yet even if they were enforceable, one who agreed to the terms and then received access would not be in violation of §1201(a)(1) if he breached the terms of the contract. The only way that §1201(a)(1) would be implicated would be if one attempted to avoid agreement to the terms by hacking through a measure protecting access. Clickwrap technology, which requires the application of information to gain access to a work, may arguably qualify as a technological measure that "effectively controls access to a work," yet the terms included in that technological protection measure are not themselves enforceable under §1201(a)(1). Once the conditions for access imposed by the technological measure have been satisfied, further conditions of use are the domain of applicable contract law or the rights and limitations of the Copyright Act. Similarly, once the conditions for access imposed by the technological measure controlling access to the work have been satisfied, another technological

measure preventing *noninfringing uses* would not be within the scope of the §1201(a)(1) prohibition, which addresses only measures that control access.

The primary concern of the commenter appears to be contractual over-reaching. While technological measures may prevent access unless a user signals assent to the terms of a contract, the prohibition on circumvention does not enforce the terms of a contract. Also, while the prohibition may prevent a user from circumventing a clickthrough license to obtain access, a user who agrees to contractual terms can gain access. It is true that if §1201(a)(1) did not exist, one might be able lawfully avoid a technological licensing agreement gateway, thereby attaining access without assent to disfavored terms. Yet if these terms are, as the commenter suggests, “beyond the limits imposed by Congress” or are a “misuse” of copyright, such preemption or misuse determinations can still be made in a court without regard to the §1201(a)(1) prohibition if one accepts and then subsequently breaches the terms. These determinations of preemption and misuse are, without question, beyond the scope of this rulemaking and are matters currently being addressed in the courts.²⁶⁶ This rulemaking is not the proper forum for adjudicating the legitimacy of such contractual terms.

18. *Proposed class: Published sound recordings of musical works on compact discs that use technological measures that prevent access on certain playback devices*

The Electronic Frontier Foundation (EFF) proposed a class of “Sound recordings released on compact disc (“CDs”) that are protected by technological protection measures that malfunction so as

²⁶⁶ See e.g., Bowers v. Baystate Technologies, Inc., 320 F.3d 1317 (Fed. Cir. 2003) cert.denied, 123 S. Ct. 2588 (2003).

to prevent access on certain playback devices.”²⁶⁷ EFF appears to have identified a “particular class of works” – a subset of the §102 category of sound recordings (and implicitly and necessarily including the musical compositions that are performed in those sound recordings), further limited by reference to media on which they are fixed and the technological measures applied to them.

EFF summarized its case as follows:

“Copy-protected” CDs are intended to prevent the unauthorized reproduction of sound recordings. Unfortunately, the technological protection measures involved can malfunction so as to make the copy-protected CDs unplayable in certain playback equipment. A consumer should be entitled to take steps to restore the playability of such a CD. To the extent this activity may constitute a violation of Section 1201(a)(1), consumers should be exempted from liability.”²⁶⁸

EFF describes a number of technologies that, although said to be copy controls, have prevented access to certain sound recordings when CDs with those controls have been placed in certain devices, particularly in personal computers. Controls that may prevent such playback are Macrovision’s Cactus Data Shield-200 (CDS) and CDS-300, among others, which are supposed to provide at least a “second session” alternative to Red Book standard recording for rendition on computers. In many cases, the nature of the malfunction is unspecified. The problem is that in these

²⁶⁷ C35(1). C11 proposed a similar class.

²⁶⁸ C35, p. 3. For a more detailed explanation of the problem as presented by EFF, see *id.*, pp. 3-6.

cases, the copyright owner intended the consumer to be able to play the work, but the technology prevents the consumer from listening to a work which he or she has purchased or otherwise lawfully acquired a right to play.

EFF argues that the technological measures used on copy-protected CDs do not effectively control access to a work and thus do not come within the provisions of §1201(a).²⁶⁹ EFF asserts that it does not appear that the sound recordings in question require “application of information or a process or treatment with the authority of the copyright owner,” one of the statutory aspects of an access control, because the content on copy-protected CDs is unencrypted and the players that do manage to access the content do not “apply” any special “information, process or treatment” to the disc in the course of their operation. EFF further notes that, conversely, even though some modern CD drives are unable to access content, that failure to permit access does not arise from the failure to apply information, or a process or treatment.

This proposal does not appear to describe a technological measure that “effectively controls access to a work” within the meaning of § 1201(a)(3)(B), when the technological measure malfunctions. In these cases, the technological measure is not performing “in the ordinary course of its operation.” In addition, access to the work is not being controlled by a technological measure under the authority of the copyright owner. When failed playback is an unintended consequence, activities undertaken to restore playability do not fall within the purview of this statutory definition.

²⁶⁹ C35, p. 6-7.

EFF acknowledged in its testimony that it wishes to dispel the uncertainty among consumers and other members of the public as to whether these controls fall within §1201(a)(1). EFF further stated that if the Register could clarify that point, “the proposed exemption would not be required.”²⁷⁰ Opponents of the proposed exemption appear to agree that a malfunctioning copy-control technology does not implicate access-control technology.²⁷¹ The Register agrees that when copy controls also prevent access to a work not because they are intended to prevent access, but simply because they are malfunctioning or as an unintended consequence of the technology, they are not access controls. Thus, to the extent that EFF seeks an exemption covering malfunctioning copy controls, there is no need to consider that proposal.

Unfortunately, the inquiry cannot end here, because it appears that in some cases, the technologies cited by EFF are intended to deny access to sound recordings under certain circumstances. In particular, record companies have asserted that some of these technologies are in fact intended to serve as both access and copy controls.²⁷² Specifically, RIAA identifies Macrovision CDS 200, Macrovision SafeAudio, and SunComm MediaCLoQ Ver. 1.0 as “effectively control[ling]access to a work” because these TPMs all are used under the authority of the copyright owner to control access on different platforms, and in each case, the TPMs require the application of a certain process or treatment to obtain access.”²⁷³ One of the technologies (Macrovision SafeAudio) makes the CD unplayable on a CD-ROM drive – i.e., the type of drive used in

²⁷⁰ T Gwen Hinze, May 14, 2003, p. 185.

²⁷¹ R23, p. 16; PHR Steve Marks, RIAA, n.8.

²⁷² PHR Steve Metalitz, July 28, 2003; PHR Steve Marks, RIAA, July 28, 2003, p. 5.

²⁷³ PHR Steve Marks, RIAA, July 28, 2003, p. 5.

computers, but permits the CD to be played on standard CD players. The other technologies permit the CD to be played on a CD-ROM drive, but only in a “second session.” CDs with “second sessions” include two copies of each work. The first copy cannot be accessed from certain devices, such as computers. The second copy (“second session”) can be accessed from those devices. The second session is also protected by technological measures that inhibit copying and file-sharing. The purpose of the second session is to permit playability on devices such as computers, but to hinder the ability of computer users to reproduce and disseminate the copies, e.g., in a peer-to-peer network.²⁷⁴

Thus, it appears that in some cases, technological measure that control access to copyrighted works have been used on sound recordings distributed on compact discs. While the class as originally formulated by EFF (expressly referring to technological measures that malfunction) is not an appropriate class for consideration (since everyone appears to agree that a technological measure that is designed to control copying and is not intended to control access, but which happens to restrict access due to malfunction, is not a technological measure that controls access), it is necessary to consider a modified formulation of that class: “Sound recordings on CDs that incorporate technological measures intended to prevent access on certain playback devices or control access on those devices.”

EFF and the other proponents of the proposed exemption urge the Register to recommend an exemption to allow nonpublic performance of unplayable CDs that consumers have lawfully

²⁷⁴ T Mark Belinsky, May 14, 2003, p. 255.

acquired. Clearly, a private performance is not an infringing use. Playback on a modern CD device installed in personal computers or DVD players with CD drives also is a noninfringing use. That is not to say that there is a right to perform a CD on any device, e.g., to play a CD in a toaster, but consumers understandably expect a CD to play on any CD player, including CD drives in computers. In sum, the proposed use is unquestionably noninfringing.

By the same token, copyright owners are not legally required to continue marketing sound recordings on CDs, or to make all CDs they distribute compatible with all devices that have CD drives. Copyright owners may migrate their works to other devices and offer new formats, such as super audio or DVD drives, just as the physical medium has evolved from vinyl to cassette tapes and 8-track tapes in times past, and to CDs and minidisks more recently.

Of course, identifying a noninfringing use does not end the inquiry. The next step is to determine whether the prohibition on circumventing access controls is having an adverse effect (or, in the next three years, is likely to have an adverse effect) on the ability to make noninfringing uses of the class of works. On the present record, the Register concludes that the requisite showing has not been made.

Although a number of reply comments reported malfunctions of various CDs on various playback devices, including standard CD players, most of the reports did not explain the precise cause of the failure to playback. Some small percentage of compact discs, like any other product, can be expected to fail simply due to causes such as manufacturing defects or damage in transit to

the retailer or consumer.²⁷⁵ The Register concludes that these comments provide insufficient information to conclude that access controls have caused any appreciable number of users to be denied access to a sound recording.

RIAA has provided information that establishes the minimal deployment of CDs protected by any technological measures in the United States to date, as well as the level of reported malfunctions. The number of works protected by technological measures thus far appears to constitute a very small number of titles and CDs offered for sale in the United States. From a total of 125,000 sound recordings titles RIAA identified that have been released on CDs for U.S. sale since calendar year 2001, only fifteen contained copy or access protection technology. Further, only five of the fifteen copy-protected CDs that were released completely restricted access to a work for computer playback, without a nearly identical second session. Only four of those titles represented sales in excess of 50,000 copies, and in each case the technological measure included a second session.²⁷⁶

Thus the total number of access-restricted CDs released in the United States is minuscule. While that number may increase in the next three years, it is not at all clear what the magnitude of that use will be or exactly what kind of technological measures will be applied. As the record industry attempts to cope with massive infringement on peer-to-peer networks and elsewhere, a

²⁷⁵ RIAA provided information showing that of the 37 CDs identified in reply comments complaining about playability, only three had been commercially released in protected form in the United States.

²⁷⁶ PHR Steve Marks, RIAA, July 28, 2003, p. 7-8, and Ex. A.

period of experimentation can be anticipated. What we know about the present is that according to RIAA, the number of CDs commercially released in the United States by its members with technological access-control measures is five one hundredths of one percent (0.05%). RIAA members represent 90% of the recording industry in the United States.²⁷⁷

The Register concludes that the record does not support a conclusion that at present, access controls on CDs have had a substantial adverse effect on noninfringing uses of sound recordings on CDs. Only a handful of CDs released in the United States have had any access controls applied, and only small subset of that handful (those without a “second session” feature) have prevented users from listening to a sound recording on a particular device. Even in the few cases where someone could not listen to a sound recording on a computer or some other device, the Register cannot find that this is more than a mere inconvenience. Standard CD players are readily available and inexpensive, and there has been no assertion that access controls have prevented access to sound recordings using such conventional equipment. While the situation in the next three years is less clear, proponents of an exemption certainly have not demonstrated that it is more likely than not that access controls will have substantial adverse effects on user’s ability to listen to music.

A review of the §1201(a)(1)(C) factors supports the Register’s decision not to recommend an exemption. Sound recordings are widely available for use on devices intended to play music on CDs. There is no allegation that access controls have had an adverse impact on the availability for use of works in non-profit, archival or educational settings, or for criticism, comment, scholarship

²⁷⁷ PHR Steve Marks, RIAA, July 28, 2003, RIAA, p. 7.

and research. But an exemption from the prohibition on circumvention in cases where sound recordings on compact discs are protected in the ways discussed above would have great potential for massive negative effects on the market for copyrighted sound recordings. The record industry has not massively deployed technological measures on CDs, but the use of technological measures is obviously a potentially important tool that record companies can use to combat widespread unauthorized infringement in the internet environment. Granting an exemption to permit circumvention based on such a meager record at a time when the use of technological measures on CDs is unclear would likely have an adverse effect on the market for or value of sound recordings.

Because the deployment of access-control devices on copy protected CDs has not been shown to have more than a de minimis effect on noninfringing users, and because threshold conditions for consideration of an exemption have not been met, the Register cannot recommend exempting sound recordings on CDs that incorporate technological measures that prevent access on certain playback devices or control access on those devices.

19. *Proposed class: Sound recordings on copy-protected Red Book Audio format compact discs*

This class was proposed by the Digital Media Association (DiMA), on behalf of transmitting organizations (including webcasters) operating under licenses (including statutory licenses) that permit them to transmit performances of sound recordings of musical works. The purpose of the proposed exemption is to permit such licensees (hereinafter “webcasters”) to circumvent what they

claim are access controls that prevent them from making “ephemeral” copies of the sound recordings pursuant to the statutory license in §112(e).²⁷⁸

DiMA and the other proponent of the proposed exemption, Full Audio (collectively, DiMA), have identified a particular product – multisession discs – as employing an access control. A multisession disc provides access to a phonorecord in the Red Book standard²⁷⁹ when it is played on a standard CD player, but provides access only to a compressed “Yellow Book” standard version of the work²⁸⁰ when the disc is played on a computer. Other access-control technologies—e.g., CDS-100 and similar technologies²⁸¹—prevent playback altogether when the disc is inserted in a computer’s CD drive. DiMA’s proposal also extends to these technologies. Finally, although what DiMA has described appears to be a copy control technology, the recording industry asserts that these technologies may indeed control access, depending on the specific technology being used. For instance, some technologies both control access to Red Book standard CDs and prevent them from being copied to computer hard drives.²⁸² But, contrary to DiMA’s apprehension, it appears that, of

²⁷⁸ C41.

²⁷⁹ The “Red Book Audio” standard was developed by Sony and Philips Electronics. It is a format that plays 44,100 samples per second in a range of 16 bits.

²⁸⁰ Yellow Book standard defines the format of CD-ROMs. It essentially adapts the Red Book Audio standard for playback on computers, processing both computer data and audio data, in sectors, with 2336 bytes of user data for audio playback. The opposition to copy protected CDs adapted for PC playback is that the sounds on the compressed data sessions offered are not of the highest, professional quality, not that there is any technical standard limitation on reproducing the same sounds.

²⁸¹ See Macrovision FAQs, Appendix B, PHR Steve Marks, RIAA.

²⁸² T Seth Greenstein, April 11, 2003, p. 117, 142-43. With respect to copy protected CDs that prevent playback on computers altogether, see also PHR Steve Marks, RIAA, July

CDs distributed in the United States, the overwhelming majority is widely available in unprotected form. See discussion *supra*.²⁸³

One of the significant questions in considering this request is whether restricting computer uses of CDs to the compressed Yellow Book standard sound recordings made for computer-driven playback is a form of access control. “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.”²⁸⁴ Regarding multisession disks, if the first-session rendition of a track and the second-session rendition of the same track are considered separately, and a user is prevented from playing the first session on a computer by the CD’s technology, it could be considered an access control even if the second session is comparable. Alternatively, it could be argued that access to the *work* was not denied, because it was available for play on both standard CD players and computer drives on either the first or the second session. In either case, access to the work is controlled, because information, a process or treatment with authority from the copyright owner is required to render the work. For the vast majority of users, the two sessions are nearly identical; thus access to the work is nearly universal. DiMA, however, contests the assertion that the two renditions are nearly identical, and for the minute number of specialists who can detect the difference in sound quality, that may be true.

28, 2003, p. 6; PHR Steve Metalitz, Joint Reply Commenters, July 28, 2003, p. 1 (stating that no more than 43,500 CDs have been released that are intended to prevent playback on personal computers).

²⁸³ See the discussion of rejected class no. 18, *supra*.

²⁸⁴ 17 U.S.C. 1201(a)(3)(B).

The Recording Industry Association of America (“RIAA”) opposes the requested exemption. With respect to copy-control technologies that block or direct access when the disc is used in a computer’s CD-ROM drive, RIAA asserts that, by using technologies like Macrovision’s CDS 200, Safe Audio or SunnComm’s Media CloQ, the copyright owner intends to control access on different platforms, and thus the technological protection measure “requires application of a certain process or treatment to obtain access.” The CDS-100 system apparently restricts access on computers and no playback is possible on that platform.²⁸⁵

Thus, it may be accepted that for the purpose of considering the need for an exemption, the technological measures discussed are access controls.

We next consider whether DiMA has identified “a particular class of copyrighted works.” DiMA’s original formulation – “Copy-protected Red Book Audio format Compact Discs” – probably is not the most felicitous or accurate description of the exemption DiMA seeks. A more accurate description might be: “Copy-protected Red Book Audio standard sound recordings that prevent the making of authorized or licensed ephemeral recordings that are necessary for exercising webcasting licenses pursuant to 17 U.S.C. § 112(e).” This class, which is defined initially by reference to a §102 category of works (sound recordings) is modified by reference to the technological measures applied to those works. This is an appropriate means of constructing a class, and the Register accepts it for purposes of evaluating DiMA’s proposal.

²⁸⁵ See PHR Steve Marks, RIAA, July 28, 2003, Appendix B.

The next step in the analysis is to determine whether DiMA has shown that the access controls in question have prevented webcasters from engaging in noninfringing uses of sound recordings.

DiMA proposed this class in order to obtain promptly the highest professional quality reproductions of sound recordings for its members' webcasts. These webcasts are authorized by a statutory a statutory license.²⁸⁶ As such, the exercise of these licenses constitutes a noninfringing use of the copyright works. Acting pursuant to their licenses, webcasters make copies of the recordings on computer servers, using economies of scale to expedite large-scale exercise of their §112(e) licenses to use ephemeral recordings. DiMA and other proponents of this proposed class assert that the exemption is needed in order to circumvent copy-protected sound recordings, which they prefer to compressed formats. For business reasons, they assert, such circumvention is needed in order to make the timely, cost-effective, and professional quality reproductions of sound recordings.

RIAA observes that the legislative history of the Digital Millennium Copyright Act acknowledges the proponents' concern. It points out the Conference Committee language that "if the use of copy protection technologies became widespread, a transmitting organization might be prevented from engaging in its traditional activities of assembling transmission programs and making ephemeral recordings permitted by section 112"²⁸⁷ RIAA notes that this concern led Congress, with the approval of both broadcasters and the recording industry, to draft compromise

²⁸⁶ See 17 U.S.C. §112(e) (citing §114(f)).

²⁸⁷ PHR Steve Englund, RIAA, June 30, 2003, p. 2 (quoting H.R. Conf. Rep. 105-796, at 78 (1998)).

language that exempts certain transmitting organizations in specified circumstances. *Id.* It concludes that Congress has already provided for DiMA's needs in §112(e)(8).²⁸⁸

DiMA and other proponents nevertheless assert that this provision arguably contemplates that requests for circumvention must be made for each sound recording to be uploaded, and individual requests are not realistic for large-scale webcasting. RIAA counters that §112(e)(8) was enacted at the same time as the anticircumvention provision. Therefore, even if the provisions are not sufficient, Congress has already expressed its intent as to this proposed exemption, and, since the situation has not changed since enactment, the Copyright Office should exercise caution before creating a similar exemption under §1201(a)(1) for the upcoming three-year period. Similarly, the Joint Reply Commenters also point out that, because §112 was intended to address all webcasters'

²⁸⁸ §112(e)(8) provides:

“If a transmitting organization entitled to make a phonorecord under this subsection is prevented from making such phonorecord by reason of the application by the copyright owner of technical measures that prevent the reproduction of the sound recording, the copyright owner shall make available to the transmitting organization the necessary means for permitting the making of such phonorecord as permitted under this subsection, if it is technologically feasible and economically reasonable for the copyright owner to do so. If the copyright owner fails to do so in a timely manner in light of the transmitting organization's reasonable business requirements, the transmitting organization shall not be liable for a violation of section 1201(a)(1) of this title for engaging in such activities as are necessary to make such phonorecords as permitted under this subsection.”

needs with respect to anticircumvention, the Librarian should proceed with caution before effectively expanding the ephemeral provision in an exemption.²⁸⁹

The Register concludes that because the §112(e) license gives webcasters the right to make ephemeral copies on their servers of sound recordings, the activities that are the focus of this requested exemption are noninfringing. However, to state that the activities are noninfringing does not answer the question whether the technological measures used on some CDs have caused or will cause substantial adverse effects on webcasters' ability to make noninfringing uses of the identified class of works.

The key question is whether the mechanism already prescribed by Congress in §112(e)(8) is sufficient to address webcasters' needs. DiMA asserts that it is not. It states that it wants to avoid delays in obtaining the highest-quality sound recordings in various formats at a cost appropriate for its members' businesses. It thus seeks an administrative determination that bulk circumvention of the Red Book Audio standard is permissible, arguing that large webcasters cannot run a timely business without such an exemption. Significantly, however, this problem has not actually been encountered. DiMA has not presented any evidence of an instance in which a webcaster has been unable to obtain the quality of recording it needs in a timely manner. Full Audio testified about agreements with major and independent record companies, as well as agreements with the Harry Fox Agency for mechanical licenses, and about webcasters' overall good relations with the music and

²⁸⁹ R23, p. 53.

recording industries.²⁹⁰ Additionally, the record reflects that the witnesses representing webcasters had not encountered copy-protected CDs in any significant number.²⁹¹ One DiMA witness acknowledged that “so far, at least for the webcasting community...we have not been prevented from getting access by the control measures that have currently been applied.”²⁹²

Rather than citing actual problems, such as competitive disadvantage with respect to major labels or an independent labels’ inability to deliver, proponents cited their fears of various operational problems.²⁹³ The proponents did allege that copy-protected CDs are beginning to be used as promotional material and webcasters cannot use them.²⁹⁴ They also cited a few news articles and projections prepared by an analyst at J.P. Morgan that hundreds of millions of protected discs will be available elsewhere in the world, and that volume shipments were to ship commercially in the United States as early as May or June 2003.²⁹⁵ Full Audio’s witness acknowledged, however, that the problem really has not yet developed. “I know that perhaps could be characterized as speculation, but it does seem very inevitable, certainly within these three years, that we are going to be encountering this.”²⁹⁶ Moreover, as representatives of record companies pointed out, and as

²⁹⁰ T Thomas Leavens, April 11, 2003, p. 125-6.

²⁹¹ T Seth Greenstein, April 11, 2003, p. 115,189-90; T Thomas Leavens, April 11, 2003, p. 179-81.

²⁹² T Seth Greenstein, April 11, 2003, p.190.

²⁹³ See, e.g., T Thomas Leavens, April 11, 2003, p. 131 et seq.; T Seth Greenstein, April 11, 2003, p. 171.

²⁹⁴ *Id.*, p. 152, 173.

²⁹⁵ *Id.*, p. 153.

²⁹⁶ T Thomas Leavens, April 11, 2003, p. 180; see p. 178-79.

DiMA did not deny, there is no indication that webcasters have ever approached record companies to resolve any problems in gaining access to protected material.²⁹⁷

In any event, §112(e)(8) clearly provides a mechanism that enables webcasters to circumvent technological measures under what appear to be the same circumstances that would operate in the case of the exemption sought in this rulemaking by DiMA. The fact that the statutory provision enacted by Congress requires some additional procedural steps does not justify ignoring the fact that Congress has provided a specific remedy for the situation that has given rise to DiMA's request for an exemption, especially when it does not appear that there have actually been any problems thus far. Having failed to demonstrate that the mechanism in §112(e)(8) has not accomplished the Congressional purpose, DiMA has not made the case for its proposed exemption.

The Register concludes that the evidence falls far short of supporting a conclusion that the access controls at issue have a present adverse effect on noninfringing uses. The proponents' evidence does not show more than de minimis present harm. Nor have they, based on a small number of news articles and a single analyst's projection, shown that future harm is more likely than not. They have not shown that record companies are unwilling to work out any anticipated problems. They have not provided sufficient evidence that they are now prevented from obtaining access to sound recordings to make ephemeral phonorecords for webcasting, or that it is likely that they will be denied access in the future. Mere apprehension that sound recordings will not be available to webcasters in the future is insufficient to prove the likelihood of a future adverse effect.

²⁹⁷ R23, p. 53; T Steve Englund, RIAA, April 11, 2003, p. 180; see T Seth Greenstein, April 11, 2003, p. 159-60.

They have not shown that the statutory exemption crafted specifically for their benefit does not serve its purpose. Without that showing of actual or likely harm, this exemption cannot be recommended.

The factors set forth in §1201(a)(1)(C) do not militate in favor of an exemption. Sound recordings are already widely available for use. Even if webcasters could not take advantage of the exemption in §112(e)(8), they would still have access to the “second session” Yellow Book recordings on the protected CDs, and DiMA has not made a convincing case that those compressed versions are too inferior to serve the webcasters’ purposes. The use of recordings for educational, nonprofit purposes is not relevant for this proposal, nor is the availability of the works for comment or criticism. However, exempting this class of works could have a substantial negative effect on the market for, and the value of, copyrighted sound recordings in this format. It cannot be denied that the recording industry is in a state of unprecedented crisis due to the widespread copyright infringement of sound recordings on the Internet. If record companies choose to use reasonable access controls in an attempt to deter such massive infringement, an exemption permitting circumvention of those access controls could have a deleterious effect on an already disrupted market. DiMA simply has not made a showing that it needs such an exemption. A balancing of the interests of copyright owners and the pertinent users requires rejection of the proposed exemption.

20. *Proposed exemption: Broadcast news monitoring*

When the Copyright Office sought requests to testify at hearings in this rulemaking proceeding, a request was received from the International Association of Broadcast Monitors (“IABM”). Members of this association are in the business of monitoring and recording portions of

broadcast news and public affairs programming for clients that include businesses and government agencies. They then compile relevant segments of the programming for delivery to their clients. The IABM requested to testify in support of the following proposed exemptions:

(1) Musical recordings and audiovisual works, protected by access control mechanisms whose circumvention is reasonably necessary to carry out a legitimate research project, where the granted exemption applies only to acts of circumvention whose primary purpose is to further a legitimate research project.²⁹⁸

(2) Musical recordings and audiovisual works, protected by access control mechanisms whose circumvention is reasonably necessary to carry out a legitimate research project.²⁹⁹

(3) Any lawfully acquired copy or phonorecord including a copyrighted work falling within any category in section 102 that, due to its nature and the users who typically use it, is likely to be lawfully used in particular environments under the fair use doctrine.³⁰⁰

(4) All photographic, video, and audio digital content that is, or purports to be, record of fact (e.g. news footage).³⁰¹

Although IABM alleged that it wished to testify in support of these already-proposed exemptions, the arguments asserted by the IABM all related to the perceived adverse effects of a proposed broadcast flag regulation that is currently being reviewed by the Federal Communications Commission.³⁰² Although the activities of the members of the IABM may fit within the general parameters of some or all of these proposed exemptions, the Register conducted one hearing session

²⁹⁸ C27.

²⁹⁹ C27.

³⁰⁰ C27.

³⁰¹ C50.

³⁰² See 67 FR 53,903 (Aug. 20, 2002).

specifically on this issue, since this specific factual context was not raised in the written initial or reply comments.³⁰³

Notwithstanding IABM's statement that it intended to testify in support of the proposed exemptions noted above, at the hearing it did not actually address those proposals, except to the extent that what it sought relates to news footage and programming.³⁰⁴ Rather, it asked the Office "to exempt news and public affairs programming from the scope of the broadcast flag."³⁰⁵ Such an exemption would be a "narrow, focused exemption specifically designed for the broadcast news monitoring industry. That exemption would allow us to bypass the broadcast flag for the very limited purpose of making news segments available to our customers."³⁰⁶

The Register cannot recommend such an exemption. First of all, the Register cannot find that the "limited purpose" for which IABM seeks an exemption constitutes a noninfringing use. The

³⁰³ Other witnesses who testified on this issue included representatives of the Electronic Frontier Foundation, The Walt Disney Company/The ABC Television Network, and Allbritton Communications/National Association of Broadcasters. The Copyright Office subsequently received a written submission on behalf of Cox Communications, Inc. after the hearings opposing IABM's testimony, but since there was no established process to consider further comments, the Office did not consider this submission in rendering its recommendation to reject this proposed exemption.

³⁰⁴ IABM did mention, in passing, that "We also support the exemptions proposed in comment numbers 27, 28 and 50 because they, too, would allow the public to bypass a technical measure for the purpose of using an audiovisual work for legitimate research and analysis." T Todd Murphy, IABM, May 9, 2003, p. 160. But it did not elaborate on those proposed exemptions.

³⁰⁵ T Pro Sherman, IABM, May 9, 2003, p. 159.

³⁰⁶ *Id.*, p. 160.

case law has, almost without exception, held that unauthorized broadcast news monitoring infringes the copyright owner's copyrights in broadcasts news programs.³⁰⁷

The evidence produced by IABM fails to support an exemption because it is entirely speculative. It further fails in that even if the speculative adverse effects were to become a reality, such adverse effects would only cause an inconvenience with respect to the intended use. Finally, it is also highly unlikely that the desired use for commercial purposes would constitute a noninfringing use absent authorization by the copyright owners.

IABM asserts that the institution of a broadcast flag regulation would prevent broadcast monitors from redistributing news broadcasts digitally over the Internet, a means of distribution that would be much more convenient than other forms of distribution currently used. While this is possible, it is not necessarily "likely." At present, there is no broadcast flag regime in place.³⁰⁸

³⁰⁷ Pacific & Southern Co., Inc. v. Duncan, 744 F.2d 1490, 1496-98 (11th Cir. 1984), cert. denied, 471 U.S. 1004 (1985); Los Angeles News Service v. Tullo, 973 F.2d 791, 796-99 (9th Cir. 1992); Georgia Television Co. v. TV News Clips of Atlanta, 19 U.S.P.Q.2D 1372, 1991 Copy. L. Rep. (CCH) ¶26,765, 18 Media L. Rep. 2349 (N.D. Ga. 1991); see Infinity Broadcast Corp. v. Kirkwood, 150 F.3d 104 (2d Cir. 1998)(retransmission of radio broadcasts over the telephone not fair use).

As IABM observed, Cable News Network, Inc. v. Video Monitoring Services of America, 940 F.2d 1471 (11th Cir. 1991), vacated, 949 F.2d 378 (11th Cir. 1991), appeal dismissed en banc, 959 F.2d 188 (11th Cir. 1992), reversed an order granting a preliminary injunction against a broadcast monitor. However, that decision was made because the injunction granted relief that went beyond protecting CNN's copyrighted material. More important, as noted in the *Tullo* case, cited above, that CNN decision does not have binding precedential effect, having been vacated and dismissed on appeal en banc. 973 F.2d at 794.

³⁰⁸ Recent news reports predict that the FCC will issue a regulation around the time that the Librarian announces the classes of works to be exempted in this rulemaking, see, e.g., "FCC Targets Copying of Digital TV," Washington Post, Oct. 16, 2003, p. E1, but an

While the FCC may adopt a broadcast flag regulation, this is not known. Even if the FCC does adopt such a regulation, it is not known when the regulation will go into effect, what the regulation will cover, and how it will be implemented. Had IABM been able to prove the likelihood that a broadcast flag regulation would be adopted, the likelihood that the regulation would be implemented within the relevant three-year period for this rulemaking, the likely nature of the compliance rules that will be mandated by the regulation, and the likely scope of any limitations that may be implemented in the regulation, there might have been some basis for consideration. The proponents, however, failed to offer any support beyond mere speculation.

The proponents also failed to prove any adverse effects beyond mere inconvenience that would result from the possible FCC regulation. There appears to be no dispute that analog broadcasting will continue for the next three years, and that any broadcast flag regulation that may be implemented would only affect digital broadcasts. Therefore, the activity currently conducted by broadcast monitors would not be significantly affected. By the proponents' own testimony, the desired redistribution over the Internet – a use that most likely is not noninfringing – would only be for the purpose of satisfying “some of our customers['] clamor for speed and convenience of digital delivery.”³⁰⁹ The fear that a possible regulation might inconvenience a user is a wholly insufficient basis for an exemption. Even if the proponents' worst case scenario were to come to pass during the ensuing three-year period, not only would analog recording and distribution be unaffected by such a regulation, but such a broadcast flag regulation apparently would not even prevent “digital” reproductions on CD-ROMS, discs, or other tangible media from being distributed to IABM's

exemption cannot be based on news reports predicting action by another agency.

³⁰⁹ T Pro Sherman, IABM, May 9, 2003, p. 157.

clients.³¹⁰ At worst, a regulation may only prevent, at some unknown time in the future, the redistribution of digital broadcast recording over the Internet. For all of these reasons, the proposal is rejected.

21. *Proposed exemption: Reverse engineering for interoperability and the Static Control proposals*

The Register granted a petition to submit a late comment from Static Control Components, Inc. (“Static Control”), which proposed three exemptions to the prohibition on circumvention. Sixty-five reply comments addressed the Static Control petition, and one session of the hearings was devoted to Static Control’s proposals. In specific, Static Control proposed:

1. Computer programs embedded in computer printers and toner cartridges and that control the interoperation and functions of the printer and toner cartridge.
2. Computer programs embedded in a machine or product and which cannot be copied during the ordinary operation or use of the machine or product.
3. Computer programs embedded in a machine or product and that control the operation of a machine or product connected thereto, but that do not otherwise control the performance, display or reproduction of copyrighted works that have an independent economic significance.

The origins of these proposals have their roots in a marketing strategy employed by Lexmark International, Inc. (Lexmark) associated with the introduction of two lines of laser printers, the T520/522 and the T620/622 (T-series). In addition to the sale of the T-series Lexmark printers, Lexmark tries to entice consumers to purchase its laser toner cartridges for use in the T-series printers. Lexmark offers a regular toner cartridge for sale that could be returned to any third-party

³¹⁰ T The Walt Disney Co. and The ABC Television Network, May 9, 2003, p. 176-77.

toner cartridge remanufacturer for replacement or refilling. After being refilled, these regular toner cartridges could then be used by consumers in the T-series printers, although allegedly with some of the enhanced features of the printer nonfunctional, e.g., the toner low meter functions only prior to being refilled.³¹¹ Lexmark also offers a “Prebate” toner cartridge for use with its T-series printers. These Prebate toner cartridges provide consumers with up to a \$50.00 savings over the regular cartridges. In return for this price discount, the box on the Prebate toner cartridge contains a shrinkwrap agreement which obligates the consumer to use the Prebate cartridge only once and to return the cartridge only to Lexmark.³¹² Unwilling to rely solely on the terms of this shrinkwrap agreement, Lexmark also deployed a technological measure contained on a microchip in its Prebate and regular cartridges.³¹³ In the regular cartridges, the technological measure does not prevent third parties from remanufacturing the cartridges, nor does it prevent users from using the remanufactured cartridge in the T-series printers. The technological measure in the Prebate toner cartridges, however, does prevent third-party remanufacturing and consumer use of remanufactured Prebate toner cartridges in the T-series printers. If consumers opt for the Prebate price discount, then not only are they contractually bound to return the cartridge to Lexmark rather than send it to a third-

³¹¹ T Seth Greenstein, *Static Control*, May 9, 2002, p.98.

³¹² The shrinkwrap license agreement states: “RETURN EMPTY CARTRIDGE TO LEXMARK FOR REMANUFACTURING AND RECYCLING. Please read before opening. Opening this package or using the patented cartridge inside confirms your acceptance of the following license/agreement. This all-new cartridge is sold at a special price subject to a restriction that it may be used only once. Following this initial use, you agree to return the empty cartridge only to Lexmark for remanufacturing and recycling. If you don’t accept these terms, return the unopened package to your point of purchase. *A regular price cartridge without these terms is available.*” [emphasis added.]

³¹³ Lexmark International, Inc. v. Static Control Components, Inc., 253 F. Supp.2d 943, 949 (E.D. Ky. 2003), appeal pending, No.03-5400 (6th Cir.).

party remanufacturer, but that contractual obligation is backed up by a technological measure that prevents the remanufacturing and refilling of the cartridge by third parties.

In both the regular and Prebate toner cartridge's microchip, there is a registered computer program called the Toner Loading Program (TLP). This program enables, inter alia, the T-series printers to approximate the amount of toner remaining in the toner cartridges. The T-series printers contain a registered computer program called the Printer Engine Program (PEP). While there are some differences in the Toner Loading Programs and the Printer Engine Programs for the T520/522 and the T620/622, for purposes of this analysis, the programs communicate in essentially the same manner.³¹⁴ Both Toner Loading Programs and the Printer Engine Programs received copyright registrations, leading to a presumption that they are copyrightable works. Both Lexmark and Static Control agree that the Toner Loading Programs for the T520/522 and the T620/622 may be expressed in different ways – i.e., that different toner loading programs could be written that would communicate with the Printer Engine Program.³¹⁵

The Toner Loading Program on the regular and Prebate toner cartridge microchips engages in an authentication sequence, or “secret handshake,” with the Printer Engine Program on the Lexmark T-series printers. This authentication sequence runs each time a toner cartridge is inserted into a Lexmark T-series printer, each time the printer is turned on, or whenever the printer is opened

³¹⁴ *Id.* at 948-49.

³¹⁵ *Id.* at 950-51.

and closed.³¹⁶ This authentication sequence must be successfully performed in order for the Toner Loading Program to exchange information with Printer Engine Program and to allow the printer to function. If, on the other hand, the authentication sequence does not successfully occur, the printer will not recognize the toner cartridge as authorized and access to the Printer Engine Program will be disabled.³¹⁷

In order to remanufacture cartridges that can interoperate with the Lexmark T-series printers, Static Control needs to understand how to gain access to the Printer Engine Program to enable it to operate. The authentication sequence (which may or may not include the “Checksum” operation)³¹⁸ protects access to the Printer Engine Program. If this sequence is not successful, the Printer Engine Program will neither accept information from the Toner Loading Program nor allow the Printer Engine Program to be used to operate the printer’s functions. Access to the Printer Engine Program is necessary for any use of the program.

³¹⁶ Id. at 952.

³¹⁷ Id. at 952-53.

³¹⁸ See id at 953-54. Although the district court found that the checksum operations (which involves the Printer Engine Program’s downloading of a copy of the Toner Loading Program from the toner cartridge’s microchip and comparing the number of bits to the expected number) was not a part of the authentication sequence or a secondary authentication sequence, from the information available in the record, the Register believes that this may well be a secondary access control. The checksum operation prevents access and use of the Printer Engine Program unless the correct value results from the process. It therefore appears, in the ordinary course of its operation, to require the application of information, or a process or a treatment, with the authority of the copyright owner, to gain access to the work. §1201(a)(3)(B). A determination on this point is not, however, essential to the Register’s analysis.

Many of the facts relating to the ongoing litigation between Lexmark and Static Control are still in dispute. One critical issue is whether Static Control reverse-engineered the communication between the Toner Loading Program and the Printer Engine Program in order to create an independent computer program or whether Static Control copied all or part of Lexmark's Toner Loading Programs in order to achieve interoperability with the Printer Engine Programs. The district court found that Static Control's SMARTEK microchip had "copied" Lexmark's Toner Loading Programs "entirely" rather than reverse engineering it.³¹⁹ As discussed below, while reverse engineering to identify and analyze the elements of a program necessary to achieve interoperability may be a noninfringing fair use, unnecessarily copying copyrightable elements to enable interoperability is infringing activity. Although the Register does not have sufficient factual information to make an independent determination on this issue, this determination is unnecessary to the decision of whether or not an exemption should be recommended. A review of the record accumulated by the Office, including the court's findings of fact at issue in the ongoing litigation between Static Control and Lexmark,³²⁰ yielded evidence sufficient to make a determination for purposes of this rulemaking. The Register's conclusion is that Static Control's purpose of achieving interoperability of remanufactured printer cartridges with Lexmark's Prebate and non-Prebate Printers could have been lawfully achieved by taking advantage of the defense found in §1201(f), the reverse engineering exemption. The Register takes no position on whether Static Control did, in fact, circumvent the "secret handshake" or the checksum operation in order to reverse engineer the

³¹⁹ Id. at 961. "In the instant case, it is clear that Static Control copied Lexmark's Toner Loading Programs in their entirety." Id.

³²⁰ Lexmark International, Inc. v. Static Control Components, Inc., 2003 U.S. Dist. LEXIS 3734 (Civil Action No. 02-571-KSF), (E.D. Ky. 2003), appeal pending, No.03-5400 (6th Cir.).

particular portion of Lexmark's Printer Engine Program or its Toner Loading Program for the sole purpose of identifying and analyzing the elements necessary to achieve interoperability of an independently created computer program with the Lexmark Printer Engine Program. Nevertheless, there was agreement between the parties that it was technologically possible to reverse engineer in order to create an original interoperable toner loading program that did not infringe the copyright of Lexmark's Toner Loading Program. The technological feasibility of creating such a noninfringing and interoperable program means that the congressional scheme could have been utilized. Whether or not this scheme was in fact utilized in this particular dispute is not an issue for the Register or the Librarian to resolve, but rather is an issue currently before the courts.³²¹ The fact-finding tools available to the parties and the trier-of-fact through the adversarial litigation process in the federal courts, including the extensive discovery and evidentiary record available to the court, make the courts the appropriate forum for resolution of the specific factual dispute. The role of this rulemaking process is to determine whether noninfringing uses of particular classes of works are adversely affected by the prohibition on circumvention of technological measures that control access to works. In order to resolve Static Control's request that the Librarian grant an exemption that would permit remanufacturers such as Static Control to circumvent access controls on computer printers and toner cartridges that control the interoperation and functions of the printer and toner cartridges, it is necessary for the Register to review and evaluate the facts to determine whether an adequate showing has been made in support of the proposed exemption. Given the technological ability to achieve interoperability through an existing statutory exemption, it appears that the congressional scheme sufficiently enables the noninfringing uses sought without requiring the assistance of an exemption in this rulemaking.

³²¹ *Id.*

Section 1201(f) is applicable to the goal of interoperability sought by Static Control.³²² The statutory exemption in §1201(f) was intended “to avoid hindering competition and innovation in the computer and software industry.”³²³ Congress did not intend the DMCA to change the effect of pre-DMCA case law that allowed legitimate software developers to continue engaging in certain activities for the purpose of achieving interoperability between computer programs.³²⁴ Not only did Congress intend that “interoperability” include the exchange of information between computer programs; it also intended “for such programs mutually to use the information which has been exchanged.”³²⁵ Interoperability necessarily includes, therefore, concerns for functionality and use, and not only of individual use, but for enabling competitive choices in the marketplace.

Section 1201(f) addresses these concerns in a series of progressive subsections. To show how §1201(f) relates to the facts of the Lexmark computer programs and Static Control’s intended use, it is necessary to examine the language of §1201(f).

Under §1201(f)(1), Static Control is not subject to the §1201(a)(1)(A) prohibition if it has lawfully obtained the right to use a copy of a computer program³²⁶ and circumvents the technological

³²² The Register takes no position on whether the means of achieving this goal actually used by Static Control satisfied the requirement of §1201(f).

³²³ House Manager’s Report at 14.

³²⁴ *Id.* Such case law includes Sega Enterprises Ltd. v. Accolade, Ind., 977 F.2d 1510 (9th Cir. 1992).

³²⁵ *Id.*

³²⁶ The Printer Engine Programs and the Toner Loading Programs.

protection measure³²⁷ that effectively controls access to a particular portion of that program³²⁸ for the sole purpose of identifying and analyzing those elements of the program that are necessary to achieve interoperability of an independently created computer program³²⁹ with other programs,³³⁰ and that have not been readily available to the person engaging in the circumvention,³³¹ to the extent any such acts of identification and analysis do not constitute infringement under this title.³³²

In addition to satisfying the goal of Static Control in this rulemaking – i.e., an exemption to §1201(a)(1)(A)’s prohibition of the act of circumvention – §1201(f) goes far beyond an exemption for §1201(a)(1)(A) by providing exemptions for certain acts within the scope of §§1201(a)(2) and (b). While these concerns are beyond the scope of this rulemaking, the point is highly relevant to

³²⁷ The authentication or checksum sequence.

³²⁸ The Printer Engine Program’s functional controls.

³²⁹ An original Toner Loading Program created by Static Control or others.

³³⁰ The Printer Engine Programs.

³³¹ Static Control. There was some controversy over whether the computer programs were available for viewing by Static Control such that circumvention was unnecessary. Since Lexmark’s programs were available in the regular toner cartridge, these programs were claimed to be “readily available” to Static Control. See, § 1201(f)(1). The point of what Static Control claims to have needed to be available was not the individual TLP and PEP programs, however, but the communication between these programs that revealed why the Prebate cartridge deactivated the PEP. It was this exchange of information that was unavailable to Static Control. Similarly, as Professor Ginsburg pointed out, if merely making information available denied the applicability of §1201(f) for creating interoperable works to foster competition, this “clever strategy” would be capable of undermining a significant goal of the provision. T Jane Ginsburg, May 9, 2003, p. 73. A canon of statutory construction is to favor an interpretation that would avoid an absurd result.

³³² Static Control and Lexmark dispute whether Static Control infringed the copyrights in Lexmark’s computer programs, and the district court concluded that it did. Whether there was or was not infringement is irrelevant to our inquiry; the only question is whether Static Control could have accomplished what it set out to do without infringing.

Static Control's intended use. Were an exemption recommended in this rulemaking, the benefit of such an exemption would end at a point comparable to §1201(f)(1). The statutory exemption goes far beyond the limits of this rulemaking. Subsection 1201(f)(2) allows, under the specified circumstances, the development and employment of the "technological means to circumvent a technological measure" that might be prohibited by §§1201(a)(2) and (b). And §1201(f)(3) allows those means to be made available to others, if this making available of the information or means is, inter alia, "solely for the purpose of enabling interoperability of an independently created computer program with other programs." Section 1201(f), therefore, has the capacity to satisfy interoperability with computer programs, such as the Printer Engine Program, in the marketplace as opposed to an exemption in this rulemaking which would be limited to individual acts of circumvention, without providing any ability to make such interoperability available to others.

Taking advantage of the statutory exemption found in §1201(f) provides far greater relief to a competitor than could any recommended exemption by the Librarian. An exemption for a particular class of works in this rulemaking is limited to the prohibition in §1201(a)(1)(A). Pursuant to §1201(a)(1)(E), neither an exemption nor "any determination" made in this rulemaking "may be used as a defense in any action to enforce any provision of this title other than this paragraph." In sharp contrast, the statutory exemption found in §1201(f) not only permits circumvention of technological measures to analyze and identify interoperable elements of a protected computer program, but also provides exemptions to the trafficking provisions in §1201(a)(2) and 1201(b). Even if the Register had found a factual basis for an exemption, it would only exempt the act of circumvention. It would not exempt the creation and distribution of the means to circumvent or the distribution of interoperable computer programs embedded in devices. Since it is clear that Static

Control's goal was not merely to privately circumvent, but rather to facilitate the distribution of competitive toner cartridges to others, a recommendation for an exemption in this rulemaking would have had little effect on the intended use.³³³ On the other hand, if reverse engineering to achieve interoperability is conducted under the statutory exemption, a competitor may not only reverse engineer a computer program in order to create an independently interoperable computer program, but may also make the information or means of interoperability available to others if the sole purpose is the enabling of interoperability of an independently created computer program with other programs, to the extent that doing so is a noninfringing use. Taking advantage of the statutory exemption is, therefore, a far more robust remedy for insuring competitive activity in the marketplace.

Since Congress created the §1201(f) statutory exemption to foster competition and accommodate the reverse engineering of computer programs to allow the creation of interoperable original computer programs, there is no basis for the Register to recommend an exemption 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. Even then, they must justify issuance

³³³ It also should be noted that an exemption from the Librarian would only apply when the circumvention was performed to engage in a noninfringing use. If Static Control copied copyrightable elements of Lexmark's Toner Loading Program rather than creating an original program that could interoperate with the Printer Engine Program, an exemption would not apply.

of any exemption that would appear to permit more than Congress intended when it enacted the statutory exemptions covering the same type of conduct.

Exemptions to the prohibition on circumvention are available only when the prohibition has had adverse effects on users seeking to make noninfringing uses. There is a factual dispute in the litigation between Lexmark and Static Control as to whether Static Control reverse engineered Lexmark's Toner Loading Program or whether Static Control simply copied Lexmark's Toner Loading Program in order to interoperate with the Printer Engine Program on certain Lexmark printers. Reverse engineering to discover the functional elements of a computer program can be a noninfringing use,³³⁴ whereas the wholesale copying of a copyrightable computer program is likely to be an infringing use. However, even if Static Control is ultimately found to have copied Lexmark's Toner Loading Program rather than to have engaged in reverse engineering permitted under §1201(f), this does not mean that §1201(f) would not be available to Static Control or similarly situated persons to accomplish their competitive purpose, so long as they stayed within the permitted scope of §1201(f). Instead, such a determination would simply mean that Static Control "avoid[ed] the drudgery in working up something fresh"³³⁵ or made a business decision that it would be too difficult or expensive to create an original interoperable program,³³⁶ and therefore made the choice to copy rather than take advantage of the statutory exemption found in §1201(f). The Librarian is not authorized to re-craft carefully tailored congressional solutions to satisfy, *post hoc*, the actions of users of copyrighted works who ignored the statutory exemption. When Congress has

³³⁴ Sega Enterprises Ltd. v. Accolade, Ind., 977 F.2d 1510 (9th Cir. 1992).

³³⁵ Campbell v. Acuff-Rose, 510 U.S. 569, 580 (1994).

³³⁶ Apple v. Franklin, 714 F.2d 1240, 1253 (3d Cir. 1993).

crafted an exemption to address a particular kind of noninfringing activity, review of noninfringing uses that were not anticipated by Congress and are not addressed by the statutory exemption may be appropriate. Yet since it appears that §1201(f) would permit Static Control to achieve its purpose, the Register could recommend an exemption only if Static Control proved that the statutory exemption is inadequate to achieve the noninfringing purpose. Since Static Control believes that §1201(f) exempts its conduct, it has not made this argument. Also, since the Register finds that even if Static Control's past conduct was outside the scope of §1201(f), Static Control's goal *could have been* achieved within the scope of §1201(f), no exemption is necessary in order to safeguard interoperability. Congress has comprehensively addressed the important concern of interoperability for competition and functionality within its own statutory exemption. That exemption provides the creators of interoperable computer programs with a much broader exemption than any that could issue from the Librarian. The Register, therefore, does not find any need for a new exemption simply to reinforce what Congress has already provided in a much more satisfactory manner.

22. *Proposed Exemption: Computer issues: encryption research, data file formats, recovery of passwords, personally identifying material*

A number of commenters raised issues related to the effect of §1201(a)(1) on users of computers and the Internet. While there were a number of variations, the primary concerns focused on the prohibition's effect on encryption and security research, recovering or discovering information that was encrypted, or protecting personally identifying information. Since the proposals for exemption involve varying factual information and analysis, they will be addressed separately.

One commenter, the CERT Coordination Center (CERT), proposed exemptions for:

1. Those literary works, musical works and audiovisual works, for which a person has lawfully obtained a right of use, protected by access control mechanisms which include features, flaws or vulnerabilities that (a) expose (i) the works to be protected or (ii) other assets of the users of such measures--including computers, computers systems or computer networks or the data or other protected works used with them--to infringement, compromise, loss, destruction, fraud and other adverse actions or (b) permit the privacy of such users to be compromised.³³⁷

2. Those literary works representing computer software programs and databases, for which a person has lawfully obtained a right of use, that operate to control access to works protected under the Copyright Act but contain features, flaws or vulnerabilities that (a) expose (i) the works to be protected or (ii) other assets of the users of such measures--including computers, computers systems or computer networks or the data or other protected works used with them--to infringement, compromise, loss, destruction, fraud and other adverse actions or (b) permit the privacy of such users to be compromised.³³⁸

Although the discussion in support of these variations on the same general proposal was thoughtful and the thrust of CERT's argument addresses an important area of concern, the comment is essentially a policy argument for a broadened exemption more appropriate for statutory enactment by Congress. The Register recognizes that there is an element of Catch-22 in this situation: if the activity the proponents wish to engage in is already permitted under any of the exemptions in §1201(subsections (d)-(g) and (i)-(j)), there is no need for an exemption; if it is not permitted under those provisions although it addresses the same subject matter, the Librarian cannot presume to overrule Congress' determination on the limitations of the statutory exemptions. But to recognize the difficulty of the situation is simply to acknowledge that this rulemaking proceeding is not intended to be a substitute for legislation or an opportunity to second-guess the determinations

³³⁷ C29(1).

³³⁸ C29(2).

Congress made when it enacted the DMCA. Rather, 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 this case, the comment states that the proposal is *consistent* with §§1201(e), (g), and (j), but does not explain why these existing statutory exemptions are insufficient to satisfy the concerns in the proposed exemptions. The comment is completely devoid of information about actual problems that have occurred or are likely to occur during the next three years. It is asserted that this “proposed new exemption is intended to take into account substantial advances that have occurred in both the technological measures that are employed to control access to protected works and, as well, the increased sophistication of technologies and procedures through which the security and integrity of computers, computer systems and computer networks, and the privacy of individual users, can be compromised.”³³⁹ In support of this statement, however, there is no factual showing on which to assess this claim. While there are five statements on data from the Computer Security Institute’s “2002 Computer Crime and Security Survey,” indicating that computer security breaches resulting from features, flaws, or vulnerabilities of computers are statistically significant, this data is not accompanied by facts that either support the scope of the proposed class or analyze the potential applicability of the current statutory exemptions in §§1201(e), (g), (i) and (j). The failure to provide specific examples of problems which this proposal addresses, together with the failure to show that the congressional exemptions are insufficient to resolve the general problems claimed, either currently or in the relevant three-year period, prevent further analysis of the issue. Based on the

³³⁹ C29 at 3.

record, the Register cannot determine whether the market has deviated from congressional expectations resulting in an unexpected adverse effect on noninfringing uses.

Another commenter, the U.S. Public Policy Committee of the Association for Computing Machinery (ACM), made a similar proposal for a class specified as:

Literary works, including computer programs and databases, protected by access control mechanisms that fail to permit access to recognize shortcomings in security systems, to defend patents and copyrights, to discover and fix dangerous bugs in code, or to conduct forms of desired educational activities.³⁴⁰

Again, there is no evidence in this comment that identifies a particular harm that the proponent demonstrated is not adequately addressed by the statutory exemptions in §§1201(e), (g) and (j). The comment presented five hypothetical examples of situations where encryption or security research might be necessary, but the commenter did nothing to identify why these could not be addressed under the existing statutory framework.

ACM's hearing testimony provided some additional factual support for the proposal – that “concerns” for publishing of research at upcoming conferences “may” be adversely affected by §1201(a)(1) – but this support was quite limited. Even if such potential harm could be quantified, it is not likely that the adverse effects would be causally attributable to the prohibition on circumvention in the DMCA. Rather, the alleged chilling effect on the discussion of the means of

³⁴⁰ C40.

circumvention would be challenged under the trafficking provisions, §§1201(a)(2) and 1201(b).³⁴¹

The concern appears to be with publication – making information regarding circumvention available to the public. Assuming that publication of scientific research papers could violate §§1201(a)(2) and 1201(b) – a controversial assumption – the Librarian has no power in this rulemaking to grant any exemptions from the prohibitions of those provisions.

Furthermore, once again there appears to be an important question as to whether this security testing, encryption research, etc., could have been conducted lawfully by acting within the congressionally-crafted exemptions. Without more specific information about the activity, it is impossible to assess the applicability of these statutory exemptions. It is clear that encryption research and security testing are very important issues currently facing this country, but they are issues that Congress specifically addressed in crafting §1201 as a whole. For the reasons discussed above relating to the CERT proposal, the Register finds no basis for recommending an exemption. With the limited information provided in these comments, it is impossible to assess the proposal.

Another comment presented a potentially interesting scenario regarding a contractual employee who, after being terminated by a university, refused to provide a password to enable access to a university computer system. The commenter proposed the class: “Circumvention of

³⁴¹ ACM quoted an email from a Dutch computer scientist stating, “There is no point in doing research if I cannot publish my results.” T Barbara Simon, ACM, May 14, 2003, p. 102.

Software - where the encryption needs to be circumvented due to unavailability of password(s) caused by absence, death, or termination.”³⁴²

Although creating an interesting intellectual exercise, the comment was also extremely difficult to address, because the factual statement was so vague that it was impossible to understand exactly how the sparse factual details fit within the scope of §1201(a)(1). For example, it was unclear whether a copyrighted work was involved, and who the author and copyright owner were. For purposes of this rulemaking, a “technological measure that effectively controls access to a work” is a measure that “requires the application of information, or a process or a treatment, *with the authority of the copyright owner...*”³⁴³ Based on the information provided in the comment, it is unclear whether the password controls were applied for purposes of protecting a copyrighted work (if there was one) or simply for protecting the privacy of the information about students in the student identification system that was password protected. Without further essential information explaining the problem and evidence showing the present or likely scope of this problem, the Register was unable to assess the need for this proposed exemption. Because the proponent failed to make its case, the Register cannot recommend this proposed class.

23. *Proposed Exemption: Conversion of data file formats and source code*

A few commenters submitted comments relating to source code or data file formats. These comments, however, were at times more difficult to decipher than encryption algorithms. For

³⁴² C18.

³⁴³ §1201(a)(3)(B) (emphasis added).

example, one proposal sought to exempt source code, because it was asserted that source code rendered into binary form effectively encrypts the source code.³⁴⁴ In turn, it was asserted that such encrypted source code creates liability for researchers who seek to alert system administrators of security flaws. The commenter cites a Red Hat advisory board regarding a claimed vulnerability in Red Hat's Linux operating system that was allegedly kept from U.S. citizens to avoid liability under the DMCA. The commenter also cites a legal notice from a Secure Network Operations representative raising "§ 1201(b)" liability for posting information on a "buffer overflow exploit" of the Tru64 UNIX system. There is another statement regarding a sophisticated attack against "dns root servers," but little additional information on the specific facts involved.

In all of these allegations, it is unclear whether the prohibition against circumvention contained in §1201(a)(1) is implicated. The vague Red Hat situation appears to implicate the distribution of information about a technology or component that would enable circumvention rather than the act of circumvention itself. Similarly, the "buffer overflow exploit" situation explicitly cites the antitrafficking provision of §1201(b). The last example regarding dns root server attacks does not provide enough information to determine what kind of technological measure, if any, was involved.

Only adverse effects that are the result of the prohibition on circumvention are relevant to this proceeding. As the House Manager's Report stated: "[a]dverse impacts that flow from other sources . . . or that are not clearly attributable [to the] prohibition, are outside the scope of the

³⁴⁴ C19.

rulemaking.”³⁴⁵ A commenter must, at a minimum, provide enough information to determine whether the proposal is within the scope of this rulemaking. This commenter has not done so. Additionally, in regard to reverse engineering, security flaws, encryption research, etc., the commenter must also provide enough information for the Register to analyze whether an existing statutory exemption is capable of resolving the adverse effect to a noninfringing use. Once again, the commenter has not provided sufficient information to do so. Finally, in regard to the commenter’s designation of a class: “source code – human readable description and/or definition of the behavior of a computer program that can be transformed into a format executable by computer hardware but effectively unreadable by humans” – it is unclear exactly what the commenter’s argument is. To the extent that the argument alleges that the rendering of source code into object code is, in itself, encryption, this argument appears flawed. At a minimum, the commenter must address this assertion in a factual context, taking into account the statutory definition of a technological measure that “effectively controls access to a work”³⁴⁶ and also taking into account the existing statutory exemptions that create specific limitations on the exempted circumvention activity. In the absence of sufficient information on which to analyze the problem, the Register is unable to recommend any exemption.

Another commenter presents a similar proposed exemption classified as “data file formats.”³⁴⁷ While it is not clear that a data file format is necessarily a measure protecting access to a

³⁴⁵ House Manager’s Report at 6.

³⁴⁶ See §1201(c)(3)(B).

³⁴⁷ C23.

work, this is particularly true when the “work” being created in a particular format is one’s own.³⁴⁸ There would not appear to be any liability in converting one’s own work from one format to another, so it is far from clear that an exemption is necessary to legally accomplish such a noninfringing use. The commenter alleges, for instance, that a current version of Microsoft Word cannot read older versions of the file format. In addition to the availability of Microsoft (and other companies’) conversion tools offered in their “Help” menus (offering not only conversion from older versions of Word, but also conversion of file formats of competitors), conversion of such file formats, while not guaranteed, does not generally appear to implicate a technological measure protecting access to a work. It would also appear that to the extent that such a file format is unreadable, and to the extent that the file format is the product of a “computer program,” one may be able to utilize the reverse engineering exemption in §1201(f) in order to access the information for which one has lawful access.

While a file format may be created with the specific purpose of controlling how one may access a work, this does not appear to be the type of situation that the commenter is addressing. For example, a distributor of a sound recording could encrypt a work for distribution over a secure server, e.g., Real Networks, and in the ordinary course of obtaining the work, the user would not necessarily have the authority to convert that work to another format. Yet in the scenarios presented by the commenter, such as the Rio Animator image animation tool or the Alisec image compression software, file conversion or reverse engineering within the scope of §1201(f) may well be authorized

³⁴⁸ Again, see §1201(c)(3)(B) (“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.” (Emphasis added.)

under current law. Unfortunately, the commenter has provided insufficient information to make that determination. In the absence of the identification of a verifiable or likely adverse effect, such an exemption does not appear to be warranted.

Another commenter proposes an exemption for “data archival mechanisms.”³⁴⁹ It is suggested that the file formats used in data archival systems that are subject to “click-wrap restrictions” may be enforceable under the DMCA. This appears to be a merger of two previous proposals – the enforceability of click-wrap licenses through §1201(a)(1) and the inability to convert data file formats due to the prohibition on circumvention. As previously discussed, neither problem is necessarily related to §1201(a)(1). The commenter provides insufficient specific information to understand the problem or the existence of potential alternatives. Most critically, it is not at all clear whether the situation described involves a technological measure that effectively controls access to a copyrighted work. The Register simply has insufficient information to recommend an exemption.

24. *Proposed exemption: Privacy and personally identifying information*

Two comments addressed issues relating to privacy and the protection of personally identifying information. One commenter proposed a class consisting of:

sound recordings, literary works (including computer programs and databases), and audiovisual works (including motion pictures), protected by access control mechanisms by or at the request of the copyright holder which require, as a condition precedent to granting access, that the user directly or indirectly disclose personally identifiable information to the copyright holder other than such

³⁴⁹ C24.

information as is reasonably necessary to complete a bona fide business transaction.³⁵⁰

The proponent cited two factual situations in which access involved or was conditioned on revealing personally identifiable information. First, the commenter stated that some Internet website operators require the disclosure of name, email address, and other personally identifiable information before allowing access to the content on the website. The commenter did not specify what content existed on any particular website requiring such disclosure or whether this material was available elsewhere without technological protection measures. There were no concrete examples cited and no showing of any actual or likely harm. In addition, the comment did not explain why a copyright owner is precluded from requesting information and why the consumer who objects could not simply refuse and find the content elsewhere in a less objectionable market situation. Absent some showing that access to the work is unavailable in some unprotected format and an explanation of what works are involved, it is impossible to assess this proposal. Without any showing of present or likely harm, consideration for this proposal cannot be sustained. In addition, the commenter failed to identify what technological measure is controlling access to the work and how this implicates the privacy concerns of the commenter.

The second factual situation cited involved litigation against Sunncomm, Inc. and Music City Records that resulted in a settlement that agreed to provide notice to consumers of information collection practices and to refrain from requiring consumers to disclose their personal information as a condition of downloading, playing, or listening to a CD. The commenter's own explanation of the evidence reveals that the current legal system together with market forces are working to resolve

³⁵⁰ C30(5).

possible excesses in the marketplace, and that the particular situation in question had in fact been satisfactorily resolved.

Another commenter raised the issue of “spyware” or software that gathers information about a user’s online activities without the knowledge of the user.³⁵¹ It is not completely clear what access control is involved, although there is some suggestion that it is generally encryption of the operations of the spyware. The activity of spyware is essentially the equivalent of a Trojan Horse that surreptitiously enters the user’s computer and performs functions without the consent of the user. Although a user may know that he or she is downloading a program or programs, that user may not be aware of the functions that the software is instructed to carry out. There were specific software applications discussed, albeit without a great deal of detail, yet the principal problem with the proposal is that it does not in any manner discuss the existing statutory exemption in §1201(i) or the precise reasons why the commenter believes such an exemption is insufficient (or even whether the commenter is aware of the existing exemption). The defect, therefore, in the case made for this proposed class is that there was not enough information provided to know whether §1201(i) could resolve the problem, as it appears capable of doing.

Section 1201(i) appears to deal with most variations of the problem of software that collects personally identifying information. This exemption permits circumvention of a measure that controls access if:

³⁵¹ C14(2).

(A) the technological measure, or the work it protects, contains the capability of collecting or disseminating personally identifying information reflecting the online activities of a natural person who seeks to gain access to the work protected;

(B) in the normal course of its operation, the technological measure, or the work it protects, collects or disseminates personally identifying information about the person who seeks to gain access to the work protected, without providing conspicuous notice of such collection or dissemination to such person, and without providing such person with the capability to prevent or restrict such collection or dissemination;

(C) the act of circumvention has the sole effect of identifying and disabling the capability described in subparagraph (A), and has no other effect on the ability of any person to gain access to any work; and

(D) the act of circumvention is carried out solely for the purpose of preventing the collection or dissemination of personally identifying information about a natural person who seeks to gain access to the work protected, and is not in violation of any other law.

Therefore, if spyware does not contain conspicuous notice to the user about the collection and dissemination of personally identifying information of that user's online activities or without providing the capability to prevent or restrict such collection and dissemination that it is conducting, a user may circumvent the measure for the sole purpose and effect of identifying, preventing or disabling such activities.

25. *Other comments beyond the scope of the rulemaking: Webcasting, Limitations of Liability for Online Service Providers and the Antitrafficking provisions of the DMCA.*

A number of comments discussed issues unrelated to the anticircumvention provision that is the focus of this rulemaking. Some of these comments consisted of criticisms of the DMCA generally, without citing any particular facts to support such criticism.³⁵² Others attacked particular

³⁵² See, e.g. C43 and C44.

aspects of the DMCA, but aspects outside of the scope of this rulemaking, e.g., criticism of the webcasting CARP³⁵³ and adverse effects of §512 relating to limitations on liability for online service providers.³⁵⁴

Some comments³⁵⁵ discussed problems with the antitrafficking provisions of §1201(a)(2) and 1201(b),³⁵⁶ related portions of the statute, but portions that are unquestionably outside the scope of this rulemaking. The Librarian is without authority to create exemptions from those provisions. In fact, Congress has specifically stated in §1201(a)(1)(E) that no exemption or determination made within the scope of this rulemaking may be used as a defense in any action to enforce any other provision of title 17 other than §1201(a)(1), and has thereby reserved to itself the authority to amend these provisions.

³⁵³ See, e.g., C45 and C46.

³⁵⁴ See, e.g., C37(3).

³⁵⁵ See, e.g., C2 and C16.

³⁵⁶ 17 U.S.C. §§1201(a)(2), 1201(b).

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

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 as follows:

(a) by revising paragraph (b); and

(b) by adding new paragraph (c).

The revisions and additions to § 201.40 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 October 28, 2003, through October 27, 2006, 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 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.

(c) Definitions. (1) "Internet locations" are defined to include domains, uniform resource locators (URLs), numeric IP addresses or any combination thereof.

(2) "Obsolete" shall mean "no longer manufactured or reasonably available in the commercial marketplace."

(3) "Specialized format," "digital text" and "authorized entities" shall have the same meaning as in 17 U.S.C. 121.