



SECTION 1201 RULEMAKING: Fifth Triennial Proceeding to Determine Exemptions to the Prohibition on Circumvention

RECOMMENDATION OF THE REGISTER OF COPYRIGHTS

OCTOBER 2012



The Register of Copyrights of the United States of America
United States Copyright Office · 101 Independence Avenue SE · Washington, DC 20559-6000 · (202) 707-8350

October 12, 2012

Dr. James H. Billington
Librarian of Congress
Library of Congress
101 Independence Ave, SE
Washington, DC 20540

Dear Dr. Billington:

Pursuant to my statutory obligation under 17 U.S.C. 1201(a)(1)(C) please find the attached recommendation relating to the rulemaking on exemptions from the prohibition on circumvention of technological measures that control access to copyrighted works.

Respectfully,

A handwritten signature in cursive script that reads "Maria A. Pallante".

Maria A. Pallante
Register of Copyrights and Director
U.S. Copyright Office

cc: Robert Dizard Jr., Deputy Librarian, Library of Congress
Elizabeth A. Pugh, General Counsel, Library of Congress

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Recommendation of the Register of Copyrights*

Introduction

The Digital Millennium Copyright Act (“DMCA”), enacted by Congress in 1998,¹ governs many aspects of the digital marketplace for copyright owners by establishing “a wide range of rules . . . for electronic commerce” and “defin[ing] whether consumers and businesses may engage in certain conduct, or use certain devices, in the course of transacting electronic commerce.”²

Title I of the Act, which added a new Chapter 12 to Title 17 of the U.S. Code, prohibits circumvention of technological measures employed by or on behalf of copyright owners to protect their works (also known as “access controls”). Specifically, Section 1201(a)(1)(A) provides, in part, that “[n]o person shall circumvent a technological measure that effectively controls access to a work protected under this title.”³ But Congress qualified the language of subparagraph (B) to ensure that the public can still engage in noninfringing uses of copyrighted works, such as fair use.⁴ Subparagraph (B) thus provides that the circumvention prohibition “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 3-year period, adversely affected by virtue of such prohibition in their ability to make noninfringing uses of that particular class of works under this title,” as determined in a rulemaking proceeding that takes place every three years.⁵

The Librarian of Congress, upon the recommendation of the Register of Copyrights, who consults with the Assistant Secretary for Communications and Information of the Department of Commerce, determines which classes of works are entitled to an exemption from the prohibition on circumvention.⁶ The resulting

* Maria A. Pallante.

¹ Pub. L. 105-304 (1998).

² TOM BLILEY, 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].

³ 17 U.S.C. § 1201(a)(1)(A).

⁴ See Commerce Comm. Report at 25-26, 35.

⁵ 17 U.S.C. § 1201(a)(1)(B).

⁶ 17 U.S.C. § 1201(a)(1)(C); see HOWARD COBLE, REPORT OF THE COMMITTEE OF CONFERENCE ON THE DIGITAL MILLENNIUM COPYRIGHT ACT, H.R. REP. NO. 105-796, at 64 (1998) [hereinafter Conference Report].

regulations, which are issued by the Librarian of Congress,⁷ 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.”⁸

The 2012 proceeding is the fifth triennial Section 1201⁹ rulemaking. The previous rulemakings culminated in regulations that exempted certain classes of works from the prohibition against circumvention of access controls.¹⁰ Based on the Register’s recommendations, the Librarian must render a new determination on potential exemptions every three years. When making this determination, the Librarian must conduct a *de novo* review of each proposed exemption and cannot rest his decision on the records in prior rulemaking proceedings.

Based on the record in this proceeding, the Register recommends that the Librarian adopt exemptions with respect to certain classes of works, as discussed and more specifically set forth below:

- Literary works distributed electronically, to permit blind and other persons with print disabilities to use screen readers and other assistive technologies
- Computer programs on wireless telephone handsets, to enable interoperability of software applications (“jailbreaking”)

⁷ Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, 75 Fed. Reg. 43,825 (July 27, 2010) (codified at 37 C.F.R. 201.40) [hereinafter 2010 Final Rule]; Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, 71 Fed. Reg. 68,472 (Nov. 27, 2006) (formerly codified at 37 C.F.R. 201.40) [hereinafter 2006 Final Rule]; Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, 68 Fed. Reg. 62,011 (Oct. 31, 2003) (formerly codified at 37 C.F.R. 201.40) [hereinafter 2003 Final Rule]; Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, 65 Fed. Reg. 64,555 (Oct. 27, 2000) (formerly codified at 37 C.F.R. 201.40) [hereinafter 2000 Final Rule].

⁸ 17 U.S.C. § 1201(a)(1)(D).

⁹ All references to numerical Sections herein refer to Title 17 of the U.S. Code.

¹⁰ Recommendation of the Register of Copyrights in RM 2008-8, Rulemaking on Exemptions from Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies (June 11, 2010) [hereinafter 2010 Recommendation], *available at* www.copyright.gov/1201/2010/initialed-registers-recommendation-june-11-2010.pdf; Recommendation of the Register of Copyrights in RM 2005-11, Rulemaking on Exemptions from Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies (Nov. 16, 2006) [hereinafter 2006 Recommendation], *available at* www.copyright.gov/1201/docs/1201_recommendation.pdf; 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 (Oct. 27, 2003) [hereinafter 2003 Recommendation], *available at* www.copyright.gov/1201/docs/registers-recommendation.pdf; 2000 Final Rule.

- Computer programs on wireless telephone handsets that were acquired within ninety days of the effective date of the exemption, for the purpose of connecting to alternative networks (“unlocking”)
- Motion pictures on DVDs or distributed by online services, for purposes of criticism or comment in noncommercial videos, documentary films, nonfiction multimedia ebooks offering film analysis, and for certain educational uses by college and university faculty and students and kindergarten through twelfth grade educators
- Motion pictures and other audiovisual works on DVDs or distributed by online services, for the purpose of research to create players capable of rendering captions and descriptive audio for persons who are blind, visually impaired, deaf or hard of hearing

In addition, based on the record, the Register recommends that the Librarian decline to adopt exemptions with respect to other proposed classes, as more specifically described below: literary works in the public domain, to enable access to digitally distributed works; video game consoles, for purposes of software interoperability; computer programs on personal computing devices, for purposes of software interoperability; and motion pictures and other works on DVDs and other media, for purposes of space shifting.

I. Background

A. Section 1201(a)(1)

As originally drafted, Section 1201(a)(1) consisted of a single sentence (what is now the first sentence of Section 1201(a)(1)): “No person shall circumvent a technological measure that effectively controls access to a work protected under this title.”¹¹ The House of Representatives Commerce Committee was concerned, however, that including an unqualified prohibition might undermine Congress’ commitment to fair use.¹² The Committee acknowledged that the growth and development of the internet 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

¹¹ See S. REP. NO. 105-190, at 86 (1998); H.R. REP. NO. 105-551, pt. 1, at 37 (1998).

¹² Commerce Comm. Report at 35.

of considerable time, resources, and money.”¹³ At the same time, 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.”¹⁴ The Committee thus concluded that “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.”¹⁵

Accordingly, the Commerce Committee proposed a modification of Section 1201 that it characterized as a “‘fail-safe’ mechanism.”¹⁶ The Committee Report noted that “[t]his 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.”¹⁷ As ultimately enacted, the “fail-safe” mechanism in Section 1201(a)(1) directs the Register 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 [Section 1201(a)(1)(A)] in their ability to make noninfringing uses under [Title 17] of a particular class of copyrighted works.”¹⁸ In addition, the Librarian must publish information on “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.”¹⁹

As explained by the Commerce Committee, “[t]he 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.”²⁰ Thus, the Register and Librarian are to “assess whether the prevalence of these technological protections, with respect to

¹³ *Id.* at 35-36.

¹⁴ *Id.* at 36.

¹⁵ *Id.*

¹⁶ *Id.*

¹⁷ *Id.*

¹⁸ 17 U.S.C. § 1201(a)(1)(C).

¹⁹ 17 U.S.C. § 1201(a)(1)(D).

²⁰ Commerce Comm. Report at 37.

particular categories of copyrighted materials, is diminishing the ability of individuals to use these works in ways that are otherwise lawful.”²¹

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

As set forth above, the primary responsibility of the Register and the Librarian in this rulemaking proceeding is to assess whether the implementation of access controls within the meaning of Section 1201 impairs the ability of individuals to use copyrighted works in ways that are otherwise lawful. Congress intended that the Register solicit input from the public while considering current or likely future adverse impacts, and to make recommendations to the Librarian concerning whether exemptions are warranted.²² In so doing, the Register, like the Librarian, is to consider “(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.”²³ The Register must carefully evaluate these factors when considering what, if any, exemptions to recommend to the Librarian, who promulgates the final rule that sets forth the exempted classes of works.

In addition, Section 1201(a)(1)(C) requires the Register to consult with the Assistant Secretary for Communications and Information of the Department of Commerce during the rulemaking process and report and comment on the Assistant Secretary’s views when making her recommendation to the Librarian. The Assistant Secretary’s participation helps to explore the effects of the DMCA on electronic commerce development and the relationship between copyright law and technology.

1. *De novo* consideration of classes

In each rulemaking proceeding, the Register reviews proposed classes on a *de novo* basis.²⁴ In enacting the DMCA, Congress indicated that “the regulatory prohibition [of Section 1201(a)(1)] 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

²¹ *Id.* Accord STAFF OF H. COMM. ON THE JUDICIARY, 105TH CONG., SECTION-BY-SECTION ANALYSIS OF H.R. 2281 AS PASSED BY THE UNITED STATES HOUSE OF REPRESENTATIVES ON AUG. 4, 1998 at 6 (Comm. Print 1998) [hereinafter House Manager’s Report].

²² Commerce Comm. Report at 37 (referencing the Administrative Procedure Act requirements, which include notice and comment).

²³ 17 U.S.C. § 1201(a)(1)(C).

²⁴ Commerce Comm. Report at 37.

[Librarian] makes a new determination that the adverse impact criteria have been met with respect to a particular class and therefore issues a new waiver.²⁵

Accordingly, the fact that a class has been previously designated creates no presumption that redesignation is appropriate. While in some cases earlier *legal* analysis by the Register may be relevant in analyzing a proposed exemption (particularly when there has been no intervening change in the law), the proponent of a class must still make a persuasive *factual* showing with respect to the three-year period currently under consideration. The Register notes, however, that when a class has been previously designated, evidence relating to the costs, benefits or marketplace effects ensuing from the earlier designation may be relevant to the assessment of whether the existing class (or some variation thereof) should be redesignated for the subsequent period.

Even if an exemption is not renewed, users may still make use of works that were lawfully circumvented while an earlier exemption was in effect, so long as no further act of circumvention is required.

2. Burden of proof

The proponents of an exemption bear the burden of proof in establishing that the Register should recommend it. As noted above, the statutory prohibition on circumvention is presumed to apply to any and all kinds of works unless, and until, the criteria for an exemption have been met with respect to a particular class.²⁶ “[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.”²⁷ The language of Section 1201(a)(1)(B) requires a conclusion that the use “*is or is likely to be* noninfringing, not merely that the adversely impacted use could plausibly be considered noninfringing.”²⁸ It is not sufficient to demonstrate that a use could conceivably be noninfringing, or that the absence of an exemption could result in an adverse impact.²⁹

Moreover, as explained above, the basis for an exemption must be established *de novo* in each triennial proceeding. This means that a proponent may not simply rely on the fact that the Register recommended an exemption in a previous rulemaking.³⁰ While the record in a prior proceeding may be relevant to establish changes in technology, usage or marketplace conditions during the intervening period (or the lack thereof), a

²⁵ *Id.*

²⁶ *Id.*

²⁷ 2010 Recommendation at 10.

²⁸ *Id.* at 12.

²⁹ *Id.*

³⁰ See 2000 Final Rule, 65 Fed. Reg. at 65,563 (citing House Manager’s Report at 8); Commerce Comm. Report at 37.

proponent seeking a new or renewed exemption must present persuasive, *current* evidence sufficient to fulfill the statutory mandate.

3. Threshold requirements

Proponents who seek to have the Librarian exempt a particular class of works from Section 1201(a)(1)'s prohibition on circumvention must satisfy two threshold requirements to establish a *prima facie* case for the proposed class: (1) uses affected by the prohibition on circumvention are or are likely to be noninfringing; and (2) as a result of a technological measure controlling access to a copyrighted work, the prohibition is causing, or in the next three years is likely to cause, a substantial adverse impact on those uses.³¹ The Register will then consider the proposed class under the statutory factors set forth in Section 1201(a)(1)(C).

a. *Noninfringing uses*

As noted above, Congress believed that it is important to protect noninfringing uses. There are several types of noninfringing uses that could be affected by the prohibition of Section 1201(a)(1), including fair use (delineated in Section 107), certain educational uses (Section 110), certain uses of computer programs (Section 117), use of public domain works (when subject to the same access control as a copyright-protected work), and perhaps other uses. The Register will look to the Copyright Act and relevant judicial precedents when analyzing whether a proposed use is likely to be noninfringing.

A proponent must show more than that a use could be noninfringing. Instead, the proponent must establish that the proposed use is likely to qualify as noninfringing under relevant law. As the Register stated in the last proceeding, there is no “rule of doubt” favoring an exemption when it is unclear whether a particular use is a fair use.³² As stated above, the statutory language requires that the use is or is likely to be noninfringing, not merely that the use could plausibly be considered noninfringing. The burden of proving that a particular use is or is likely to be noninfringing belongs to the proponent.³³

b. *Likelihood of substantial adverse impact*

The second threshold requirement is to establish that, due to technical measures controlling access to copyrighted works, the prohibition on circumvention is causing, or is in the ensuing three-year period likely to cause, “substantial effects” on the proposed uses. Under this requirement, a proponent of an exemption must show “distinct, verifiable, and measurable impacts,” and more than “*de minimis* impacts.”³⁴

³¹ See 17 U.S.C. § 1201(a)(1)(B).

³² 2010 Recommendation at 11-12.

³³ *Id.*

³⁴ 2003 Final Rule at 62,013 (internal quotation marks omitted).

To meet the burden of proof, proponents of an exemption must provide evidence either that actual harm currently exists or that it is “likely” to occur in the next three years. The amount of evidence required to do so may vary with the factual context of the alleged harm. It is generally necessary to demonstrate actual instances of verifiable problems occurring in the marketplace generally to prove actual harm. Although circumstantial evidence may also support a claim of present or likely harm, it must reasonably demonstrate that a measure protecting access was the cause of the harm.

Likely adverse effects may also support an exemption. To demonstrate a “likelihood” of adverse impact, the proponent must prove that such impact is more likely than not to occur.³⁵ Claims based on “likely” adverse effects cannot be supported by speculation alone.³⁶ Because a showing of likely adverse impact necessarily involves some amount of prediction, the proponent of the exemption bears the substantial burden of proving that the expected adverse impact is not just conceivable – or sometimes possible – but probable.

The identification of existing or likely problems is not, however, the end of the analysis. For an exemption of a particular class of works to be warranted, a proponent must show that the problems justify an exemption in light of all of the relevant facts. The identification of isolated or anecdotal problems generally will be insufficient to warrant an exemption.³⁷ Similarly, the mere fact that a particular medium or technology may be more convenient to use for noninfringing purposes than other formats is generally insufficient to support an exemption.³⁸ The Register and Librarian will, when appropriate, assess the alternatives that exist to accomplish the proposed noninfringing uses. Such evidence is relevant to the inquiry regarding whether the prohibition adversely affects the noninfringing use of the class of works. If sufficient alternatives exist to permit the noninfringing use, there is no substantial adverse impact. Proponents of an exemption must show sufficient harm to warrant the exemption from the default rule established by Congress, the prohibition against circumvention.

³⁵ “Likely” means “probable,” “in all probability,” or “having a better chance of existing or occurring than not.” 2010 Recommendation at 12 n.31 (citing BLACK’S LAW DICTIONARY 638 (abridged 6th ed. 1991)).

³⁶ See House Manager’s Report at 6 (an exemption based on likely future adverse impacts during the applicable period should be made only in extraordinary circumstances in which the evidence of likelihood is highly specific, strong and persuasive).

³⁷ 2010 Recommendation at 194 (“anecdotal evidence, isolated occurrences, and inconveniences will not be sufficient to support an exemption”); Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, 76 Fed. Reg. 60,398, 60,400 (Sept. 29, 2011) [hereinafter 2011 Notice of Inquiry].

³⁸ *Id.*

4. Statutory factors

If a proponent satisfies the threshold showing, the Register will continue the analysis by looking at the statutory factors 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.³⁹

At this stage of the analysis, it is critical to balance user and copyright owner interests. The assessment also includes consideration of any other statutory exemptions to the prohibition that apply to the uses in question. If a statutory exemption applies, the Librarian may not need to designate a class.

C. Defining a class

A major focus of the rulemaking proceeding is how to define a “class” of works. In enacting Section 1201, Congress noted that the class should be neither too broad nor too narrow.⁴⁰ The Commerce Committee Report provides a bit more guidance in stating that “the ‘particular class of copyrighted works’ [is intended to] be a narrow and focused subset of the broad categories of works . . . identified in section 102 of the Copyright Act.”⁴¹ Notwithstanding the rather open-ended nature of the task, Congress emphasized that “[d]eciding the scope or boundaries of a ‘particular class’ of copyrighted works as to which the prohibition contained in section 1201(a)(1) has been shown to have had an adverse impact is an important issue to be determined during the rulemaking proceedings.”⁴²

Because the term “category” of works generally is understood in copyright law as referring to the Section 102 categories, the Register concluded that the starting point for any definition of a “particular class” of works in the Section 1201 rulemaking process must be one of those categories. The illustrative list of categories appearing in Section 102 of Title 17, such as literary works, musical works (including any accompanying

³⁹ 17 U.S.C. § 1201(a)(1)(C).

⁴⁰ 2010 Recommendation at 17 (citing House Manager’s Report at 7).

⁴¹ Commerce Comm. Report at 38.

⁴² House Manager’s Report at 7.

words), and sound recordings, is only a starting point for this decision, however; a “class” will generally constitute some subset of a Section 102 category.

While it begins with a Section 102 category of works, or a subcategory thereof, the description of a “particular class” of works is ordinarily further refined by reference to other factors to ensure that the scope of the class is proportionate to the scope of the harm to noninfringing uses. That is, 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 may also take into account the adverse effects an exemption may have on the market for or value of copyrighted works. 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 the works. 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 inconsistent with Congress’ intent in directing the Register and Librarian to define a “particular class” of works.

In the earliest rulemakings, consistent with the records in those proceedings, the Register rejected proposals to classify works by reference to the type of user or use (*e.g.*, libraries, or scholarly research).⁴³ In the 2006 proceeding, however, the Register concluded, based on the record before her, that in appropriate circumstances a “class of works” that is defined initially by reference to a Section 102 category of works or subcategory thereof may additionally be refined not only by reference to the medium on which the works are distributed or particular access controls at issue, but also by reference to the particular type of use and/or user to which the exemption shall be applicable. The Register determined that there was no basis in the statute or in the legislative history that required her to delineate the contours of a “class of works” in a factual vacuum. At the same time, tailoring a class solely by reference to the use and/or user would be beyond the scope of what a “particular class of works” is intended to be.⁴⁴

The contours of a “class” will depend on the unique factual circumstances established in the rulemaking record on a case-by-case basis.⁴⁵ Moreover, those factual circumstances are considered in the context of the market for copyrighted works in any given three-year period.⁴⁶ The Register will look to the specific record before her to assess the proper scope of a class for the ensuing three-year period.

⁴³ In the first Section 1201 rulemaking process, the Register determined that “the statutory language required that the Librarian identify a ‘class of works’ primarily based upon attributes of the works themselves, and not by reference to some external criteria such as the intended use or the users of the works.” 2011 Notice of Inquiry, 76 Fed. Reg. at 60,402.

⁴⁴ See 2006 Recommendation at 9-10, 15-20.

⁴⁵ *Id.* at 17-18.

⁴⁶ Commerce Comm. Report at 36 (“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.”).

II. History of 2012 proceeding

A. Commencement

On September 29, 2011, the Register initiated this rulemaking proceeding pursuant to Section 1201(a)(1)(C) with publication of a Notice of Inquiry (“NOI”).⁴⁷ The NOI requested written comments from all interested parties, including representatives of copyright owners, educational institutions, libraries and archives, scholars, researchers, and members of the public concerning whether noninfringing uses of certain classes of works are, or are likely to be, adversely affected by the prohibition against circumvention of technological measures that control access to copyrighted works.⁴⁸

During the initial comment period that ended on December 1, 2011, the Copyright Office received twenty-two comments, all of which were posted on the Office’s website.⁴⁹ Based on these comments, the Register identified proposed exemptions for the upcoming period.

B. Notice of Proposed Rulemaking

Because some of the initial comments contained similar or overlapping proposals, the Copyright Office arranged the proposals into ten classes of works, and set forth and summarized each proposed class in a Notice of Proposed Rulemaking (“NPRM”) published on December 20, 2011.⁵⁰ This NPRM did not present the initial classes in the form of a proposed rule, but merely as “a starting point for further consideration.”⁵¹

The NPRM asked interested parties to submit additional comments and reply comments providing support, opposition, clarification, or correction regarding the proposed classes of works, and to provide factual and/or legal arguments in support of their positions. The Copyright Office received a total of 674 comments before the

⁴⁷ 2011 Notice of Inquiry, 76 Fed. Reg. 60,398 (Sept. 29, 2011). The last triennial rulemaking proceeding was commenced in 2008 and concluded in 2010 (the “2010 Rulemaking”). Because the Register was unable to present her recommendation to the Librarian of Congress prior to October 27, 2009, the then-existing regulations specifying the classes adopted pursuant to the 2006 rulemaking were extended until July 27, 2010, when the last triennial rulemaking was concluded. *See* Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, 74 Fed. Reg. 55,138 (Oct. 27, 2009).

⁴⁸ Parties submitting comments were asked to: specify a class or classes of works adversely affected by the prohibition on circumvention of access controls; summarize their argument in favor of designating the class of works; and provide any facts, evidence, and legal arguments supporting the designation.

⁴⁹ As in past Section 1201 rulemaking proceedings, all materials made a part of the record are available through the Copyright Office website, www.copyright.gov/1201, or, in the case of certain exhibits that the website is unable to host due to technological limitations, upon written request to the Copyright Office.

⁵⁰ Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, 76 Fed. Reg. 78,866 (Dec. 20, 2011).

⁵¹ *Id.* at 78,868.

comment period closed on February 10, 2012.⁵² The Office also received eighteen reply comments before the reply comment period closed on March 2, 2012.⁵³

C. Public hearings and written questions

On March 15, 2012, the Register published a Notice indicating that public hearings would be conducted at the University of California, UCLA School of Law in California and at the Library of Congress in Washington, D.C., in May and June 2012, to consider the proposed exemptions. Requests to testify were due April 2, 2012.⁵⁴ Public hearings were held on five separate days: at the Library of Congress on May 11, 2012;⁵⁵ at University of California, Los Angeles, School of Law on May 17, 2012; and at the Library of Congress on May 31, June 4, and June 5, 2012. Witnesses representing proponents and opponents of proposed classes of works offered testimony and answered questions from Copyright Office staff.⁵⁶

Following the hearings, the Copyright Office sent follow-up questions pertaining to certain issues to the witnesses who had testified regarding those issues. The purpose of these written inquiries was to clarify for the record certain statements made during the hearings and to elicit responses to questions raised at the hearings.⁵⁷

D. Consultation with Assistant Secretary for Communications and Information

During the rulemaking process, as contemplated by Congress, the Register sought input from the Assistant Secretary for Communications and Information of the Department of Commerce, who oversees the National Telecommunications and Information Administration (“NTIA”). NTIA staff were briefed on the rulemaking process and informed of developments through a series of meetings and telephone conferences. They were also in attendance at many of the hearings.

⁵² See comments posted on the Office’s website at www.copyright.gov/1201/2012/comments/.

⁵³ See reply comments posted on the Office’s website at www.copyright.gov/1201/2012/comments/reply/.

⁵⁴ Notice of Public Hearings: Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, 77 Fed. Reg. 15,327 (March 15, 2012).

⁵⁵ The May 11, 2012 hearing was designated as a “Technology Hearing” to give proponents and opponents of proposed classes of works an opportunity to conduct demonstrations of various technologies pertinent to the merits of the proposals.

⁵⁶ Written transcripts of the hearings are available on the Copyright Office website. See www.copyright.gov/1201/hearings/2012/agenda/. Certain exhibits referenced in the transcripts are available at www.copyright.gov/1201/2012/exhibits/. Exhibits that the Office website could not host due to technological limitations are available upon request to the Copyright Office.

⁵⁷ The Copyright Office’s post-hearing questions and the witnesses’ responses thereto are posted on the Office website. See www.copyright.gov/1201/2012/responses/. Certain exhibits referenced in the post-hearing questions and replies are available at www.copyright.gov/1201/2012/exhibits/. Exhibits that could not be hosted on the Office website due to technological limitations are available upon written request to the Office.

NTIA formally communicated its views on the proposed classes in a letter delivered to the Register on September 21, 2012.⁵⁸ A discussion of NTIA’s substantive analysis of particular proposals is presented in the relevant sections of this Recommendation.

III. Discussion

A. Proposed Class 1: Literary works in the public domain – digital access

Proponent Open Book Alliance (“OBA”) proposes that the Register recommend the following class:

Literary works in the public domain that are made available in digital copies.

1. Proponent’s case

Proponent seeks to circumvent technological measures applied to literary works in the public domain.

As explained above, 17 U.S.C. § 1201(a)(1)(A) provides that “[n]o person shall circumvent a technological measure that effectively controls access to a work protected under this title.” Thus, the prohibition on circumvention of technological protection measures does not apply to public domain materials because such materials are not protected under Title 17. Nevertheless, the proponent seeks a “clarification” from the Librarian that circumvention of technological measures for the purpose of accessing literary works in the public domain does not violate 17 U.S.C. § 1201(a)(1).⁵⁹

⁵⁸ Letter from The Hon. Lawrence E. Strickling, Assistant Secretary for Communications and Information, National Telecommunications and Information Administration, United States Department of Commerce to Maria A. Pallante, Register of Copyrights, U.S. Copyright Office (Sept. 21, 2012) [hereinafter NTIA Letter].

⁵⁹ P1 (OBA) at 1. Throughout this document, the Register uses the following citations to reflect record evidence: P to refer to documents suggesting proposed classes; C to refer to comments on proposed classes; R to refer to reply comments on proposed classes; and T to refer to transcript excerpts. Additionally, the Register specifies the party or witness in its citations. For example, “P1 (OBA)” refers to the Open Book Alliance’s comments in support of Proposed Class 1 and “C12 (Joint Creators)” refers to the comments of Joint Creators and Copyright Owners in response to Proposed Class 1. In the example “T Doe, May 17, 2012, at 233,” the “T” indicates a citation to a hearing transcript, “Doe” refers to the last name of the witness, “May 17, 2012” refers to the date of the hearing, and “at 233” refers to the page of the transcript. All of the written documents and transcripts reflected in these citations, as well as post-hearing follow-up correspondence, are available on the Office’s website, www.copyright.gov/1201.

2. Opposition

Joint Creators and Copyright Owners (“Joint Creators”)⁶⁰ filed comments in response to Proposed Class 1. Joint Creators do not object to the conclusion that Section 1201(a)(1) is inapplicable to literary works that are in the public domain, but caution that many distributions of such literary works contain ancillary copyrightable elements, such as cover art, inserts, photographs, prefaces, and the like. Joint Creators assert that a formal exemption is unnecessary and beyond the scope of the proceeding and, alternatively, that even if such an exemption were warranted, the proponent has failed to meet its burden.⁶¹

3. NTIA’s comments

NTIA “shares [OBA]’s concern that the implementation of [technological measures] restricts universal access” to public domain material, and that such restrictions “may have a negative impact on educational institutions and research organizations,” as well as other negative impacts on the public.⁶² NTIA also recognizes, as the Register has noted, that “[w]orks in the public domain are not affected by the prohibition on circumvention.”⁶³ Accordingly, NTIA agrees that an exemption is not required for this class of works.⁶⁴

4. Discussion

Section 1201(a)(1)(A) provides that “[n]o person shall circumvent a technological measure that effectively controls access to a work *protected under this title*.”⁶⁵ (emphasis added). Because public domain works are not “protected under [Title 17],” the prohibition on circumvention does not apply to such works. As the Librarian noted in the 2010 rulemaking proceeding, “Section 1201 does not prohibit circumvention of a technological protection measure when it simply controls access to a public domain work; in such a case, it is lawful to circumvent the technological protection measure and there is no need for an exemption.”⁶⁶

⁶⁰ The trade groups represented by Joint Creators are the Association of American Publishers, the American Society of Media Photographers, the Business Software Alliance, the Entertainment Software Association, the Motion Picture Association of America, the Picture Archive Council of America, and the Recording Industry Association of America. C12 (Joint Creators) at 1-2.

⁶¹ There were several other comments filed in support of the exemption, but none offered significant additional facts or argument.

⁶² NTIA Letter at 3.

⁶³ *Id.* (quoting 2010 Recommendation at 256).

⁶⁴ *Id.*

⁶⁵ 17 U.S.C. § 1201(a)(1)(A) (emphasis added).

⁶⁶ 2010 Final Rule, 75 Fed. Reg. at 43,837. The Register made a similar observation in the 2003 rulemaking. *See* 2003 Final Rule, 68 Fed. Reg. at 62,015.

As the Joint Creators note, additional questions may arise when a technological measure controls access not only to a work in the public domain, but at the same time controls access to other works that are protected by copyright. There is no need for the Register to address this issue, however, because proponents neither raised it nor presented any evidence relating to it.

5. Recommendation

The Register concludes that the requested exemption is beyond the scope of this rulemaking proceeding. The Register therefore declines to recommend the adoption of Proposed Class 1.

B. Proposed Class 2: Literary works distributed electronically – assistive technologies

Proponents American Council of the Blind (“ACB”) and the American Foundation for the Blind (“AFB”) propose that the Register recommend the following class:

Literary works, distributed electronically, that: (1) contain digital rights management and/or other access controls which either prevent the enabling of the book’s read-aloud functionality or which interfere with screen readers or other applications or assistive technologies that render the text in specialized formats; and (2) are legally obtained by blind or other persons with print disabilities (as such persons are defined in section 121 of Title 17, United States Code), or are legally obtained by authorized entities (as defined in such section) distributing such work exclusively to such persons.

1. Proponent’s case

Proponents seek an exemption from the prohibition on circumvention in order to access literary works that are distributed electronically – *i.e.*, ebooks – that are legally obtained by individuals who are blind or print disabled but cannot be used with screen readers or other assistive technologies.

a. Background

Ebooks are books in digital formats that are downloaded by users to personal computers or portable electronic devices. Although ebooks are available from a variety of sources and in a multiplicity of formats, three dominant reading platforms have emerged: Amazon.com’s Kindle, Barnes & Noble’s Nook, and Apple’s iBooks application for use with Apple devices such as the iPhone and iPad. Ebooks offer the potential significantly to improve access to literary works for individuals who are blind, visually impaired, or otherwise physically disabled such that they cannot read a traditional print book. As the Register observed in 2010:

[t]he benefits of ebooks were immediately apparent to the blind and visually impaired. Ebooks present significant advantages to this community of users. When a book is in electronic form, it offers the potential for accessibility that is otherwise not available from the print version of a book. An ebook is capable of allowing a user to modify the size of the print, to activate a “read-aloud” function, or to interact with the work by means of a separate screen reader

software and hardware. The modification of print size can allow users with visual impairments to access an ebook without the need for corrective lenses or external magnification. The “read-aloud” function can render written text to synthesized speech, enabling the user to listen to a copy of a work by having the computer or device voice the text that appears on the screen. A screen reader program can also enable read-aloud functionality, but offers additional benefits to the blind and visually impaired. For instance, screen reader software can be coupled with hardware to enable rendering written text into Braille, or it can facilitate navigation through an ebook that would not be available with simple read-aloud options on a computer or portable device.⁶⁷

In 2006 and 2010, the Librarian designated a class consisting of “[l]iterary works distributed in ebook format when all existing ebook editions of the work (including digital text editions made available by authorized entities) contain access controls that prevent the enabling either of the book’s read-aloud function or of screen readers that render the text into a specialized format.”⁶⁸ Proponents request a variation of that language that, essentially, eliminates the requirement that “all existing ebook editions of the work . . . contain access controls . . .,” but which is limited to individuals with print disabilities as defined by 17 U.S.C. § 121, or those that “are legally obtained by authorized entities [under Section 121] distributing such work exclusively to such persons.”

b. *Asserted adverse impact*

ACB and AFB assert that the exception is necessary because “technological measures to control access to copyrighted works have been developed and deployed in ways that prevent access to and fair use of [ebooks] by people who are blind or visually impaired.”⁶⁹ Despite the rapid growth of the ebook market, ACB and AFB assert that most ebook titles remain inaccessible due to fragmentation within the industry and differing technical standards and accessibility capabilities across platforms:

Of the current major [ebook] distributors (Barnes & Noble’s Nook store, Amazon’s Kindle store, and Apple’s iBookstore) Apple’s iBooks application is the only

⁶⁷ 2010 Recommendation at 247.

⁶⁸ 2010 Final Rule, 75 Fed. Reg. at 43,837; 2006 Final Rule, 71 Fed. Reg. at 68,475; *see also* 2003 Final Rule, 68 Fed. Reg. at 62,014 (“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.”).

⁶⁹ P2 (ACB and AFB) at 4.

mainstream [ebook] reader that is accessible to individuals who are blind or visually impaired. Apple's full-featured screen reader includes word-by-word navigation and [B]raille support. By contrast, all of Barnes & Noble's Nook readers are completely inaccessible to blind users. Although Amazon offers text-to-speech features for its Kindle books, those features are so limited that the Kindle has been described as an inaccessible product with accessibility enhancements. The Kindle for PC with Accessibility Plug-in lacks the navigational feature to read word-by-word or read the spelling of words.⁷⁰

Although precise figures remain elusive, press accounts cited by the proponents suggest that only a fraction of the publicly available ebooks are accessible; they estimate that there are approximately 1.8 million inaccessible ebook titles. They offer one example, *The Mill River Recluse* by Darcie Chan, ebook editions of which are available in each of the three major ebook stores, but they assert that only the iBookstore edition is accessible. An individual with a print disability would thus be required to have an iPhone, iPad, or other Apple device in order to access the book.⁷¹ Proponents assert that “[t]he cost of purchasing Apple hardware merely to read an accessible version of an ebook represents a substantial adverse effect caused by the DMCA’s anti-circumvention provision.”⁷²

The Samuelson-Glushko Technology Law & Policy Clinic at the University of Colorado Law School (“Clinic”), another commenting party, urges the Register to recommend either the current exemption, or its own proposed version of the exemption, which is slightly narrower than the version proposed by the proponents.⁷³ The Clinic believes that its version of the language alleviates the opponents’ concerns while achieving the objectives of the initial proposal. Specifically, the Clinic asserts the existence of a “literacy crisis in the blind and print-disabled community,” that requires more widespread availability of “text to speech” capabilities, noting that fewer than ten percent of the 1.3 million legally blind individuals are able to read Braille, and only ten percent of blind children learn how to read it.⁷⁴ The Clinic also supports the proponents’

⁷⁰ *Id.* at 8 (internal citations omitted).

⁷¹ See T Brunson, June 5, 2012, at 23 (explaining that different manifestations of a particular platform often contain different feature sets).

⁷² P2 (ACB and AFB) at 10.

⁷³ R15 (Samuelson-Glushko Technology Law & Technology Policy Clinic) at 3 (“Literary works, distributed electronically, that contain technological measures that control access to such works, when circumvention is accomplished to facilitate the rendering of specialized formats, when the purpose of circumvention is for the purpose of improving the ability of blind or other persons with print disabilities, who have lawful access to such works, to perceive such works.”).

⁷⁴ *Id.* at 8 (citing *The Braille Literacy Crisis in America Facing the Truth, Reversing the Trend, and Empowering the Blind*, NAT’L FED’N OF THE BLIND JERNIGAN INST., Mar. 26, 2009).

argument that a blind individual should not have to invest in all three major reading platforms in order to obtain accessible content.

Finally, the Clinic notes the uncertainty surrounding whether text-to-speech technology implicates any of copyright's exclusive rights, suggesting that the exemption would "protect good faith disabled users from possible legal liability."⁷⁵

2. Opposition

Joint Creators⁷⁶ offered no objection in principle to an exemption that is identical to that promulgated in 2010. They note, however, that the market for literary works is evolving rapidly and market share of the major electronic book platforms has increased substantially since the last rulemaking. They also note that the proposed exemption in this instance is broader than the current exemption, because it applies to all literary works distributed electronically without regard for whether alternatives are readily available on the market. Specifically, Joint Creators "see no reason why the existing exemption should be expanded to cover works that can be lawfully obtained in the desired formats without engaging in circumvention."⁷⁷

Joint Creators also note that the proposed exemption, which would apply to "readers who are blind or visually impaired, or anyone else, who devises means to circumvent copy protection measure to allow access by people with print disabilities,"⁷⁸ could run afoul of the prohibition on trafficking in circumvention tools set forth in Section 1201(a)(2).

3. Discussion

Since the issue of ebook accessibility was first raised in the 2003 rulemaking, the Register has been supportive of the need to ensure that access controls do not prevent people who are blind or visually impaired from gaining meaningful access to books distributed in electronic formats. The Register has therefore twice recommended that the Librarian designate an appropriate class.⁷⁹

⁷⁵ *Id.* at 13.

⁷⁶ The trade groups represented by Joint Creators are the Association of American Publishers, the American Society of Media Photographers, the Business Software Alliance, the Entertainment Software Association, the Motion Picture Association of America, the Picture Archive Council of America, and the Recording Industry Association of America. C12 (Joint Creators) at 1-2.

⁷⁷ *Id.* at 18.

⁷⁸ *Id.* (quoting P2 (ACB and AFB) at 12).

⁷⁹ See 2003 Recommendation at 64; 2006 Recommendation at 37. *But see* 2010 Recommendation at 246-62 (finding, in 2010, that the record was not sufficiently developed to permit the recommendation of the proposed class); 2010 Final Rule, 75 Fed. Reg. at 43,837-89 (notwithstanding the Register's determination, the Librarian ultimately designated such a class).

As an initial matter, it is worth noting that the proposed exemption is, indeed, different from the exemption that the Librarian granted in 2010. The 2010 exemption applies to:

[l]iterary works distributed in ebook format when all existing ebook editions of the work (including digital text editions made available by authorized entities) contain access controls that prevent the enabling either of the book's read-aloud function or of screen readers that render the text into a specialized format.⁸⁰

As noted by Joint Creators, the proposed exemption is broader in that it does not require that "all existing ebook editions of the work" be inaccessible in order for the exemption to apply. Notwithstanding this enlargement, however, the proposed class is also narrower in that it applies only to works that "are legally obtained by blind or other persons with print disabilities." The 2010 exemption contains no such limitation on the purpose for which technological protection measures may be circumvented.

Significantly, when the Register was first called upon to consider an exemption for ebooks in 2003, the marketplace was very different. At that time, the market was nascent. Ebooks were distributed primarily for use on personal computers, readable with freely available software, and "the public's reception of ebooks [was] tentative."⁸¹ Today, ebooks are marketed mainly for use on mobile devices, ranging from dedicated ebook readers using proprietary software (*e.g.*, Amazon's Kindle) to multipurpose devices running free software applications (*e.g.*, an Apple iPad running Amazon's Kindle app). During the intervening period, the market for ebooks has grown dramatically.⁸²

Nonetheless, there are often substantial costs associated with owning dedicated reading devices, and there are inefficiencies associated with having to own more than one such device.⁸³ The restrictions recommended by the Register in prior rulemakings are therefore not reflective of the current market conditions.

Further, according to a market study cited by the proponents, the ebook marketplace is dominated by Amazon.com, with "[m]ore than 70 percent of ebook buyers us[ing] the store," which "currently offers 950,000 ebook titles, of which 800,000 cost \$9.99 or less." Moreover, "110 of the 111 titles on the bestseller list of the New York

⁸⁰ 2010 Final Rule, 75 Fed. Reg. at 43,837-89.

⁸¹ See 2003 Recommendation at 64.

⁸² Cf. Shiv Malik, *Kindle ebook sales have overtaken Amazon print sales, says book seller*, THE GUARDIAN (Aug. 5, 2012) (explaining that in the United Kingdom, Amazon's ebook sales have exceeded print sales according to unaudited figures released by the company and "since the start of 2012, for every hardback and paperback book sold on its site, customers downloaded 114 ebooks.").

⁸³ These inefficiencies are compounded, and rise to the level of impediments to accessibility, when the owner is blind or visually impaired.

Times are available as ebooks for the Kindle.”⁸⁴ Barnes & Noble is the “second heavyweight player in retail, and the strongest competitor to Amazon,” followed by Apple’s iBookstore.⁸⁵ Of the three major platforms, “Apple’s iBooks application is the only mainstream ebook reader that is accessible,”⁸⁶ and even then, “[i]t’s probably an exaggeration to say that every book in the iBookstore” is accessible.⁸⁷

The reasons to require that all ebook editions be inaccessible in order for the exemption to apply no longer make sense in the current market environment. Moreover, because the record indicates that the majority of ebooks available through commercial channels are either inaccessible or, at best, only somewhat accessible, there is no need to analyze specific titles to see if they are inaccessible, as done in the past.

a. Statutory factors

Because the Librarian and the Register must consider “[t]he effect of circumvention of technological measures on the market for or value of copyrighted works,”⁸⁸ there is some merit to the Joint Creators’ position that an exemption should apply only when no accessible market alternative exists. But proponents clarified at the hearing that the intent of the exemption is to allow blind or visually impaired individuals to access works they have *lawfully* obtained that, for whatever reason, not natively accessible. More to the point, proponents’ counsel asserted that “[t]he whole point of this exemption is to make sure that the person with print disabilities can get access to the thing that he or she has purchased or otherwise lawfully obtained.”⁸⁹

Generally, public policy favors removing impediments to access for individuals with disabilities,⁹⁰ and the notion that an individual ought to be required to invest in three (or more) competing electronic book platforms would appear to be contrary to that policy. Further, the record supports a finding that a significant number of ebooks are inaccessible on any platform, and even those that are accessible may not satisfy the needs of every individual with an impairment,⁹¹ further illustrating the need for such an exemption.

⁸⁴ RÜDIGER WISCHENBART & SABINE KALDONEK, *THE GLOBAL EBOOK MARKET: CURRENT CONDITIONS AND FUTURE PROJECTIONS* 5 (2011).

⁸⁵ *Id.*

⁸⁶ P2 (ACB and AFB) at 8.

⁸⁷ T Richert, June 5, 2012, at 25.

⁸⁸ 17 U.S.C. § 1201(a)(1)(C)(iv).

⁸⁹ T Richert, June 5, 2012, at 19.

⁹⁰ *See, e.g.*, 42 U.S.C. § 12101(a)(7) (“the Nation’s proper goals regarding individuals with disabilities are to assure equality of opportunity, full participation, independent living, and economic self-sufficiency for such individuals.”); 17 U.S.C. § 121 (copyright exemption for certain restricted uses of nondramatic literary works in favor of individuals who are blind or physically handicapped).

⁹¹ *See* T Brunson, June 5, 2012, at 23 (noting that individuals who are blind require different forms of accommodation than those with less severe vision impairments).

Applied properly, the proposed exemption would simply allow an individual with a print disability to exploit a lawfully obtained ebook in a manner that enables him or her to perceive it on the platform for which it was purchased, without regard to whether commercial offerings on other platforms are accessible. Absent the proposed exemption, a blind or visually impaired person with a particular reading device would be required to invest in a competing device in the event that a particular ebook were accessible on the second platform, but not on the platform in which the individual originally invested. Thus, a blind or visually impaired person would essentially have to invest in each of the major commercial ebook platforms in order to have access to the full complement of accessible material.

Joint Creators assert that the market is evolving in such a way that it will enhance accessibility and make content more widely available for accessible uses. It is clear that the technical standards and market models associated with ebook publishing are undergoing rapid and significant change, and it is entirely possible that the market will evolve in such way that will enhance accessibility. But, it is just as possible that the market will become more diversified, with Apple, Barnes & Noble, Amazon and perhaps new entrants taking divergent approaches, resulting in further fragmentation of technical formats, protection measures, distribution models, and standards for accessibility.

The Register finds that all four statutory factors favor the exemption because it will serve to increase the availability of copyrighted works for a variety of purposes, including but not limited to commentary, criticism, research, and educational uses and, properly fashioned, will not adversely impact the market for copyrighted works. With respect to the Joint Creators' concern that the proposed exemption could implicate the trafficking provisions of Section 1201(a)(2), based on proponents' explanations, it appears that the beneficiaries of the proposed exemption could distribute accessible *works* created under the exemption, rather than the *tools* to exploit the exemption. The Register therefore believes that a properly crafted exemption would not run afoul of Section 1201(a)(2).

The statute permits the Librarian to consider "such other factors" as appropriate.⁹² The Register notes that the proposed class is not merely a matter of convenience, but is instead intended to enable individuals who are blind or visually impaired to have meaningful access to the same content that individuals without such impairments are able to perceive. As proponents have explained, their desire is simply to have effective access to content that individuals who are blind or visually impaired acquire lawfully, just as individuals without such impairments can buy on the mainstream market. In short, the proposed class ensures effective access to a rapidly growing array of ebook content by a population that would otherwise go without.

⁹² 17 U.S.C. § 1201(a)(1)(C)(v).

b. NTIA comments

NTIA supports the adoption of the proposed exemption, noting that:

[r]equiring visually impaired Americans to invest hundreds of dollars in an additional device (or even multiple additional devices), particularly when an already-owned device is technically capable of rendering literary works accessible, is not a reasonable alternative to circumvention and demonstrates an adverse effect of the various access controls used.⁹³

NTIA observes that the current “proposal expands the contemplated class of works from the current exemption,”⁹⁴ in that it applies to “literary works, distributed electronically” rather than the current exemption’s application to “literary works distributed in ebook format.”⁹⁵ Explaining that “[l]iterary works are distributed electronically in a wide range of formats, not all of which are necessarily widely understood to constitute an ‘ebook format[,]’”⁹⁶ NTIA notes that it “prefers the new, more general language as it more precisely resolves the harm demonstrated in the record.”⁹⁷

4. Recommendation

The record demonstrates that blind or visually impaired individuals are at a significant disadvantage with respect to obtaining accessible ebook content because of the different platforms, standards, and devices on which ebooks are consumed, and the channels through which they are distributed. The existing fragmentation and the considerable uncertainty surrounding the evolution of the marketplace, coupled with the lack of any likely market harm or material opposition, compels the Register to support an exemption of the type proponents seek.

At the hearing, proponents stated that “it was not [their] intent to create a situation where publishers are not getting paid”⁹⁸ for their works; they acknowledge that the “rights owner should be compensated for [] the price of the mainstream book available to the general public.”⁹⁹ Indeed, as described above, proponents seek nothing more than the ability to render accessible those ebooks that are lawfully acquired through customary retail channels, but that are inaccessible to certain users: “What the publisher or rights

⁹³ NTIA Letter at 5.

⁹⁴ *Id.*

⁹⁵ *See* 2010 Final Rule, 75 Fed. Reg. at 43,839.

⁹⁶ NTIA Letter at 5.

⁹⁷ *Id.*

⁹⁸ T Richert, June 5, 2012, at 33.

⁹⁹ *Id.* at 34.

owner should be compensated for is the price of the mainstream book available to the general public because that's the standard against which we would measure fairness."¹⁰⁰ Thus, the first prong of the recommended class permits circumvention by blind or other persons with disabilities, effectively ensuring that they have access through the open market, while also ensuring that rights owners receive appropriate remuneration.

The second prong of the proposal (the part that would extend the exemption to authorized entities) is a new consideration; it has not been the subject of a prior Section 1201 rulemaking and proponents did not provide extensive analysis of this aspect of their proposal. Nonetheless, the Register finds that the proposal is supported by relevant evidence and that authorized entities should enjoy an exemption to the extent required for them to carry out their work under Section 121. However, the proposal as written requires some modifications to ensure that it is consistent with, but not an enlargement of, Section 121. In relevant part, Section 121 permits qualified "authorized entities" to reproduce and distribute *nondramatic* literary works provided the resulting copies are in "specialized formats exclusively for use by blind or other persons with disabilities."¹⁰¹

The Register notes that several provisions in Section 121 appear ill-suited to the digital world and could benefit from comprehensive review by Congress. Section 121 was enacted in 1996 following careful consideration of the public interest, including the interests of persons with disabilities and the interests of authors and other copyright owners. Although the Register supports a legislative review of Section 121, the issues are exceedingly complex, and this proceeding is not the appropriate mechanism by which to conduct it.¹⁰² Indeed, the precise contours of how authorized entities might engage with, and deploy "specialized formats exclusively for use by blind or other persons with disabilities" in the digital environment are not fully developed on the record before the Register. Accordingly, the recommended class has been fashioned to ensure that it complies with the current statutory framework in which authorized entities must operate.

The Register therefore declines to recommend the proposed class as initially drafted, but instead, recommends a substantially similar exemption that includes appropriate limitations to ensure that its application comports both with copyright law and proponents' intent. Accordingly, the Register recommends the following class containing appropriate limiting language, as follows:

Literary works, distributed electronically, that are protected by technological measures which either

¹⁰⁰ *Id.*

¹⁰¹ 17 U.S.C. § 121(a) (emphasis added).

¹⁰² See generally REPORT OF THE ADVISORY COMMISSION ON ACCESSIBLE INSTRUCTIONAL MATERIALS IN POSTSECONDARY EDUCATION FOR STUDENTS WITH DISABILITIES, at 43-48 (Dec. 6, 2011), available at www2.ed.gov/about/bdscomm/list/aim/meeting/aim-report.pdf (recommending that Congress review the scope, effectiveness, and function of Section 121); see also *The Authors Guild, Inc. v. Hathitrust*, No. 11-6351 (S.D.N.Y. Oct. 10, 2012), slip op. at 23 (holding that libraries of educational institutions may be "authorized entities" under Section 121).

prevent the enabling of read-aloud functionality or interfere with screen readers or other applications or assistive technologies, (i) when a copy of such a work is lawfully obtained by a blind or other person with a disability, as such a person is defined in 17 U.S.C. § 121; provided, however, the rights owner is remunerated, as appropriate, for the price of the mainstream copy of the work as made available to the general public through customary channels; or (ii) when such work is a nondramatic literary work, lawfully obtained and used by an authorized entity pursuant to 17 U.S.C. § 121.

C. Proposed Class 3: Video game consoles – software interoperability (“jailbreaking”)

Proponent Electronic Frontier Foundation (“EFF”) and other supporters propose that the Register recommend the following class:

Computer programs that enable lawfully acquired video game consoles to execute lawfully acquired software applications, where circumvention is undertaken for the sole purpose of enabling interoperability of such applications with computer programs on the gaming console.

1. Proponents’ case

Proponent EFF, joined by Andrew “bunnie” Huang (“Huang”), the Free Software Foundation (“FSF”), SaurikIT, LLC (“SaurikIT”) and others,¹⁰³ seeks an exemption to permit the circumvention of access controls on video game console computer code so that the consoles can be used with non-vendor-approved software that is lawfully acquired.

a. Background

The leading proponent of this exemption, EFF, a nonprofit public interest organization devoted to “maintaining the traditional balance” of copyright law,¹⁰⁴ observes that modern video game consoles are increasingly sophisticated computing devices that are capable of running not only games but “entire computer operating systems.” All three major video game manufacturers, however – Sony, Microsoft, and Nintendo – have deployed technological restrictions that force console purchasers to limit their operating systems and software exclusively to vendor-approved offerings, even where there is no evidence that other options will infringe copyrights.¹⁰⁵ These restrictions require a console owner who would like to install a computer operating system or run a “homebrew” (*i.e.*, independently developed) application to defeat a number of technical measures before they are able to do so – a process that proponents refer to as “jailbreaking.” Proponents seek an exemption from Section 1201(a)(1) to permit such jailbreaking of video game consoles. Because the class they propose would extend only to “lawfully obtained software programs,” proponents assert that it will not

¹⁰³ Numerous individual users also submitted comments noting their support for the exemption without offering substantive facts or legal analysis.

¹⁰⁴ P3 (EFF) at 2. EFF represents the interests of “thousands of dues-paying members,” including consumers, hobbyists, computer programmers, entrepreneurs, students, teachers, and researchers.

¹⁰⁵ *Id.* at 19.

authorize or foster infringing activities and that, in any event, “several additional steps” beyond mere jailbreaking are required in order to exploit pirated materials.¹⁰⁶

In its comments, EFF explained the circumvention process with reference to Sony’s PlayStation 3 (“PS3”), which is also the primary focus of its arguments in support of an exemption. Sony’s PS3 employs a series of technological protections so that the console can install and run only authenticated, encrypted code. One such measure is the encryption of the console’s firmware, which restricts access to the console. The firmware must be authenticated by the console’s bootloader – a piece of software that coordinates the activation of various parts of the console when it is turned on – and decrypted before it can be used. Once the firmware has been authenticated and decrypted, it, in turn, authenticates applications before they can be installed or run on the PS3.¹⁰⁷ Thus, the most popular jailbreaking process for the PS3 requires the console’s restrictions to be bypassed and a firmware file to be downloaded in order to neutralize the console’s authentication processes and permit the use of non-Sony-approved software on the system.¹⁰⁸ EFF also states, without elaboration, that Microsoft’s Xbox 360 and Nintendo’s Wii employ similar firmware authentication procedures as technological protection measures.¹⁰⁹

In further support of its requested exemption, EFF recounts that when Sony launched the PS3 in 2006, it included a software application called “OtherOS” that permitted users to install Linux and UNIX operating systems on their consoles. EFF provides examples of researchers who were able to use these earlier PS3 consoles in lieu of other computer systems to conduct various forms of scientific research, citing an Air Force project that made use of 1700 PS3s, as well as two academic projects employing clusters of PS3s to create high-performance computers.¹¹⁰ Some of these researchers chose to use clustered PS3s because they were less expensive than the available alternatives.¹¹¹ In 2010, however, Sony issued a firmware update for the PS3 that removed the OtherOS functionality. PS3 users were not forced to upgrade, but the failure to adopt the upgrade precludes access to certain gameplay features and might make repair or replacement of the gaming system more difficult.¹¹² As EFF explains: “In short, users who wish to fulfill the original promise of the PS3 have no choice but to jailbreak the

¹⁰⁶ *Id.* at 30-31. As counsel for EFF expressed: “I want to be very, very clear here. It wouldn’t permit infringement. It simply wouldn’t. We are not asking for any circumvention for unlawful purposes.” T Hoffman, May 17, 2012, at 13.

¹⁰⁷ P3 (EFF) at 29.

¹⁰⁸ *Id.* at 30.

¹⁰⁹ *Id.* at 29.

¹¹⁰ EFF also mentions a distributed computing project called Folding@Home, in which Sony has cooperated with Stanford to conduct protein folding research on a worldwide basis through linked PS3s. EFF asserts that participation in Folding@Home does not require console jailbreaking. *Id.* at 21-22 n.124.

¹¹¹ *Id.* at 20-22; *see also id.*, Appendix C ¶ 2 (Statement of G Khanna) (noting availability of alternative computing options) ¶ 7 (Sony supported research by donating four PS3s), Appendix D ¶ 9 (Statement of N Pinto) (chart summarizing capabilities and costs of computing alternatives).

¹¹² P3 (EFF) at 22-23; R 13 (EFF) at 6.

console to install an alternative operating system.”¹¹³ EFF also notes in passing that while Nintendo’s Wii and Microsoft’s Xbox 360 did not launch with support for an alternative operating system, “developers have nevertheless managed to install alternative operating systems on both consoles via jailbreaking techniques, as well.”¹¹⁴

EFF asserts that none of the three major video game console manufacturers currently allows the installation of independently developed applications on their consoles unless the developer has obtained approval of the software from the manufacturer through a “stringent” process that may require the developer to license costly development tools for fees ranging from \$1,700 to \$10,000 per year.¹¹⁵ As a result, hobbyists and homebrew developers engage in circumvention to defeat technical restrictions in order to install software without manufacturer approval.¹¹⁶ Homebrewers have created games and other applications to run on the PS3, Wii, and Xbox consoles.

EFF notes over 450 independently created games and applications for Nintendo’s Wii available on the homebrew site WiiBrew.org. EFF also mentions a “vibrant” homebrew community revolving around an annual international competition sponsored by NintendoMax, but does not cite particular games or applications developed for that platform.¹¹⁷ With respect to the PS3, EFF references some eighteen games and several nongaming applications, including a file backup program called “Multiman” and an application that transforms the PS3 into an FTP server that can transfer files to other devices over the internet. EFF notes one PS3 homebrew application that has had “remarkable success,” having attracted “thousands” of users.¹¹⁸ EFF lists a single application for Microsoft’s Xbox, the XBMC media center. EFF observes that “there is not a strong homebrew community on the Xbox360,” attributing this phenomenon to a Microsoft development program that “allows developers to publish games with relative ease.”¹¹⁹ In a letter responding to post-hearing questions from the Copyright Office, EFF notes some additional homebrew activities conducted on legacy consoles and handheld video game devices.¹²⁰

¹¹³ P3 (EFF) at 23; R 13 (EFF) at 6.

¹¹⁴ P3 (EFF) at 23-24.

¹¹⁵ *See id.* at 24 n.142 (noting the prices for licensing the software development kits for PS3 and Nintendo Wii, respectively).

¹¹⁶ *Id.* at 25-26.

¹¹⁷ *Id.* 26-28.

¹¹⁸ R13 (EFF) at 6-7; P3 (EFF) at 27-28. Apparently, these homebrew applications have been created for older versions of the PS3 as, according to SCEA, the most recent version of the PS3 has not been hacked. C1 (SCEA) at 10.

¹¹⁹ P3 (EFF) at 26 n.154.

¹²⁰ Letter from Marcia Hoffman, Senior Staff Attorney, EFF, to David O. Carson, General Counsel, U.S. Copyright Office (June 29, 2012).

b. *Asserted noninfringing uses*

Proponents' request for an exemption is premised on their view that circumventing access controls on a video console for the purpose of running independently created software constitutes a noninfringing use. As articulated by the EFF, "[c]ourts have long found copying and modification to enable device interoperability noninfringing under the doctrine of fair use."¹²¹ In support of this assertion, they cite the Register's determination in the 2010 rulemaking that jailbreaking an iPhone to enable it to run non-Apple-approved applications constitutes a noninfringing fair use.¹²² They also highlight two Ninth Circuit cases, *Sega Enterprises Ltd. v. Accolade, Inc.*¹²³ and *Sony Computer Entertainment, Inc. v. Connectix Corporation*,¹²⁴ both of which held the reverse engineering of video games for purposes of determining requirements for interoperability to be a noninfringing fair use.¹²⁵ Proponents assert no basis other than fair use to establish that the activities in question are noninfringing.

Reviewing the four-factor test for fair use embodied in Section 107,¹²⁶ proponents contend that, as to the first factor – purpose and character of the use – “[b]ecause jailbreaking a video game console for purposes of making it interoperable with computer operating systems and independently created applications is transformative, personal, noncommercial, and confers a public benefit, the first factor weighs heavily” in their favor.¹²⁷ They contend that the second factor also weighs in their favor, because console firmware is “highly factual and functional”; to the extent it is a creative work, its access restrictions are implemented “to protect a business model, not the underlying copyrighted work.”¹²⁸ Regarding the third factor, they state that the amount of console computer code

¹²¹ P3 (EFF) at 31.

¹²² *Id.*; see also 2010 Recommendation at 91, 100 (“The Register agrees that the activity of an iPhone owner who modifies his or her iPhone’s firmware/operating system in order to make it interoperable with an application that Apple has not approved, but that the iPhone owner wishes to run on the iPhone, fits comfortably within the four corners of fair use.”).

¹²³ 977 F.2d 1510 (9th Cir. 1992).

¹²⁴ 203 F.3d 596 (9th Cir. 2000).

¹²⁵ In *Sega*, the Ninth Circuit determined that a game developer’s copying and disassembly of a competitor’s video game software for the purpose of examining unprotected elements of the code in order to render the developer’s video game compatible with the competitor’s game console was a fair use under Section 107 of the Copyright Act. 977 F.2d at 1520. In *Connectix*, the Ninth Circuit revisited the question of reverse engineering video games, holding that a developer’s disassembly of Sony software to produce a PlayStation “emulator” capable of playing Sony video games constituted a transformative fair use. 203 F.3d at 607-08.

¹²⁶ See 17 U.S.C. § 107. The factors to be considered in a fair use analysis include: “(1) the purpose and character of the use, including whether such use is of a commercial nature or is for nonprofit educational purposes; (2) the nature of the copyrighted work; (3) the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and (4) the effect of the use on the potential market for or value of the copyrighted work.”

¹²⁷ P3 (EFF) at 31-32.

¹²⁸ *Id.* at 32.

that is copied to permit interoperability “varies depending on the device”; nonetheless, they summarily assert that any copying and modification required to achieve interoperability is “necessary and reasonable” and consistent with the Register’s determination in the 2010 rulemaking that *de minimis* changes made to smartphone firmware to permit it to be used with non-vendor-approved applications did not defeat a finding of fair use.¹²⁹ Finally, with respect to the fourth factor, proponents contend that “because the technological restrictions in question are designed to protect a business model, circumventing them and installing legitimate interoperable software will not have an adverse effect on the market for the underlying firmware,” thus again favoring a finding of fair use.¹³⁰

c. *Asserted adverse impact*

Proponents maintain that manufacturers’ technological restrictions on video game consoles not only constrain consumer choice and the value of consoles to their owners, but also the incentives for independent developers to create copyrightable systems and software that would expand the marketplace for these devices and “promote the progress of science and the useful arts in these areas.”¹³¹ More specifically, they claim that console access controls are inhibiting scientific research and homebrew development activities. Pointing to the Register’s determination in the last 1201 rulemaking that circumvention of technological measures on smartphones to enable interoperability with lawfully obtained applications should be permissible, proponents argue that the same logic should apply here. According to proponents, the restrictions on video game consoles do not protect the value or integrity of copyrighted works, but instead reflect a business decision to restrict the applications that users can run on their devices.¹³²

Proponents further assert that “[a] large community of console jailbreakers currently exists for all three major video game consoles.” (By contrast, EFF refers to the community of “homebrew developers” – presumably a subset of jailbreakers in general – as “small and thriving.”¹³³) EFF states that console jailbreakers face potential liability under Section 1201(a)(1). As evidence of this, EFF cites recent litigation pursued by Sony against an individual and others who developed and published a method for jailbreaking the PS3. EFF explains that in January 2010, George Hotz (also known by his online name “GeoHot”) publicly disclosed a method for jailbreaking the PS3 that built on the work of a group of researchers known as Fail0verflow. In response, Sony initiated a lawsuit against Hotz and others alleging, among other things, that the defendants had conspired to violate the DMCA.¹³⁴

¹²⁹ *Id.* at 32-33 (citing 2010 Recommendation at 97).

¹³⁰ *Id.* at 33.

¹³¹ *Id.* at 19.

¹³² *Id.* at 20.

¹³³ *Id.* at 29, 34. EFF does not provide any numbers in support of these characterizations.

¹³⁴ P3 (EFF) at 30; *see also Sony Computer Entm’t LLC v. Hotz*, No. 2011-CV-00167 (N.D. Cal. filed Jan. 11, 2011). The current status of this litigation is not apparent from the record in this proceeding, but the

Finally, a few proponents suggest potential scenarios in which a console might need to be jailbroken to effectuate a repair, for example, in order to replace a worn-out component such as a hard drive or optical drive.¹³⁵

d. *Argument under statutory factors*

Proponents assert that the significance of the statutory factors delineated in Section 1201(a)(1)(C)¹³⁶ is “diminished” in the context of video game consoles because, “as with smartphones in the 2006 and 2010 rulemaking proceedings, ‘the access controls do not appear to actually be deployed in order to protect the interests of the copyright owner of the value or integrity of the copyrighted work; rather they are used by[sic] to limit the ability of [users to run third party applications], a business decision that has nothing whatsoever to do with the interests protected by copyright.’”¹³⁷ They proceed nonetheless to address the statutory factors, arguing that, as to factor one, permitting circumvention of video game console for purposes of interoperability will increase the availability of copyrighted works by stimulating the development of new firmware and games.¹³⁸ Regarding factor two, they assert that there is no reason to believe that console firmware will be less available for nonprofit uses, so this factor is neutral.¹³⁹ With respect to the third factor, they claim that video game jailbreaking has led to “substantial” developments in scholarship and scientific research and a jailbreaking exemption would further promote such activities.¹⁴⁰ Looking to the fourth factor, they maintain that jailbreaking is unlikely adversely to affect the market for copyrighted works because jailbroken consoles will still be “tethered” to the authorized game distributors and the proposed exemption is “narrowly tailored” to permit only noninfringing uses; moreover, permitting circumvention “will probably increase the availability of copyrighted console firmware rather than diminish it” because interoperability will stimulate research and development efforts.¹⁴¹ Finally, as an “other” factor to consider pursuant to Section 1201(a)(1)(C)(v), they urge that technological restrictions imposed by

Register notes that court records show that a permanent injunction was entered against Hotz on April 12, 2011. See Final J. Upon Consent and Permanent Inj., *Hotz*, No. 2011-CV-00167 (Apr. 12, 2011).

¹³⁵ See, e.g., C15 (Huang) at 1; Statement of Andrew “bunnie” Huang, PhD, June 29, 2012; C411 (K. Wiens) at 1-2; C284 (J Turner) at 1. As discussed below, however, no commenter identified any actual instances of repair attempts by users.

¹³⁶ See 17 U.S.C. § 1201(a)(1)(C).

¹³⁷ P3 (EFF) at 34 (citing 2006 Recommendation at 52) (alteration in original).

¹³⁸ *Id.*

¹³⁹ *Id.*

¹⁴⁰ *Id.* at 35.

¹⁴¹ *Id.* at 36.

manufacturers to preserve their business interests are not an aim of copyright law and should therefore be considered “unrelated to the purpose of this proceeding.”¹⁴²

2. Opposition

Opponents of Proposed Class 3 include the trade group Entertainment Software Association (“ESA”),¹⁴³ Joint Creators,¹⁴⁴ and Sony Computer Entertainment America LLC (“SCEA” or “Sony”), which manufactures and distributes video game consoles, including the PS3. Opponents filed extensive comments in response to EFF’s request for an exemption.

ESA characterizes video game consoles as “the center of an intellectual property ecosystem which makes copyrighted content readily and legally accessible, offering a tremendous benefit to creators, distributors and, most importantly, the public at large.” It further states that “[t]his entire system, however, is predicated on effective, secure access controls and legal protection to support them – the very type of access controls Congress envisioned when it passed 1201.” It asserts that to grant EFF’s requested exemption “would enable and encourage widespread content theft and piracy, destabilizing the distribution system that earns revenues for authors and encourages the production of new copyrighted works.” It contends that the exemption is unwarranted because it would favor “speculative benefits accruing to a relatively infinitesimal contingent of ‘hobbyists’ who have ample alternative development opportunities and platforms available for their use already.”¹⁴⁵

ESA explains that there are at least two potential access controls at issue here: first, “the encryption of the console’s firmware,” and second, the operation of the firmware itself, which “prevents the installation of unauthorized software” by performing an authentication check. ESA explains that to play a homebrew game – or pirated content or applications that enable unlawful copying – the user must circumvent not only the encryption on the console’s firmware, but also modify the firmware to defeat the authentication check access control. It adds that once the user modifies the firmware, when the user launches an application (whether homebrew or pirated), the modified firmware will operate but the access controls will be circumvented – effectively allowing the console to run unauthorized content.¹⁴⁶

¹⁴² *Id.*; see also *id.* at 18 (“In both 2006 and 2010, the Register frowned on firmware manufacturers advancing copyright claims in their functional computer programs to support anti-competitive business practices.”).

¹⁴³ ESA represents “all of the major platform providers and nearly all major video game publishers in the United States,” including the manufacturers of the three consoles on which EFF focuses its comments, the Sony PS3, the Microsoft Xbox 360, and Nintendo’s Wii. C5 (ESA) at 2.

¹⁴⁴ The trade groups represented by Joint Creators are the Association of American Publishers, the American Society of Media Photographers, the Business Software Alliance, the Entertainment Software Association, the Motion Picture Association of America, the Picture Archive Council of America, and the Recording Industry Association of America. C12 (Joint Creators) at 1-2.

¹⁴⁵ C5 (ESA) at 1-2.

¹⁴⁶ *Id.* at 7-8.

According to ESA, copyrighted video games – as well as other expressive works, including movies and music – are available through video game consoles “precisely because platform providers use access controls to restrict access to these works.”¹⁴⁷ Thousands of video games are published for gaming consoles each year, some of which are created and owned by console manufacturers.¹⁴⁸ ESA’s members and their content partners rely on the availability and effectiveness of console access controls in determining whether to make their copyrighted works available through such consoles. “Absent the access controls, copyright owners would be concerned that their content could easily be infringed, and the incentive to make such content available through [video consoles] would be greatly diminished.” Thus, in opponents’ view, the exemption sought by EFF would in fact decrease the availability of copyrighted works.¹⁴⁹

Joint Creators report that consumers have purchased over 65 million Xbox consoles, 55 million PlayStation 3 consoles, and 95 million Nintendo Wiis. They state that each of these devices (and many others) rely on access controls protected by Section 1201.¹⁵⁰ Joint Creators assert that some portion of consumers have chosen these devices because of the benefits of access controls – such as ensuring the availability of high-quality, legitimate content and protection from malware and security threats – and that the Register should consider this in evaluating the costs and benefits of exemptions proposed by “an extremely small minority of users.” They argue that consumers and developers benefit from the existing robust marketplace, which offers real choices among products and services.¹⁵¹

SCEA’s comments focus on its PS3 console (the dominant example addressed in EFF’s proposal). SCEA confirms that the technological restrictions controlling access to the PS3 protect both its firmware and the copyrighted video games that are developed for that system. It described these measures as an “integrated system” that begins with the bootloader – the first piece of software to execute when the console is powered on – and continues with a series of integrity checks to detect any unauthorized modification of the PS3 firmware that could cause harm. Once the firmware is fully loaded, it acts as a technological protection on the video games and other applications that are run on the PS3.¹⁵²

As explained by SCEA, allowing circumvention of the PS3 access controls would mean that the basic security checks could be skipped and the firmware freely modified to bypass or eliminate the process by which the video games are authenticated for use on the

¹⁴⁷ *Id.* at 2-3.

¹⁴⁸ *Id.* at 2, 30; C1 (SCEA) at 7 (noting that SCEA owns 15 to 20% of the games for the PS3 platform).

¹⁴⁹ C5 (ESA) at 2-3, 36-37.

¹⁵⁰ R12 (Joint Creators) at 1-2.

¹⁵¹ *Id.* at 2.

¹⁵² C1 (SCEA) at 11-12.

console.¹⁵³ Thus, it would be “virtually certain that successful hackers, under the guise of the exemption, will create the tools that enable even novice users to make, distribute, download, and play back illegal copies of games.” SCEA urges that in evaluating EFF’s exemption request, “the Register cannot ignore this serious market reality.”¹⁵⁴

Throughout their comments, opponents stress piracy as an overriding concern, noting that once a user circumvents a console’s security measures – even for an ostensibly benign purpose – it becomes a vehicle for unauthorized content. In their view, EFF’s attempt to limit the exemption to interoperability with lawful applications will make no difference in practice, because “all known methods for circumventing game console [technological protection measures] *necessarily* eliminate the measures’ ability to preclude the play, reproduction and distribution of infringing content.”¹⁵⁵ They further assert that “[i]t is not feasible to distinguish between facilitating lawfully acquired applications and facilitating applications that are not lawfully acquired.”¹⁵⁶

Opponents take issue with EFF’s argument that the proposed exemption should not be concerning because “additional steps” beyond circumvention are needed to play pirated content. ESA points out that EFF does not claim that the circumvention methods for the Xbox and Wii require “additional steps” to play pirated content and, in fact, they do not.¹⁵⁷ More generally, ESA explains that the hacking packages for consoles either require no further applications to enable illegal content, or are made available with any additional software that might be required.¹⁵⁸

In support of this last contention, opponents provide documentation of “hacking packages” that come bundled with applications to play pirated content.¹⁵⁹ They also note, again with supporting materials, that the homebrew channel installed with a popular Wii hacking package, HackWii, “automatically includes applications that enable the console to play pirated content and is necessarily incapable of distinguishing between pirated software and so-called homebrew applications.”¹⁶⁰ They point out, with further support

¹⁵³ *Id.* at 12.

¹⁵⁴ *Id.* at 2.

¹⁵⁵ C12 (Joint Creators) at 29 (emphasis in original); *see also* C5 (ESA) at 4; T Genetski, May 17, 2012, at 22.

¹⁵⁶ C1 (SCEA) at 4.

¹⁵⁷ C5 (ESA) at 32.

¹⁵⁸ *Id.* at 32-33.

¹⁵⁹ *Id.* at 32 & n.101, Ex. B (examples of websites offering jailbreak methods for the Wii and PS3 as well as access to pirated “backup” content).

¹⁶⁰ *Id.* at 32-33 & nn.102, 103, Ex. E. As Dylan Rhoads, a senior software engineer and anti-piracy expert at Nintendo, explains:

To my knowledge, virtually all of the hacking packages that are available today come bundled with applications that permit users to play pirated content. For example, the HackMii installer package is commonly used to hack the Wii home console. During the process of hacking the console, it installs a “Homebrew” channel on the Wii’s

in the record, that the “Multiman” backup system referenced by EFF as a “prime example” of a useful application enabled by jailbroken PS3s is used “to decrypt and copy protected PS3 games so they can be illegally distributed.”¹⁶¹ Similarly, documentary evidence submitted by opponents demonstrates that the PS3 FTP file server application described by EFF is used as a means to transfer illegal files.¹⁶² Opponents also furnish multiple examples of advertisements for jailbreaking services that include (for an all-in price) a library of pirated games.¹⁶³

Opponents point to online forums and other sources that specifically reference George Hotz’s hack of the PS3 – described sympathetically by EFF in its proposal – as permitting users to play pirated games and content, and provide representative postings.¹⁶⁴ The documentation evidences a broadly shared perception in the gaming community that jailbreaking leads to piracy.¹⁶⁵ Notably, some of those providing commentary made the further observation that such piracy would negatively impact the development of new games.¹⁶⁶

home menu through which users can access homebrew games and applications. This Homebrew channel includes applications that enable the console to play pirated content.

Id. Statement 1 ¶ 8 (D Rhoads); *see also id.* Ex. B at 2, 4 (Wii hacking site that states, “[w]ith the Wii Homebrew Channel installed, you will save hundreds, as you can play free games, movies and music,” then instructs users to “[d]ownload Wii game(s) from The Pirate Bay.”).

¹⁶¹ C1 (SCEA) at 41 & n.112; *see also* C5 (ESA) Ex. C at 1 (downloading of Multiman included as a step in web tutorial on “[h]ow to hack PS3 and play pirated games”).

¹⁶² C1 (SCEA) at 41 & n.11; C5 (ESA) Ex. C at 2 (instruction to download PS3 FTP file server program to hacked console to permit transfer of pirated games).

¹⁶³ *See, e.g.,* C5 (ESA) Ex. D at 7 (“NEVER PAY FOR A GAME AGAIN WITH MY SERVICES”), 10 (“Mod your PsP for free games!”), 11 (“\$150 package includes 1000 free Super Nintendo Games and 200 free Wii games), and 19 (offering Wii “upgrading” packages with hundreds of games).

¹⁶⁴ C5 (ESA) at 32 & n.100; *see, e.g., id.* Ex. B at 22 (“GeoHot, the hacker responsible for publishing the key online, may well be ‘totally against piracy’, but the pirates in question are gleefully touting ‘GeoHot’s custom firmware’ as their springboard. D’oh.”), and 24 (“[T]he big deal about this latest [George Hotz] hack is that ... PS3s will happily boot up pirated game discs or package files and believe they’re 100% legit.”).

¹⁶⁵ *See, e.g., id.* Ex. B at 29 (“Problem is, regardless of intention (aka, Homebrew), the more common use will be victimized[sic] piracy. Put another way, the gate is open, irreparably[sic] so ...”), 30 (“The majority of the ‘homebrew community’ simply exists for the reason of pirating current games and not paying for them.”), 31 (“[E]veryone here knows that its for piracy, no need to hide behind the old ‘dude, I swear its only for homebrewzz and eemulatorz ... im not a thief dude!’ shitty lie.”), 37 (“Homebrew (which always leads to piracy) is cancer and stupid.”), and 39 (“From homebrew piracy is born, there is just no way to stop it. And lets be honest I would rather get free games then buy them.”).

¹⁶⁶ *See, e.g., id.* Ex. B at 26 (“But when everyone has easy access to free games and nobody pays for them, the developers get zero money. What’s the point of having infinite access to free games when no developer can stay in business to make new ones?”), and 30 (“Developers aren’t going to look at the numbers and just assume that a bunch of those people bought the game after pirating it, they are just going to see a bunch of people who played the game for free. Thus they are going to react accordingly....”).

SCEA elaborates on the hacking issue by commenting specifically on the events surrounding a 2010 breach of its PS3 system. In that case, hackers announced that they had successfully circumvented the technological measures on PS3 firmware, which was accomplished by exploiting vulnerabilities in Linux operating in the OtherOS environment.¹⁶⁷ The hackers stated that they did not endorse or condone piracy. One hacker, however, subsequently published PS3's encryption keys on the internet. Almost immediately, the keys were used to create jailbreak software to allow unauthorized code to be run on PS3 consoles, which in turn permitted the use of illegally made games.¹⁶⁸ Sony "saw an immediate rise in the number of illegal copies but no increase in homebrew development," while sales of legitimate software "declined dramatically."¹⁶⁹ As a result of the hack, Sony decided it had no choice but to discontinue OtherOS and issued a system upgrade that disabled OtherOS functionality for those who wished to maintain access to Sony's PlayStation network. According to SCEA, since the removal of OtherOS, the PS3 has not been successfully hacked.¹⁷⁰

Mindful of the exemption established by the Librarian in the prior proceeding to permit jailbreaking of smartphones to render them interoperable with non-approved applications, opponents urge that video game consoles are not the equivalent of iPhones for purposes of Section 1201. Opponents argue that, in contrast to Apple's use of access controls on its iPhone in furtherance of a restrictive business model rather than copyright interests, the technological measures on game consoles legitimately protect the creation and dissemination of copyrighted works by discouraging pirated content and protecting creators' investment in new games.¹⁷¹ Opponents distinguish the development of a video game – a long and intensive process "akin to ... motion picture production" involving a team of developers that can cost tens of millions of dollars – from the relative ease and inexpensiveness of creating a smartphone application.¹⁷² According to opponents, the development of new video games would be significantly impaired without reliable technological protections to protect developers' investments.¹⁷³ In addition, opponents maintain that, based on the evidence, "it is simply not the case that there are thousands of independently developed video games," so the record here is not comparable to the one the Register considered in the 2010 smartphone proceeding.¹⁷⁴

¹⁶⁷ Although not stated in its comments, it appears that one of the groups of hackers SCEA references may have been George Hotz, against whom it pursued legal action. *See supra* note 134.

¹⁶⁸ C1 (SCEA) at 13.

¹⁶⁹ *Id.* at 13, 29.

¹⁷⁰ *Id.* at 10.

¹⁷¹ C5 (ESA) at 5, 24.

¹⁷² C1 (SCEA) at 46-47, 51-52.

¹⁷³ *Id.* at 46-47; C5 (ESA) at 2-3.

¹⁷⁴ C1 (SCEA) at 37, 46 (noting that the total number of active PS3 homebrew developers appears to be ten or fewer and, since the beginning of 2011, only a "few dozen" homebrew PS3 games have been released (including adaptations of existing games for alternative platforms)); *cf.* 2010 Recommendation at 85 (reviewing iPhone statistics).

In addition, opponents argue that the proponents of Class 3 have failed to meet their burden of establishing that the technological measures protecting video game consoles have had or are likely to have a substantial adverse effect on noninfringing uses of console computer programs. They assert that the uses identified by EFF as being harmed by console manufacturers' access restrictions – the ability to conduct scientific research on gaming consoles and the ability to run alternative Linux software on consoles in order to develop homebrew applications – are insufficient to support the exemption sought.¹⁷⁵

More specifically, opponents point out that EFF identifies only a “handful” of researchers who have been or might be affected by Sony’s discontinuation of OtherOS (and the ability to install Linux) on the PS3, which researchers are apparently interested in harnessing less expensive computer power rather than engaging in criticism or commentary of copyrighted works.¹⁷⁶ They further note that EFF could not cite “a single example of a researcher who has sought to use a PS3 for research purposes and been denied access by Sony.”¹⁷⁷

With respect to the need to jailbreak consoles to permit the operation of Linux-based homebrew programs, opponents contend that the record is similarly meager. They note that while EFF’s request focuses on the PS3, the homebrew community for that device is small, as evidenced by the fact that less than one-tenth of one percent of PS3 users (fewer than 2,000 in all) have made use of the PS3’s OtherOS feature.¹⁷⁸ In any event, they say, there are over 4,000 devices on which Linux can be run without the need for circumvention, and homebrew games and applications can be played on a wide array of open platform devices.¹⁷⁹

Opponents further observe that each of the three major video game console manufacturers has a program to support independent developers in creating and publishing compatible games.¹⁸⁰ For example, SCEA licenses independent developers with good ideas for games – “no matter how small” – and has a program to provide funding for small developers.¹⁸¹ Nintendo offers an inexpensive program to develop games for its Wii console, without circumvention, that has generated over 300 video games. Opponents also point to proponents’ concession that independent developers are able to publish games “with relative ease” through Microsoft’s development program for

¹⁷⁵ C5 (ESA) at 9; C12 (Joint Creators) at 26-28.

¹⁷⁶ C5 (ESA) at 9-13; *see also* T Hoffman, May 17, 2012, at 48-49 (confirming same). Opponents also make note of the Folding@Home project, in which 20,000 PS3s are actively involved. *Id.* at 32; C1 (SCEA) at 42.

¹⁷⁷ C5 (ESA) at 9-11.

¹⁷⁸ *Id.* at 10.

¹⁷⁹ *Id.* at 13-14.

¹⁸⁰ *Id.* at 14-15.

¹⁸¹ C1 (SCEA) at 42-43.

the Xbox 360, and note that there are over 2,000 “indie” titles currently available for the Xbox console that do not require hacking to access.¹⁸²

Opponents also dispute proponents’ suggestion that circumvention is necessary to repair broken game consoles, explaining that “[e]ach console maker offers authorized repair options. Such services are available free of charge for consoles that remain under warranty and for a nominal fee thereafter.”¹⁸³

Taking issue with the Register’s 2010 conclusion that Section 1201(f) supported a finding of fair use with respect to the jailbreaking of smartphones,¹⁸⁴ opponents argue that, in any case, that fair use finding does not apply here. They seek to distinguish the *Sega* and *Connectix* decisions on the ground that the copying in those cases was limited to *intermediate* copying for the purpose of reverse engineering; unlike in the case of console jailbreaking – which makes only minimal alterations to the code to disable access controls and then reuses the code in its “slightly altered” form – the final products in *Sega* and *Connectix* did not include protected expression from the originals.¹⁸⁵ Opponents argue under the first fair use factor that the use in question is not a transformative one in light of the “abundant evidence that the primary reason many users seek to hack the [consoles] is not to create new and different works, but to avoid paying the customary cost of existing works or devices – which courts have recognized as a commercial use.”¹⁸⁶ With respect to the second fair use factor, they point out that console code protects highly expressive copyrighted works.¹⁸⁷ They assert that a finding of fair use based on the fact that only *de minimis* changes are made to a protected work turns the third fair use factor (amount and substantiality of the portion used) on its head.¹⁸⁸ As for the fourth factor, they assert that if access controls can be legally circumvented, this will decrease the market for legitimate content and, in turn, decrease demand for the circumvented firmware.¹⁸⁹

Finally, opponents urge that even if proponents have met their burden of demonstrating a substantial adverse effect flowing from console access controls, the proposed exemption does not meet the multifactor test of Section 1201. According to proponents, “hacking a [console] necessarily enables piracy,” while maintaining the integrity of video game consoles has the effect of increasing – not decreasing – the

¹⁸² C5 (ESA) at 14-15.

¹⁸³ Letter from Christian Genetski, Senior Vice President & General Counsel, ESA, to David O. Carson, General Counsel, U.S. Copyright Office, at 3.

¹⁸⁴ C5 (ESA) at 40. Opponents contend that, in enacting Section 1201(f), Congress “clearly defined the outer bounds of when circumvention is permissible,” and that the Register should not deviate from Congress’ determination through a fair use analysis. *Id.* at 40-41.

¹⁸⁵ *Id.* at 19-21.

¹⁸⁶ *Id.* at 22-23.

¹⁸⁷ *Id.* at 25.

¹⁸⁸ *Id.* at 25-27.

¹⁸⁹ *Id.* at 28.

availability of copyright works. Proponents assert that granting the proposed exemption would cause developers to withdraw works from the video game marketplace, with the net result of fewer copyrighted works being created and less access to works for the public.¹⁹⁰

3. Discussion

Proponents of the Class 3 exemption bear the burden of establishing, by a preponderance of the evidence, that as a result of the prohibition embodied in Section 1201(a)(1), they are, or are likely to be in the next three years, adversely affected in their ability to make noninfringing uses of the proposed class of works.¹⁹¹ Proponents invoke the Register’s 2010 determination in favor of an exception to permit the jailbreaking of smartphones to render them interoperable with lawfully obtained applications in support of their proposed exemption to permit circumvention of video game consoles. But in order to obtain an exemption, a proponent cannot expect to ride the coattails of an exemption granted in an earlier proceeding for a different – or even the same – class of works. Rather, the Register must determine, based on a *de novo* review of the current record evidence pertaining to that class, whether an exception to Congress’ default rule prohibiting circumvention of technological measures is warranted for the succeeding three years.

a. *Noninfringing uses*

Before turning to whether proponents have demonstrated a substantial adverse impact on the activities they seek to protect, it is important to consider whether proponents have satisfied their burden of demonstrating that the uses in question are, in fact, noninfringing.

Although, as drafted, proponents’ proposed class would permit copying and modification of console computer code to permit interoperability with any type of lawfully obtained application, proponents focus principally on two categories of use to justify their request: scientific research and homebrew activities, which include the development of video games and other applications. Based on these, proponents assert that the copying and modification of computer programs to render them interoperable with independently created software and applications constitutes a “transformative, personal, noncommercial” fair use.¹⁹² Proponents rely heavily on the Ninth Circuit’s

¹⁹⁰ *Id.* at 27-28, 30-31, 34.

¹⁹¹ 17 U.S.C. § 1201(a)(1)(C).

¹⁹² Apparently, proponents do not seek to rely on Section 117, which permits the lawful owner of a computer program to copy or adapt it as an “essential step” in using the program with a machine, so long as it is not used in any other manner. 17 U.S.C. § 117(a). In a footnote, SCEA urges that Section 117 is inapplicable, in part because, in Sony’s view, console owners do not own the console software. *See* C1 (SCEA) at 32 n.83; *see also* T Genetski and Metalitz, May 17, 2012, at 64-65 (observing that proponents have not invoked Section 117). The Register concludes, in any event, that there is insufficient evidence in the record (including in relation to the question of ownership) to support a finding that Section 117 would immunize the activities in question.

decisions in *Sega* and *Connectix*, in which the reverse engineering of video game software was held to be a fair use.¹⁹³ They also point to the Register’s determination in the 2010 rulemaking proceeding that circumvention of an iPhone’s restrictions to permit it to run non-Apple-approved applications was a fair use, asserting that the same should hold true here.

Section 107 provides that “the fair use of a copyrighted work ... for purposes such as criticism, comment, news reporting, teaching ..., scholarship, or research” is not a violation of copyright law and sets forth a four-factor framework for purposes of determining whether a particular use is fair.¹⁹⁴ Fair use is a fact-specific inquiry requiring case-by-case consideration.¹⁹⁵ While the Register’s legal analysis of fair use considerations in the smartphone context is somewhat relevant, it is not the end of the story. As evidenced by the record in this proceeding, video game consoles present a different set of circumstances – circumstances that must be considered *de novo* with respect to the class of works proposed.

In the case of the iPhone, the Register determined that the alteration of the phone’s firmware (fewer than 50 bytes of code out of 8 million, or 1/160,000th of the work) was not transformative in light of the modest modifications made to the code which, while allowing the use of non-Apple-approved applications, did not alter the fundamental purpose of the work – *i.e.*, to operate the phone essentially as intended.¹⁹⁶ Nonetheless, drawing on Congress’ endorsement of certain reverse engineering practices in Section 1201(f), as well as the Ninth Circuit’s holdings in *Sega* and *Connectix*, the Register concluded that making such modifications for purposes of rendering the iPhone’s firmware interoperable with independently created applications was a favored use under the law, as well as a personal and noncommercial one.¹⁹⁷ In arriving at this conclusion, the Register also relied upon compelling evidence that Apple’s objections to installation of unapproved software “had nothing to do with its interests as the owner of copyrights in the computer programs embodied in the iPhone, and running the unapproved applications has no adverse effect on those interests. Rather, its objections relate to its interests as a manufacturer and distributor of a device.”¹⁹⁸ That is, Apple’s access controls served to promote a restrictive business model rather than meaningful copyright interests.

As for video game consoles, the record is different. Although EFF asserts that the console manufacturers’ access controls serve only to protect a business model rather than *bona fide* copyright interests, they have not made a persuasive case in this regard. Unlike

¹⁹³ See *supra* note 125.

¹⁹⁴ 17 U.S.C. § 107.

¹⁹⁵ *Campbell v. Acuff-Rose*, 510 U.S. 569 (1994).

¹⁹⁶ 2010 Recommendation at 93-95, 97.

¹⁹⁷ *Id.* at 95-96.

¹⁹⁸ *Id.* at 82, 93.

in the case of iPhones, the record demonstrates that access controls on gaming consoles protect not only the console firmware, but the video games and applications that run on the console as well. The evidence also shows that video games are far more difficult and complex to produce than smartphone applications, requiring teams of developers and potential investments in the tens of millions of dollars. The manufacturers themselves are the creators and owners of a significant portion of these copyrighted works. In sum, while the access controls at issue may serve to further manufacturers' business interests, it is true that they also protect highly valuable expressive works, many of which are owned by the manufacturers, in addition to console firmware itself.

For this and other reasons, the fair use analysis for video consoles diverges from that in the smartphone context.

The first factor to be considered under Section 107 is the "purpose and character" of the use, including whether it is commercial in nature, and whether it is "transformative" in that it "adds something new, with a further purpose of different character, altering the first with new expression, meaning or message."¹⁹⁹ In the case where a console is jailbroken to play independent gaming or entertainment content (whether pirated or not), the use would not appear to be transformative. The use is not for purposes of comment or criticism; rather, the circumvented console code is serving the same fundamental purpose as is served by the unbroken code.

When console computer code is circumvented for purposes of scientific research, however, the use clearly departs from the original purpose of the work. Moreover, research is an expressly favored purpose under Section 107.²⁰⁰ EFF does not provide any technical detail concerning the nature or extent of the modifications required to create a cluster of PS3s for purposes of scientific research, but it is possible that the alterations are more meaningful than in the smartphone context. In any event, the use of console code for research purposes would appear to be a transformative one. Similarly, to the extent a video console is being converted into a backup device or file server (setting aside for the moment the question of whether the purpose is to facilitate infringement, as opponents assert), this, too, could be considered transformative in nature. Such a use adds "a further purpose" to the copyrighted work. Finally, it would appear that, when undertaken by individual device owners for lawful purposes, at least some such transformative uses may be personal and noncommercial in nature.²⁰¹

In sum, as to the first fair use consideration, the Register notes that in general, interoperability is a favored purpose under the law. Certain of the research activities and

¹⁹⁹ *Id.* at 94-95; 17 U.S.C. § 107(1).

²⁰⁰ 17 U.S.C. § 107.

²⁰¹ By contrast, we note that the copying of copyrighted works to avoid paying the customary price of those works – *i.e.*, piracy – has been recognized by courts to be a commercial use. *See, e.g., Harper & Row, Publishers, Inc. v. Nation Enters.*, 471 U.S. 539, 562 (1985) (concern is "not whether the sole motive of the use is monetary gain but whether the user stands to profit from exploitation of the copyrighted material without paying the customary price").

functional applications that proponents claim would be enabled by circumvention may well constitute transformative, and possibly personal and noncommercial, uses. On the other hand, jailbreaking a console to play games and other entertainment content (even if lawfully acquired) is not a transformative use. The Register concludes that, while the results are mixed, the first fair use factor offers some support for an exemption.²⁰²

The second factor of the fair use analysis requires the Register to examine the nature of the copyrighted work for which the exemption is sought. Even though it may well include creative elements, the record here indicates that video console computer code exists largely for the purpose of playing other, expressive works, and is to a significant degree functional in nature.²⁰³ The second fair use factor therefore slightly favors the requested exemption.

Factor three requires the Register to consider the amount and substantiality of the work used. Proponents do not offer much in this regard. In the case of the iPhone, the evidence indicated that after being minimally altered, the vast majority of jailbroken firmware was reused. There is no similar showing here. In making its case with respect to factor three, EFF observes merely that the amount copied for purposes of interoperability will vary. This would appear to make sense, as different gaming platforms presumably require different modifications, and the adaptation of console code for the purpose of linking PS3s for research purposes, for example, could be quite a different undertaking from the alteration of the same code to play non-vendor-approved games. But the record is devoid of meaningful information about the extent of copying and amount of modification that is required for the proffered uses.

As the Register determined in the 2010 rulemaking, extensive copying, for purposes of interoperability, while disfavored under the Section 107 analysis, does not necessarily defeat fair use.²⁰⁴ Here, however, the Register has no basis in the record to assess this question. Proponents have not met their burden of establishing the degree of copying or types of modification required for the noninfringing uses they seek to enable. The Register therefore concludes that this factor is indeterminate.

Factor four considers the effect of the use on the potential market for or value of the copyrighted work. As articulated by the Supreme Court in *Campbell v. Acuff-Rose*, this requires us to consider “not only the extent of market harm caused by the particular actions of the [user], but also ‘whether unrestricted and widespread conduct of the sort

²⁰² In arriving at this conclusion, we are mindful that opponents have offered a substantial amount of evidence demonstrating that circumvention of console access controls, even when initially undertaken for a lawful purpose, is inextricably linked with piracy – certainly not a favored purpose under the fair use analysis. The Register believes that the piracy concern is most appropriately addressed in the context of the fourth fair use factor (market harm) and under the first statutory factor of Section 1201(a)(1) (availability of copyrighted works).

²⁰³ See *Sega*, 977 F.2d at 24-26.

²⁰⁴ See 2010 Recommendation at 97-100.

engaged in by the [proponent of fair use] . . . would result in a substantially adverse impact on the potential market.”²⁰⁵

Proponents’ assertion that the circumvention of console access controls does not cause market harm essentially boils down to the proposition that because the Register determined in 2010 that the jailbreaking of smartphones does not cause market harm, there is no harm here.²⁰⁶ As expressed by proponents: “The Register concluded in the previous rulemaking that the fourth factor was not designed to protect manufacturers from potential incidental damage, such as security concerns or device integrity, that might arise from users jailbreaking their devices.”²⁰⁷ As explained above, such a generalized and retrospective approach is inadequate in light of Congress’ directive that the Librarian conduct a *de novo* review of the current evidence in *each* triennial proceeding to determine whether an exemption is warranted.

The record here shows that access controls on video game consoles not only preserve the integrity of the consoles, but also ensure the legitimacy of the content that is played on those devices. Opponents make a strong case, supported by substantial evidence in the record, that the circumvention of console restrictions – even when initially undertaken for salutary purposes – is inextricably linked to and tends to foster piracy.²⁰⁸ That is, once circumvented and altered to permit unauthorized applications, the console computer code does not discriminate between lawful and unlawful content. The record includes multiple examples of jailbreaking packages that are bundled with unauthorized content or the ability to access it. Notably, a popular homebrew channel of what is apparently the most active independent development community, Wii-based homebrewers, also facilitates access to illegal content. Numerous online comments posted by gaming enthusiasts suggest that once a gaming platform is compromised, piracy ensues.

This effect is well illustrated by the events surrounding the circumvention of Sony’s PS3 platform. In that instance, the hackers publicly stated that they did not condone piracy. But once the fruits of their labors were published online, software quickly became available that permitted illegally-made games to be run on jailbroken consoles, with a corresponding rise in illegal copies – and with no increase in independent development. As a result of the circumvention, Sony found it necessary to replace the compromised PS3 platform with a new one that eliminated the vulnerability.

²⁰⁵ *Campbell*, 510 U.S. at 590.

²⁰⁶ See P3 (EFF) at 15-16.

²⁰⁷ *Id.* at 15-16.

²⁰⁸ It is possible that, in the case of scientific researchers or others operating in a relatively isolated setting, some sort of confidentiality requirement could be imposed in an effort to mitigate such an effect, but proponents have not limited their proposal in this way (and it is not clear that they would want to). Moreover, even if a violator faced legal consequences after the fact, the publication of a circumvention methodology could not be undone.

In short, opponents have provided compelling, uncontradicted evidence that circumvention of access controls to permit interoperability of video game consoles – regardless of purpose – has the effect of diminishing the value of, and impairing the market for, the affected code, because the compromised code can no longer serve as a secure platform for the development and distribution of legitimate content.²⁰⁹ The record also supports a finding that the more widespread the practice of circumvention is, the greater the negative consequences.

Instead of countering this evidence with a factual showing to prove opponents wrong, EFF instead invokes the limiting language in its proposal to assert that such uses would not be permitted.²¹⁰ While this is true as far as it goes, it does not satisfy proponents’ obligation to address the real-world impact of their proposed exemption. Accordingly, the Register finds that factor four weighs against a finding of fair use.

Reviewing the question of fair use in its totality, the Register finds that factor one is mixed, factor two slightly favors the use, factor three is indeterminate, and factor four weighs somewhat strongly against a finding of fair use. Overall, the Register finds that proponents have failed to fulfill their obligation to establish persuasively that fair use can serve as a basis for the exemption they seek.

Finally, with respect to the question of noninfringing uses, proponents briefly mention a third type of arguably protected activity, the repair of outmoded gaming consoles. Such a use of console code could fall within Section 117(c), a statutory exception which permits the owner of a machine to make or authorize the making of a copy of a computer program for purposes of maintenance or repair.²¹¹ To the extent console repair activity falls within the Section 117(c) exception, such an activity would be noninfringing or it might be a fair use of the code. But, as discussed below, proponents have failed to meet their burden with respect to this use, which is presented only in hypothetical terms. They do not document a single example of an actual repair (or forgone repair), or offer analysis as to why the activity should be exempted.

²⁰⁹ Of course, piracy also diminishes the value of the copyrighted games and applications that are pirated, a subject that we discuss below under the first of the statutory factors.

²¹⁰ EFF also dismisses opponents’ piracy concerns as the type of concern rejected by the Second Circuit in *Consumers Union, Inc. v. Gen. Signal Corp.*, 724 F.3d 1044 (2d Cir. 1983), where the court held that the alleged damage to the reputation of Consumers Union as an unbiased tester of consumer products resulting from the defendant’s quotation of plaintiff’s copyrighted report to promote defendant’s product was not a cognizable injury under the fourth fair use factor because it did not focus on the potential market for or value of the copyrighted work. *Id.* at 1051. Here, by contrast, proponents have made a substantial showing that piracy causes harm to the market for and value of the console computer code itself. *Lexmark Int’l, Inc. v. Static Control Components, Inc.*, 387 F.3d 522 (6th Cir. 2004), also relied upon by proponents, is likewise inapposite, as that court found that, based on the record below, the printer cartridge “lock-out” code allegedly infringed by the defendant did not qualify for copyright protection and, moreover, was distinguishable from the protectable video console authentication code at issue in a different case. *Id.* at 537-42, 543.

²¹¹ 17 U.S.C. § 117(c).

b. *Adverse impact*

Even if proponents had satisfied their burden of establishing noninfringing uses, they fail to demonstrate that video game console access controls have or are likely to have a substantial adverse impact on such uses.

The record confirms that manufacturers' technological restrictions on video game consoles effectively control access to video game firmware and software, and are therefore subject to the prohibition of Section 1201(a)(1).²¹² Proponents identify two broad categories of activities that are threatened by the resulting prohibition – scientific research and homebrew software development – both of which, proponents say, depend upon the ability to circumvent console restrictions to render console computer code interoperable with other programs. EFF offers no statistics as to how many video consoles have been jailbroken by consumers. Commenter Huang, citing “personal correspondence with HBC developers,” asserts that over two million users have installed the Nintendo Wii homebrew channel and, based on a website source, that there are “at least” hundreds of thousands of Xbox users who run the XBMC application and millions more who have downloaded the same app for their PCs.²¹³ Even crediting this unsubstantiated information, the record does not say what proportion of these users took these steps to engage in scientific research or homebrew activities, as opposed to the consumption of unauthorized content.

With respect to scientific research activities, it appears that in recent years there have been three academic research projects and one military project that have employed

²¹² In their comments and at the rulemaking hearing, Joint Creators urge that proponents have failed to meet their threshold burden of establishing that the statutory exception to the prohibition on circumvention that permits certain types of reverse engineering, Section 1201(f), does not apply. In proposing Class 3, EFF mentions Section 1201(f) in passing as lending support for its argument that the circumvention of console access controls to achieve interoperability is a transformative, and fair, use. Proponents, however, do not analyze the applicability of Section 1201(f) or take a position as to whether it already protects the activities they assert are being impaired. If it did protect these activities, of course, there would be no adverse effect under Section 1201(a)(1) and no need to consider an exemption within the current rulemaking.

Section 1201(f) creates a statutory exception to Section 1201(a)(1)'s prohibition on circumvention for certain reverse engineering activities. The Register was faced with an analogous question of statutory interpretation concerning the applicability of Section 1201(f) to circumvention of smartphone restrictions in the 2010 Rulemaking. There, the Register concluded that “an iPhone owner who ‘jailbreaks’ does not fall within the four corners of the statutory exemption of Section 1201(f)” because the owner “is not the person who has ‘identif[ied] and analyz[ed] those elements of the [phone’s software] program that are necessary to achieve interoperability.” 2010 Recommendation at 94-95 & n.318. Again, here the proposed exemption is one of general applicability that would permit anyone to jailbreak a video console – not just those who develop a jailbreaking process through “identification and analysis” of programmatic elements. There is, then, at a minimum, significant doubt as to whether Section 1201(f) would immunize the circumvention activities in which proponents seek to engage. The Register therefore proceeds with the analysis of Proposed Class 3 based on the assumption that 1201(f) is inapplicable.

²¹³ C15 (Huang) at 2.

clustered PS3 game consoles in lieu of other, more expensive computing alternatives.²¹⁴ There is nothing in the record to suggest that the PS3 computer code was itself the ultimate object of the research efforts identified by EFF. Rather, the PS3s were employed as a means to a laudable – but unrelated – end that could also have been achieved using an alternative (albeit more costly) computing system. In addition, the record suggests that Sony has cooperated with at least some of these research initiatives; indeed, EFF confirmed at one of the hearings in this proceeding that it is unaware of any instance in which Sony turned away a researcher seeking to use PS3s for a scientific endeavor. EFF does not offer any other examples of scientific research conducted on a gaming platform other than the PS3. Nor does it cite any specific research project that has been forgone as a result of an inability to circumvent console restrictions.

As to the use of video consoles for homebrew activities, the record is uneven. Although proponents do not focus on the technical aspects of Nintendo’s Wii in their proposal, most of the homebrew games and other applications they identify appear to have been generated for circumvented Wiis; EFF notes 450 plus offerings available on the WiiBrew.org website. As for the PS3, the record is thin; proponents identify fewer than twenty games and a handful of applications, including the “Multiman” backup utility and an FTP file server adaptation (the legitimacy of both of which are questioned by opponents). With respect to the Xbox 360, EFF concedes that there is no significant homebrew activity. There appears to be a smattering of activity on legacy systems and handheld devices. The record provides scant information as to how popular any of these applications are. One independently developed application is deemed “remarkably successful” with “thousands” of users; presumably others have had fewer.

Concerning the use of video game consoles to operate Linux software generally, the record shows that less than 1/10th of one percent of PS3 users availed themselves of the (now discontinued) OtherOS option, which permitted users to run Linux on their PS3s. At the same time, there are over 4,000 alternative devices on which Linux can be run without the need for circumvention. Such devices can be used to develop and run Linux-based video games and other applications.

According to ESA, the three leading video game manufacturers have sold over 65 million Xbox consoles, 55 million PS3 consoles, and 95 million Nintendo Wiis. Undoubtedly, some of these machines are no longer in use. Nonetheless, these numbers provide some context in which to assess whether Section 1201(a)(1) is substantially interfering with the noninfringing uses described by proponents in support of Proposed Class 3.

The Register concludes that proponents have failed to establish that the prohibition on circumvention, as applied to video game console code, is causing substantial adverse effects. With respect to scientific research, a small number of research projects involving only one type of gaming console, the PS3, suggest a *de minimis* impact, if any. This conclusion is reinforced by record evidence indicating that

²¹⁴ One of these, Folding@home, apparently does not require circumvention of the PS3 console.

Sony has in fact cooperated with and been a supporter of research efforts, including research conducted on PS3 consoles. Moreover, the record shows that alternative computing resources for such projects are available in the marketplace. The fact that the alternatives are (or at one time were) more expensive than assembling a group of PS3s is simply an economic reality that does not provide the basis for an exemption.

Nor does the record support a finding that Section 1201(a)(1) is having a substantial adverse impact on lawful homebrew activities. The most significant level of homebrew activity identified by EFF appears to have occurred in relation to the Wii, but the record is sparse with respect to the PS3, as well as for legacy and handheld devices, and evidently nonexistent for the Xbox 360. Nor is there much indication in the record as to the level of demand for such homebrew programs as there are. It seems that at least some homebrew applications attract only thousands of users, or fewer, from the tens of millions of console owners.

Most importantly, however, it is apparent from the record that independent development of video games and other applications can be pursued on thousands of other Linux-based devices and other platforms, as well as through various programs offered by the console manufacturers themselves, which appear to draw participants even though there may be participation fees. As the Register has frequently stated in the Section 1201 context, “‘mere inconveniences . . . do not rise to the level of a substantial adverse impact’ on noninfringing uses.”²¹⁵ Those who wish to develop and play homebrew games and applications have abundant alternatives to circumvention.

Finally, as noted above, proponents have offered no factual basis in support of their suggestion that users are having difficulty repairing their consoles as a result of Section 1201(a)(1). Proponents fail to document any actual instances of users seeking to make repairs. Moreover, opponents state that console owners can have their devices repaired by the manufacturer for free or, if no longer under warranty, for a reasonable fee; proponents do not dispute this assertion. On this record, the repair concern appears to be purely speculative. Indeed, when questioned at one of the rulemaking hearings about the need for an exemption to repair broken consoles, counsel for lead proponent EFF candidly acknowledged that she didn’t “know the details.”²¹⁶

c. *Statutory factors*

Proponents argue that the significance of the statutory factors delineated in Section 1201(a)(1)(C) is “diminished” in the context of video game consoles because, in their view, console access controls are deployed to limit the ability to run third-party applications, which is “a business decision that has nothing whatsoever to do with the interests protected by copyright.”²¹⁷ The Register does not agree.

²¹⁵ 2010 Recommendation at 223 & n.731.

²¹⁶ T Hoffman, May 17, 2012, at 63-64; *see also* C15 (A Huang) at 1; P3 (EFF) at 23.

²¹⁷ P3 (EFF) at 34.

The first statutory factor asks the Librarian to consider the impact of the challenged technological measure on the availability for use of copyrighted works.

The Register concludes that console access controls encourage the development and dissemination of highly creative copyrighted works by facilitating secure platforms for the development and distribution of video games and other applications. In addition to artwork, graphics and sound effects, a sophisticated video game may include storyline, character development, voiceovers, music and other expressive elements. Such a work is far more challenging and expensive to create than the typical smartphone application, for example; like a motion picture, it involves a team of creators and may require funding in the millions of dollars. It is difficult to imagine that one would choose to make such an investment without some hope that it could be recouped by offering the resulting product through channels that provide some measure of protection against unauthorized copying and distribution.

Homebrew activities conducted on circumvented platforms also yield new copyrightable works. As discussed above, however, such activities may be pursued on myriad alternative devices and platforms without resorting to circumvention – including, in the case of gaming applications, through manufacturer-sanctioned development programs.

Nor is there any evidence in the record to suggest that users' access to copyrighted works is negatively impacted by an inability to repair their consoles.

On balance, it appears that console access controls, because they encourage the creation and distribution of valuable expressive works and do not foreclose independent channels of creative development, have the effect of increasing, rather than decreasing, the availability of copyrighted works.

The second statutory factor considers the impact of access controls on the availability of works for nonprofit archival, preservation, and educational purposes. This factor appears to be of limited relevance in the context of video game console code; the Register agrees with proponents that it is neutral.²¹⁸

The third factor addresses the impact of the technological restriction on criticism, comment, news reporting, teaching, scholarship or research.

Proponents cite a small number of examples of scientific research projects that have been facilitated by one particular gaming platform, the Sony PS3. Researchers have been able to link together PS3s to function as high-performance computers. In these few cases, resourceful scientists chose to use PS3s in lieu of more expensive market alternatives. There is no showing, however, that any research project has been unable to proceed due to a console access control. In fact, Sony has supported research efforts and proponents acknowledge that they are unaware of any instance in which Sony has turned

²¹⁸ *Id.* at 34.

away a researcher. In sum, it does not appear that the prohibition on circumvention is having a negative impact on scientific research efforts, and there is no showing with respect to the other favored activities referenced in the third statutory factor.

Factor four of the statutory test concerns the effect of circumvention of access controls on the market for or value of copyrighted works.

As discussed above in connection with the fourth fair use factor, the record demonstrates that, due to the particular characteristics of the video game marketplace, the circumvention of access controls protecting a console computer program so that it can be copied and modified for the purpose of enabling unauthorized applications has the effect of decreasing the market for, and value of, that program, as it can no longer serve to facilitate a secure gaming platform. Further, by enabling the ability to obtain and play pirated games and other unauthorized content, the dismantling of console access controls undermines the value of legitimate copyrighted works in the marketplace, many of which require a substantial investment of creative and financial resources to create.

Proponents urge that piracy is an irrelevant consideration with respect to Class 3 as the exemption they seek is only for purposes of allowing interoperability with “lawfully obtained applications.” But the Register cannot ignore the factual record before her. Even if piracy is not the initial or intended purpose for circumvention and modification of console software, the record substantiates opponents’ assessment that in the case of video games, console jailbreaking leads to a higher level of infringing activity. Notably, the uncontradicted evidence establishing the relationship between circumvention and piracy distinguishes the case of video consoles from that of smartphones, where the record did not support the same finding.²¹⁹ It also suggests that the restriction limiting Class 3 to “lawfully obtained” applications – which the Register has found effective in some other contexts – does not provide adequate assurance here. Simply to suggest, as proponents do, that unlawful uses are outside the scope of the exemption and therefore of no concern is not a persuasive answer.

Finally, it is important to consider any additional factors that may be appropriate in evaluating the request for an exemption. In this regard, proponents assert that, as the Register determined in the case of the Apple iPhone, the access controls at issue here exist to serve the manufacturer’s business objectives rather than genuine copyright interests.

²¹⁹ Apple did make the argument that circumvention of the iPhone access controls would facilitate piracy, but the Register did not find this argument compelling based on the record before her. See 2010 Recommendation at 95 (“The fact that a jailbroken [iPhone] *might* be used to play pirated content hardly makes the purpose and character of the use here . . . a disfavored use.”) (emphasis added). The Register observed that the concern that an exemption would expose copyrighted content residing on smartphone handsets to be exposed to unlawful copyright and distribution was without foundation, as “no factual basis for such speculation has been presented.” *Id.* at 102. Here, by contrast, the showing with respect to piracy is compelling, and cannot be dismissed.

Proponents are correct that the access controls protecting video game console code facilitate a business model – as many technological restrictions do. But here, unlike what the record showed in relation to smartphones in the 2010 proceeding, that is not the sole purpose. Console access controls protect not only the integrity of the console code, but the copyrighted works that run on the consoles. In so doing, they provide important incentives to create video games and other content for consoles, and thus play a critical role in the development and dissemination of highly innovative copyrighted works.

4. NTIA comments

NTIA “supports the innovative spirit epitomized by independent developers and researchers whose needs proponents contemplate in this class,”²²⁰ but notes that “the evidence in the record is insufficient to support the considerable breadth of the proposed class.”²²¹ NTIA asserts that the record is unclear with respect to the need for an exemption to enable software interoperability, and that there is compelling evidence that there are reasonable alternatives available for research purposes.²²² NTIA “is also cognizant of the proposal’s likely negative impact on the underlying business model that has enabled significant growth and innovation in the video game industry.”²²³

Although NTIA does not support the exemption as requested by the proponents, it does support an exemption that is limited to allow videogame console owners to repair or replace hardware components, or to “obtain unlicensed repairs when the console is out of warranty or when the console and authorized replacement parts are no longer on the market.”²²⁴ Such a narrowly crafted exemption, asserts NTIA, “would not undermine console manufacturers’ existing business models or hinder innovation in the video game industry.”²²⁵

As explained above, the Register finds that the record lacks any factual basis upon which to recommend the designation of a class, even one that is limited to repair activities, as suggested by NTIA in its letter.²²⁶

5. Recommendation

The Register finds that the evidentiary record fails to support a finding that the inability to circumvent access controls on video game consoles for purposes of rendering them interoperable with independent software applications has, or over the course of the

²²⁰ NTIA Letter at 6.

²²¹ *Id.* (citation omitted).

²²² *Id.*

²²³ *Id.*

²²⁴ *Id.* at 7.

²²⁵ *Id.*

²²⁶ NTIA relies on comments submitted by Huang in support of an exemption for repairs, but, as explained above, Huang offers only hypothetical assertions without any specific evidence. *See id.* nn.39 & 40.

next three years will likely have, a substantial adverse impact on the ability to make noninfringing uses of console computer programs. The Register therefore declines to recommend the adoption of Proposed Class 3.

D. Proposed Class 4: Personal computing devices – software interoperability

Proponent Software Freedom Law Center (“SFLC”), joined by other commenting parties, proposes that the Register recommend the following class:

Computer programs that enable the installation and execution of lawfully obtained software on a personal computing device, where circumvention is performed by or at the request of the device’s owner.

1. Proponents’ case

Lead proponent SFLC, supported by others, including FSF, Mozilla Corporation (“Mozilla”), SaurikIT, New Yorkers for Fair Use (“NYFU”), and Huang, seeks an exemption to permit the circumvention of access controls on computer programs on personal computing devices to enable the installation of other software – including alternative operating systems – when that software is lawfully obtained. The exemption would allow circumvention by the device owner or by someone acting at the device owner’s request.

a. Background

SFLC, a nonprofit legal services organization dedicated to “protecting and advancing free software,”²²⁷ explains that there are two broad categories of access controls on personal computing devices: “application locks,” which effectively prevent users from installing certain software applications, and “OS locks,” which effectively prevent users from installing replacement operating systems.²²⁸ Citing the Librarian’s 2010 exemption to permit jailbreaking of smartphones to enable interoperability, SFLC asserts that “the restrictions addressed by the [smartphone] exemption have become commonplace on other mobile computing devices and have begun to appear on personal computers.”²²⁹ Accordingly, SFLC contends that the smartphone exemption should be “expanded to give owners of all personal computing devices the same access to applications as owners of mobile phones have [It] should be expanded to clearly encompass circumvention for the purpose of installing any software the user chooses, including a new operating system.”²³⁰

SFLC explains that the mobile device market, which includes not only smartphones but also tablet computers, is dominated by Google’s Android operating

²²⁷ P4 (SFLC) at 1 & n.1.

²²⁸ P4 (SFLC) at 3.

²²⁹ *Id.* at 2.

²³⁰ *Id.*

system and Apple's iOS, which together account for ninety-four percent of the market. In addition, the two most popular ebook readers, Amazon's Kindle and Barnes & Noble's Nook, are Android-based devices.²³¹ According to SFLC, "[a]ll of the restrictions addressed by the [smartphone] exemption are reproduced on the new formats." The iOS on the iPhone and iPad limits applications to those obtained from Apple's store.²³² In the case of Android, users are allowed to install applications obtained from channels other than Google's Android Marketplace, but Android withholds "many vital privileges" (*i.e.*, important device functionalities) from alternatively sourced applications.²³³ In addition, even though the Kindle and Nook are Android-based, Amazon and Barnes & Noble have substituted their own exclusive distribution channels, which cannot be avoided without jailbreaking.²³⁴

SFLC warns that the problem it describes is now spreading to the personal computer:

A similar fate threatens personal computers: a majority of new laptop and desktop personal computers shipped in the next year are expected to incorporate hardware controls that allow manufacturers to prevent the installation of unauthorized operating systems. In theory, these controls will merely make it difficult but not impossible, for a user to install their choice of operating system. In practice, however, there is a very real danger that the controls will impose an OS lock in many personal computers.²³⁵

Or, as commenter NYFU sums up the situation: "Today Apple has, and soon, if we do not stop them, Microsoft will have, practical ownership of millions of computers used by millions of people in the United States of America."²³⁶

SFLC observes that Apple and Microsoft have recently established app stores for their respective operating systems that "closely follow the model of their mobile predecessors." Although these more recent app stores are "not yet the sole distribution

²³¹ *Id.* at 3-4.

²³² SaurikIT cites the example of Mozilla's Firefox, an alternative browser, which has a 25% market share on personal computers (making it the second most popular browser in that market), but which has not been approved by Apple. *See* C14 (SaurikIT) at 3.

²³³ P4 (SFLC) at 4. In a similar vein, commenter SaurikIT observes that developers of iPhone applications are not able to engage the "proximity sensor" on the phone (which allows the device to sense when it is next to the user's face) and that, until recently, the iPhone's camera was not allowed to function as a video recorder. Application developers also face restrictions from device makers as to when their software can run – *e.g.*, the frequency with which it can perform a task or whether it can run continuously "in the background." C14 (SaurikIT), at 3-4.

²³⁴ P4 (SFLC) at 4.

²³⁵ *Id.* at 8.

²³⁶ C16 (NYFU) at 1.

channel for either operating system, ... Microsoft at least is moving quickly to make [its] Windows 8 store exactly that.” And, per SFLC, Apple will be “severely restricting” the functionality of apps distributed via the Mac App Store.²³⁷

SFLC acknowledges that the stated justification for OS locks is to protect device owners from malicious software by making it impossible for viruses to gain access to, or replace, a device’s operating system. But in SFLC’s words, “[t]his ‘security feature’ is undiscerning: it will reject the device owner’s intentional installation of an operating system just as it will reject a virus’s payload.”²³⁸ SFLC observes that “[t]o the extent the firmware lock being circumvented merely prevents unauthorized operating systems from running, it does not protect access to a copyrighted work of the device producer, but rather prevents access to a competing copyrighted work to which the device owner has a license.”²³⁹ SFLC asserts that while OS locks may protect against malware, they also prevent users from removing covert spyware that reports a user’s activity to the carrier, manufacturer or software supplier; according to SFLC, the only way for a user to disable this capability is to replace the preinstalled operating system with a spyware-free system.²⁴⁰

According to SFLC, many users – particularly Android users – have replaced the operating systems on their mobile devices with modified systems, which are known as “mods.” SFLC states that Android mods are noninfringing because fundamental components of Android are licensed under free software licenses (unlike other popular mobile operating systems). The most popular Android mod has been installed nearly 700,000 times, but users who install it face the specter of Section 1201(a)(1) liability because the “vast majority” of handsets capable of running Android employ OS locks.²⁴¹ According to SFLC, mods permit access to additional functionalities and applications, in addition to facilitating the removal of hidden spyware. SFLC notes that “[u]nlike in the PC market, there are as yet no producers of commodity mobile phone software; nearly all modern handsets are produced by vendors with ties to proprietary operating systems.”²⁴²

SFLC explains that the UEFI Forum, an industry trade association, has established a standard for the interface between computer operating systems and hardware that includes a feature called “secure boot” which can be used as an OS lock.²⁴³ SFLC characterizes the UEFI “secure boot” standard as follows:

The UEFI specification does not define a means for users to disable the OS lock, only how it will operate when enabled:

²³⁷ P4 (SFLC) at 4-5.

²³⁸ *Id.* at 5.

²³⁹ *Id.* at 11.

²⁴⁰ *Id.* at 5-6.

²⁴¹ *Id.* at 6.

²⁴² *Id.* at 7.

²⁴³ *Id.* at 8.

it requires a secure boot-enabled machine to load only an operation system that corresponds to an approved cryptographic signature in the machine's firmware. The easiest way for a manufacturer to implement the specification as required by the Window Logo Program is to include only Microsoft's key in the firmware. The specification does not prevent manufacturers from allowing users to disable the lock or add non-Microsoft keys, but neither does it require or encourage them to, and the market incentives discourage it²⁴⁴

In correspondence responding to a post-hearing inquiry from the Copyright Office, SFLC elaborates that Microsoft has established a program to enable developers to "have their operating systems signed by Microsoft" – *i.e.*, to acquire a secure boot key – for a fee of ninety-nine dollars.²⁴⁵

SFLC notes that Microsoft has announced that it will require hardware manufacturers for the forthcoming Windows 8 operating system to enable secure boot "by default." It asserts that because Microsoft controls nearly ninety percent of the operating system market, secure boot will be a "nearly ubiquitous" feature on personal computers in the next year. According to SFLC, this will "decimate" what is now a thriving market for alternative PC operating systems.²⁴⁶

b. *Asserted noninfringing activities*

SFLC asserts that "it is not infringing for the owner of a device to install applications that have not been approved by the device's manufacture." According to SFLC, this conclusion – which it draws from the Register's analysis and findings in the 2010 rulemaking proceeding – applies with equal force to application locks on devices other than smartphones, as well as to OS locks. SFLC notes that in 2010, the Register determined that circumvention for the purpose of achieving interoperability was either "noninfringing or fair." SFLC further opines that, while modification of a preinstalled operating system is sometimes necessary to circumvent an application lock, the same is not true of OS locks, as removal of a device's default operating system does not implicate any of the exclusive rights of the owner of the operating system. Further, SFLC asserts, the installation of an alternative operating system that is licensed is also a noninfringing act.²⁴⁷

²⁴⁴ *Id.* at 9.

²⁴⁵ Letter from Aaron Williamson, Senior Staff Counsel, Software Freedom Law Center, to David O. Carson, General Counsel, U.S. Copyright Office (July 9, 2012), at 3-4.

²⁴⁶ P4 (SFLC) at 8-9. Per SFLC, Wikipedia lists over 200 more GNU/Linux-based alternatives as well as approximately eighty more based on Berkeley Systems Distribution, another type of popular free software. *Id.* at 9.

²⁴⁷ *Id.* at 10-11. SFLC makes the further point that manufacturers can and do limit device warranties to exclude harm caused by modification of an operating system. *Id.* at 10; *see also* C14 (SaurikIT) at 4-5 (noting warranty restrictions).

c. *Asserted adverse impact*

SFLC states that “nearly every mobile phone on the consumer market, including most Android phones, prevents the installation of unauthorized operating systems via a [technological protection measure].” The same restrictions are now found on tablets and ebook readers. Accordingly, absent an exemption, the owners of these devices are vulnerable to claims under Section 1201(a)(1).²⁴⁸ According to SFLC, hundreds of thousands of users have installed new operating systems on their mobile devices, but the threat of liability hampers such efforts and such users’ ability to share techniques and experience.²⁴⁹

With respect to personal computers, SLFC asserts that the expansion of the app store model to personal computers threatens to provide operating system vendors with “monopolistic control” over what has previously been an unrestricted market.²⁵⁰ In particular, users will be hampered by the implementation of UEFI secure boot on the majority of new PCs over the next year.²⁵¹ In SLFC’s estimation, free software communities lack the organizational structure and “clout” to negotiate with manufacturers to ensure that their own keys are included in secure boot firmware; OS locks could therefore have “devastating results for free software operating systems.” Absent the requested exemption, community-based free software operating systems, which depend upon open access to computer platforms, will have little chance of succeeding.²⁵²

In addition to limiting consumer choice, SFLC asserts, the failure to permit users to replace operating systems with user-chosen upgrades and alternative software inhibits the ability to extend the useful life of personal computing devices. This has a negative impact on efforts to refurbish computers for distribution to needy communities as well as an adverse environmental impact.²⁵³

Finally, commenter Huang notes that the prohibition embodied in Section 1201(a)(1) could make it difficult to repair a device if the repair requires circumvention of an access control on the device.²⁵⁴

²⁴⁸ P4 (SFLC) at 4. Huang echoes SFLC’s assertions in his comments: “Without these exemptions, the owner’s right to modify, repair, improve and develop for devices that incorporate now-ubiquitous cryptographic technology is hampered by the potential legal ramifications of jailbreaking.” C15 (Huang) at 1; *see also* C3 (FSF) at 3 (noting expansion of access controls on personal computing devices).

²⁴⁹ P4 (SFLC) at 12.

²⁵⁰ *Id.* at 5.

²⁵¹ *Id.* at 12.

²⁵² *Id.* at 9-10, 12.

²⁵³ *Id.* at 7-8.

²⁵⁴ C15 (Huang) at 1.

d. *Argument under statutory factors*

SFLC maintains that the proposed exemption will enhance user access to copyrighted works by expanding the availability of operating systems “in two dimensions” – that is, by enabling users to upgrade to newer versions of their default operating systems and by permitting them to install entirely different operating systems. It contends that the availability of free software operating systems on mobile devices will serve as a foundation of new research and development, which is being stifled by OS and application locks. In SFLC’s view, an exception will also promote criticism and comment by helping to counter censorship. Here SFLC cites Apple’s rejection from its store of two apps of which it apparently disapproved: a game that was critical of Apple and a comic book rendering of James Joyce’s *Ulysses* that contained nudity.²⁵⁵

Finally, SFLC states that, as established in the 2010 proceeding, “Apple uses its control over the sole iOS application distribution channel to restrain competition.”²⁵⁶ According to SFLC, this anticompetitive control now extends to the iPad as well. Thus, in its view, the exemption that is available to mobile phone users should be extended to owners of all kinds of devices.²⁵⁷

2. Opposition

Proposed Class 4 is opposed by Joint Creators,²⁵⁸ who argue that the proposed exemption “targets every device and every platform, and creates an open-ended standard for circumvention.” In their view, if granted, the exemption “would strip any copyright owner, distributor, or licensee from exercising any choices with respect to how to construct a distribution system related to personal computing, and would thus expose copyright owners and their business partners to unnecessary risk, piracy, and unpredictability.”²⁵⁹ Joint Creators characterize proponents’ request as, “at best, premature,” and maintain that proponents have failed to meet the substantial burden required for an exemption.²⁶⁰

Joint Creators are of the view that the unauthorized reproduction and modification of an operating system for the purpose of running non-approved applications is not a fair use, and assert that the fair use argument in favor of jailbreaking relies upon an

²⁵⁵ P4 (SFLC) at 12-13 (but noting that Apple subsequently reversed its decision on the *Ulysses* comic book).

²⁵⁶ *Id.* at 13.

²⁵⁷ *Id.*

²⁵⁸ The trade groups represented by the Joint Creators are the Association of American Publishers, the American Society of Media Photographers, the Business Software Alliance, the Entertainment Software Association, the Motion Picture Association of America, the Picture Archive Council of America, and the Recording Industry Association of America. C12 (Joint Creators) at 1-2.

²⁵⁹ *Id.* at 29-30.

²⁶⁰ *Id.* at 31-32.

inappropriate extension of existing case law.²⁶¹ They further assert that Section 1201(f) is inapplicable because “jailbreaking by consumers is not for the purpose of developing software.”²⁶²

Joint Creators contend that the “primary effects” of such an exemption “would be to enable distribution of pirated applications, and to remove technical limitations that would otherwise protect trial versions of applications.”²⁶³ According to Joint Creators, circumvention of technical measures on computer programs is accomplished “primarily to unlock trial versions of software, or enable access to pirated copies or unauthorized modified versions.”²⁶⁴ Further, malicious developers often insert malware within pirated applications.²⁶⁵

Joint Creators stress that proponents’ arguments in favor of the proposed class are based on speculation, rather than facts. They assert that proponents’ comments present “theories” about what might occur with respect to personal computers and fail to demonstrate that the scenarios they portray are more likely than not, as required to establish the need for an exception.²⁶⁶ In particular, with respect to the UEFI secure boot feature, proponents have not identified a single UEFI computer platform that precludes the installation of an alternative operating system. Further, they note, proponents in fact concede that neither Apple nor Microsoft currently limits installation of applications for personal computers to those purchased through stores affiliated with their respective companies.²⁶⁷ Opponents observe that users have access to personal computers in the marketplace on which they can install their own operating systems without engaging in circumvention.²⁶⁸

Joint Creators assert that technical measures such as “code signing” permit the immediate downloading of applications and prevent modified or pirated applications from executing. In addition, such access controls enable copyright owners to make trial versions of software available for evaluation. Thus, “[f]ar from limiting the availability of software applications, these platforms and their protection mechanisms have contributed to an unprecedented number of applications being made available to

²⁶¹ T Feder, June 5, 2012, at 197-98. The cases they reference in this regard are *Sega Enters. Ltd. v. Accolade, Inc.*, 977 F.2d 1510 (9th Cir. 1992), and *Sony Computer Entm’t, Inc. v. Connectix Corp.*, 203 F.3d 596 (9th Cir. 2000), both of which involved the reverse engineering of video game consoles.

²⁶² *Id.* at 199.

²⁶³ C12 (Joint Creators) at 29-30.

²⁶⁴ *Id.* at 30.

²⁶⁵ *Id.* at 31.

²⁶⁶ *Id.* at 31-32.

²⁶⁷ *Id.* at 31.

²⁶⁸ T Metalitz, June 5, 2012, at 206.

users.”²⁶⁹ Further, Joint Creators note, proponents admit that alternatives to circumvention are “readily available.”²⁷⁰

Finally, Joint Creators assert that the proposed class – in purporting to immunize circumvention “performed . . . at the request of the device’s owner” – amounts to a request to exempt the provision of circumvention services, which is prohibited under Section 1201(a)(1)(E).²⁷¹

3. Discussion

Proponents request an extraordinarily broad class comprising every personal computer device with a computer program that could be circumvented to permit the installation of alternative software. Proponents seek to extend the requested exemption not only to the owners of such devices, but to those who would perform circumvention on a device owner’s behalf.

Proponents address two wide-ranging categories of works in their comments. The first is computer programs on mobile personal computing devices – including Apple and Android-based smartphones, tablets and ebook readers – which proponents assert are almost always subject to technical protection measures in the form of application locks and OS locks. The second is computer programs on personal computers, which proponents suggest will likely soon be subject to technical restrictions akin to those now prevalent in the mobile device market.

a. *Noninfringing uses*

Proponents do not offer much in support of their claim that the uses for which they seek an exemption are noninfringing, even though this is a threshold requirement before an exemption can be considered. Instead, proponents choose to rest their case upon the Register’s conclusion in the 2010 rulemaking – in the context of smartphones – that it is not an infringement to install applications that have not been approved by a device’s manufacturer. They claim that, in granting the 2010 exemption, the Register also “implicitly recognized” the noninfringing purpose of circumventing OS locks, and note that the removal of a device’s default operating system does not require the reproduction, derivation, distribution, performance or display of the deleted system.²⁷² Proponents do not bother to recount the Register’s 2010 findings or the analysis upon

²⁶⁹ C12 (Joint Creators) at 30. At the hearing on Proposed Class 4, a representative of the Business Software Alliance (in turn represented by Joint Creators) stated that there are over 100 million smartphone users in the United States and tens of millions of tablet users, that there are over a million apps available from thousands of software developers for the top mobile platforms, and that tens of billions of apps have been downloaded. T Feder, June 5, 2012, at 193.

²⁷⁰ C12 (Joint Creators) at 30.

²⁷¹ *Id.* at 32.

²⁷² P4 (SFLC) at 10.

which they rely, as, in their view, to do so would only be “duplicative.”²⁷³ Proponents’ conclusory declaration that the expansive set of uses upon which they premise their request are noninfringing is inadequate in the context of this rulemaking. As often stated, a proponent of a proposed class is required to demonstrate *de novo* – through specific facts and legal analysis – that an exemption is warranted. A proponent cannot “extend” or “expand” a previously granted exemption simply by invoking an earlier proceeding.²⁷⁴

Here the claimed noninfringing uses – which presumably would occur across a broad spectrum of devices – are described in only the most general terms and are unsupported by a factual showing or meaningful analysis. It is not clear, for example, whether proponents are relying on fair use or are simply claiming that the activities in question do not implicate copyright interests, or both. Proponents suggest that no Section 106 right is implicated by the removal of an operating system, though they do not elaborate.²⁷⁵ Indeed, proponents do not define what is (or is not) a personal computing device, let alone explain the technical operation of the access controls at issue, or what is involved in circumventing them.²⁷⁶

The record is also murky on the especially critical issue of whether the removal of an operating system from a device in its entirety – an activity proponents seek to facilitate through this rulemaking process – requires the circumvention of technical measures *before* erasing the operating system, or whether it is possible to remove an operating system without prior circumvention (even if such removal also simultaneously removes the access controls for that operating system). At the hearing on Proposed Class 4, the Copyright Office sought clarification on this point from the parties, but the results were inconclusive. The best reading of the discussion is that, in some cases, it might be possible to remove an operating system without first circumventing an access control (as perhaps in the case of a complete “reflashing” of a device’s system), and in others it might not be, and that it boiled down to a factual question that could not be satisfactorily answered by proponents.²⁷⁷

To the extent an operating system can be removed without having first to gain access to the work through an act of circumvention, even if such work is protected for other purposes by technological measures, such removal does not constitute a violation of Section 1201(a)(1). This is because upon deletion of the work, any such technological

²⁷³ *Id.*

²⁷⁴ *See, e.g.*, 2010 Recommendation at 14 (“In each rulemaking proceeding, proposed classes are reviewed *de novo*. The fact that a class was previously designated by the Librarian creates no presumption that redesignation is appropriate, but rather the proponent of such a class must make a *prima facie* case in each three-year period.”).

²⁷⁵ P4 (SFLC) at 10.

²⁷⁶ By contrast, in the 2010 smartphone proceeding, the Register had a record before her that permitted her to analyze these issues. *See, e.g.*, 2010 Recommendation at 83-84, 97.

²⁷⁷ T Metalitz, Feder, Williamson, & Sulzberger, June 5, 2012, at 255-65.

measure is no longer “effectively control[ing] access” to the work.²⁷⁸ In such a case, of course, an exemption is unnecessary.

Finally, proponents fail to address whether Section 117, an exception to a copyright owner’s exclusive rights under Section 106 that permits the owner of a computer program to copy or adapt a program to permit it to be used in conjunction with a machine,²⁷⁹ might be relevant in at least some of the situations with which they are concerned. On this record, the Register could not address whether Section 117 might apply. To the extent Section 117 was to apply, however, it could serve to support proponents’ claim of noninfringing uses.²⁸⁰

b. *Adverse impact*

As a second threshold requirement for an exemption, proponents must demonstrate that the prohibition of Section 1201(a)(1) is having, or is likely to have, substantial adverse effects on noninfringing uses.

Proponents offer generalized observations about the use of access controls in the mobile device marketplace. Proponents rely heavily on the Register’s 2010 conclusion proceeding that Apple’s use of technical measures on its iPhone did not protect copyrighted works, but instead protected a restrictive business model. As explained above, however, the Register’s earlier finding does not serve as precedent in the current proceeding. Rather, any determination concerning the purpose and impact of Apple’s access controls in this proceeding – or any manufacturer’s access controls, for that matter – must be made based on evidence of marketplace conditions as they exist *today* or are likely to exist over the next three years.

Proponents fail to offer specific facts or analysis in support of their requested exemption. To take but one example, proponents mention Amazon’s Kindle and Barnes & Noble’s Nook ebook readers as being burdened by access controls. But they do not detail the technical restrictions in question, what is required to circumvent them, or whether these devices are being circumvented in meaningful numbers today. Nor, if such is the case, do they explain users’ actual objectives in circumventing these devices, whether there is a market for independently distributed ebooks (or some other relevant market) that is going untapped or, if so, how sizeable it is. These are but a few of the questions that would be relevant in determining whether an exception to permit jailbreaking of ebook readers is justified that cannot be answered on this record.²⁸¹

²⁷⁸ See 17 U.S.C. §1201(a)(1); see also 2010 Final Rule, 75 Fed. Reg. at 43,831 (“[C]omplete reflashing does not even constitute circumvention of an access control because it actually deletes the copy of the entire work that had been protected by the access control, thereby permanently denying access to that work.”); 2010 Recommendation at 13 (“In order for the prohibition to apply to a work, the technological protection must control *access* to a copyrighted work.”).

²⁷⁹ 17 U.S.C. § 117(a)(1).

²⁸⁰ Cf. 2010 Recommendation at 86-91 (analyzing Section 117 in the smartphone context).

²⁸¹ We further observe that proponents fail to examine Section 1201(f)(1), a statutory exception to the prohibition on circumvention that permits reverse engineering for the purposes of interoperability for

With respect to the second category, personal computers, much of the concern appears to be centered on Microsoft's to be launched Windows 8 operating system and its "secure boot" functionality. But proponents' own statements indicate that this concern is speculative. It appears undisputed in the record that, at least as of today, purchasers of personal computers are able to install alternative operating systems without resorting to circumvention. Proponents concede that the UEFI specification allegedly adopted by Microsoft "does not prevent manufacturers from allowing users to disable the lock or add non-Microsoft keys,"²⁸² and acknowledge Microsoft's program permitting developers to acquire keys for ninety-nine dollars. Against this backdrop, proponents assert that OS locks "threaten" personal computers, while at the same time allowing that "[i]n theory, these controls will merely make it difficult but not impossible, for a user to install their choice of operating system."²⁸³ Proponents add that "*should* OS locks obstruct users from installing whatever software they choose on devices they own," they should not be subject to DMCA liability.²⁸⁴ These types of prognostications are clearly in the realm of the hypothetical.

Indeed, on this record, there is an open question as to whether an OS lock preventing the operation of an *alternative* operating system is a technological measure protecting a copyrighted work with the meaning of Section 1201(a).²⁸⁵ Based on the information provided, it is difficult to say, and it is also possible that the analysis of different types of OS locks might yield varying answers.

Proponents' suppositions concerning the features of forthcoming software fall short of making a case that the harmful effects they posit are more likely to occur than not. Mere speculation cannot support an exception to Section 1201(a)(1); rather, predicted adverse effects are only cognizable "in extraordinary circumstances in which the evidence of likelihood of future adverse impact is highly specific, strong and persuasive."²⁸⁶ Proponents offer no such evidence here.

certain reasons. To the extent it applied, it might obviate the need for an exemption because Section 1201(a)(1) would have no adverse effect. But on this record, the Register was not able to assess whether Section 1201(f)(1) might have a bearing on the proposed class.

²⁸² P4 (SFLC) at 9.

²⁸³ *Id.* at 8.

²⁸⁴ *Id.* at 10 (emphasis added).

²⁸⁵ Proponents themselves raise this question when they observe that "[t]o the extent the firmware lock being circumvented merely prevents unauthorized operating systems from running, it does not protect access to a copyrighted work of the device producer, but rather prevents access to a competing copyrighted work to which the device owner has a license." *Id.* at 11.

²⁸⁶ House Manager's Report at 6.

c. Class definition

As an additional consideration with respect to this particular proposal, the Register notes that the granting of an exemption for such a sweeping class as proposed here is without precedent throughout the history of Section 1201 rulemakings. The Register has noted previously that, aside from indicating that the correct starting point of the class definition is a category of work listed in Section 102,²⁸⁷ Congress provided little guidance on this point in enacting Section 1201. As the Register has explained, the House Manager’s Report²⁸⁸ indicates that the class should neither be too broad nor too narrow. Somewhat more helpful is language from the Commerce Committee Report stating that “the ‘particular class of copyrighted works’ [is intended to] be a narrow and focused subset of the broad categories of works ... identified in section 102.”²⁸⁹ Although Congress appeared to contemplate a degree of flexibility, the Register’s task of defining the proper class is nonetheless a critical one; Congress emphasized that “[d]eciding the scope of boundaries of a ‘particular class’ of copyrighted works as to which the prohibition contained in section 1201(a)(1) has been shown to have had an adverse impact is an important issue to be determined during the rulemaking proceedings.”²⁹⁰

In the past, faced with a proposed class with respect to which the proponents offered substantial and persuasive evidence, but for which the definition proposed was not fully congruent with the proponents’ showing, the Register has – to the extent a sufficient basis exists in the record – refined the class definition to ensure that it is appropriately tailored to her findings.²⁹¹ But such refinement is only possible when the proponent of the proposed class has otherwise succeeded in demonstrating that some version of its exemption is warranted. In order to so demonstrate, a proponent must present specific and compelling evidence of noninfringing uses that are being, or are likely to be, substantially adversely affected by the prohibition of Section 1201(a)(1). The mere possibility that some users of some works encompassed by a proposed class are or may be adversely affected is not sufficient. It is the evidentiary record that determines the “narrow and focused subset” of works that are properly included in the class. The Register cannot delineate the appropriate contours of a class “in a factual vacuum.”²⁹²

Here, as discussed above, proponents have failed to support the proposed exemption with demonstrable facts. Thus, even if there might be particular subsets

²⁸⁷ 17 U.S.C. § 102.

²⁸⁸ 2010 Recommendation at 17 (citing House Manager’s Report at 7).

²⁸⁹ Commerce Comm. Report at 38.

²⁹⁰ House Manager’s Report at 7.

²⁹¹ 2010 Recommendation at 16 (explaining that “[t]he records in [the 2010] and prior rulemakings have demonstrated that in many cases, [an initial] subset of a category of works should be further tailored in accordance with the evidence in the record.”).

²⁹² *Id.*

within their very broad proposal that might deserve consideration, there is no record from which the Register could even begin to make such a determination.²⁹³

As a final matter, the Register notes that to the extent that the class proponents seek to exempt would effectively permit the provision of circumvention services to others – as the last clause of Proposed Class 4 would appear to do – it must be rejected. The provision of circumvention services to others is forbidden under Section 1201(a)(2) of the DMCA.²⁹⁴ Section 1201(a)(1)(E) specifies that an exemption granted under Section 1201(a)(1)(C) – that is, through the instant proceeding – is inapplicable to any prohibition of Section 1201 other than Section 1201(a)(1), which addresses a user’s *own acts* of circumvention.²⁹⁵

d. *NTIA comments*

NTIA “is not convinced that Secure Boot constitutes ‘a technological measure that effectively controls access to a work’ protected by U.S. copyright law.”²⁹⁶ It further notes that “[t]here is no evidence that Secure Boot restricts access to Windows 8 or any other work for purposes of protecting copyright.” NTIA thus does not support the designation of the proposed class.

4. Recommendation

The Register recognizes that the concern expressed by proponents – that a broad implementation of restrictive access controls could preclude users from installing operating systems and applications of their choice on a wide variety of personal computing devices – is a significant one. As the Register has noted previously, interoperability is generally favored under the law.²⁹⁷ It is not difficult to assume that in some cases, at least, technological measures of the nature suggested by proponents could be troubling. But here, proponents rely heavily on speculation and fail to present specific and compelling evidence in support of a focused exemption. The Register therefore declines to recommend the adoption of Proposed Class 4.²⁹⁸

²⁹³ The Register notes that, to the extent the proponents’ proposed class is directed at smartphones and tablet computers, it is possible that some of their concerns may be addressed in the context of the Register’s consideration of Proposed Classes 5 and 6, in which the evidentiary records are considerably more robust.

²⁹⁴ 17 U.S.C. § 1201(a)(2) provides that “[no] person shall manufacture, import, offer to the public, provide, or otherwise traffic in any technology, product, service, devices, component, or part thereof” that is “primarily designed or produced for the purpose of circumvent[ion],” “has only limited commercially significant purpose or use other than circumvent[ion],” or “is marketed by that person or another acting in concert with that person with that person’s knowledge for use in circumvent[ion]”; *see also* 2010 Recommendation at 169-70.

²⁹⁵ *See* 17 U.S.C. § 1201(a)(1)(E).

²⁹⁶ NTIA Letter at 9 (quoting 17 U.S.C. § 1201(a)(1)(A)).

²⁹⁷ 2010 Recommendation at 91-94

²⁹⁸ In light of the Register’s conclusion that proponents have failed to make a *prima facie* showing in support of an exemption, there is no need to consider the Section 1201 statutory factors.

E. Proposed Class 5: Wireless telephone handsets – software interoperability (“jailbreaking”)

Proponent EFF, supported by other commenters, proposes the Register recommend the following class of works:

Computer programs that enable wireless telephone handsets (“smartphones”) and tablets to execute lawfully obtained software applications, where circumvention is undertaken for the purpose of enabling interoperability of such applications with computer programs on the handset or tablet.

1. Proponent’s case

Proponent EFF, joined by The New America Foundation, New Media Rights, and Mozilla,²⁹⁹ seeks an exemption to permit the circumvention of access controls on wireless devices so that the devices can be used with non-vendor-approved software that is lawfully acquired.

a. Background

In 2010, the Register recommended, and the Librarian designated, a class that permitted circumvention of technological measures on certain telephone handsets known as “smartphones.”³⁰⁰ That exemption permitted users to circumvent

[c]omputer programs that enable wireless telephone handsets to execute software applications, where circumvention is accomplished for the sole purpose of enabling interoperability of such applications, when they have been lawfully obtained, with computer programs on the telephone handset.³⁰¹

In recommending the class, the Register found that many such phones are protected by access controls,³⁰² that proponent’s intended use – to render certain lawfully acquired

²⁹⁹ The Office also received comments from numerous individual users who noted their support for the exemption but did not offer substantive factual or legal analysis.

³⁰⁰ Although none of the parties defined “smartphone” in this proceeding, the Register notes that, in 2010, the Copyright Office defined smartphones as “mobile phones with advanced data features and keyboards.” 2010 Recommendation at 77 n.256. While the Register is required to review the factual record *de novo* in each rulemaking, the record is clear that each of the parties implicitly applies the same definition of “smartphone” here. Moreover, no party has questioned this definition of “smartphone.” Accordingly, the Register adopts the same definition in this rulemaking.

³⁰¹ 2010 Final Rule, 75 Fed. Reg. at 43,839.

³⁰² *Id.* at 85-86.

applications interoperable with the handset's software – was fair,³⁰³ and that the access controls adversely affected that use.³⁰⁴ The Register also found that the statutory factors prescribed by 17 U.S.C. § 1201(a)(1)(C) weighed in favor of granting the exemption.³⁰⁵ Colloquially, the exemption permitted users to “jailbreak” or “root” certain devices.³⁰⁶

EFF seeks the designation of an expanded version of that which was designated in 2010, citing dramatic growth in mobile phone market, along with continued widespread use of technological measures to prevent users from installing unauthorized applications on such phones.³⁰⁷ EFF's proposal also expands the exemption to include “tablets,” such as Apple's iPad, which, says EFF, have “enjoyed similar radical popularity over the past two years.”³⁰⁸

The New America Foundation's Open Technology Initiative (NAF) filed comments in support of the proposal, encouraging the Register to expand the class to include “a broad range of mobile devices,”³⁰⁹ and asserting that jailbreaking does not infringe on any copyright interests.³¹⁰

Several other organizations offered comments in support of the proposal. New Media Rights asserts that “[t]he ability to jailbreak is essential for competition and innovation,”³¹¹ and that it “provides consumer protection since it fosters increased competition that leads to more choice, less censorship, and pressure for official app stores to improve their systems.”³¹² Mozilla contends that jailbreaking promotes choice in software applications for smartphone users, promotes innovation and development of new applications, enables critical software testing, and promotes open access to the internet.³¹³ The Free Software Foundation asserts that “[u]sers should be allowed to install whatever software they like on their devices.”³¹⁴

The Office received several hundred additional comments in support of the proposed exemption. Although several such comments provided examples of how the

³⁰³ *Id.* at 100.

³⁰⁴ *Id.*

³⁰⁵ *Id.* at 101-02.

³⁰⁶ According to the EFF, “[j]ailbreaking” is the term people tend to use for iPhones, and “rooting” is a term that people tend to use for Android devices, but the basic idea is the same, and it is to get full administrative access to the device.” T Hofmann, May 17, 2012, at 104.

³⁰⁷ P5 (EFF) at 2-3.

³⁰⁸ *Id.* at 4.

³⁰⁹ C6 (New America Foundation) at 5.

³¹⁰ *Id.* at 5.

³¹¹ C13 (New Media Foundation) at 2.

³¹² *Id.* at 3.

³¹³ C9 (Mozilla) at 2-4.

³¹⁴ C3 (Free Software Foundation) at 3.

current jailbreaking exemption has been used, none offered significant additional facts or substantive legal arguments.

b. *Asserted noninfringing uses*

EFF asserts that “[c]ourts have long found copying and modification to enable device interoperability noninfringing under the doctrine of fair use.”³¹⁵ Proponent also notes that the Register found jailbreaking to be a fair use in the 2010 rulemaking, further asserting that “[n]othing in the factual or legal record since the last proceeding suggests that a change in this position is warranted.”³¹⁶

In brief, EFF asserts that jailbreaking constitutes a transformative use akin to those uses found to be fair in several leading cases on the issue,³¹⁷ thus tipping the first factor in favor of fair use.³¹⁸ EFF asserts that the second factor favors fair use as well, because the portion of the copyrighted firmware exploited by jailbreaking is functional,³¹⁹ and because “it is customary for operating systems to enable third-party interoperability”; therefore, “the copyright owner’s exclusive rights are not infringed when a user runs an application without the manufacturer’s consent.”³²⁰

With respect to the third factor, EFF asserts that, although “the amount of firmware copied for the various smartphone and tablet jailbreaks varies depending on device and version,” in each case, “the amount copied is necessary and reasonable for the legitimate purpose” of achieving interoperability.³²¹ Finally, with respect to the fourth factor, EFF asserts that “jailbreaking does not foreclose sales of smartphone or tablet firmware, nor are users jailbreaking their devices to compete in the marketplace for firmware sales.”³²²

c. *Asserted adverse impact*

EFF asserts that “the last three years have seen dramatic growth in the adoption of smartphones and tablets as consumers increasingly shift from traditional personal computers to mobile devices.”³²³ Specifically, EFF cites data “showing that 35% of all American adults are now smartphone owners” and that “smartphone penetration will

³¹⁵ P5 (EFF) at 11 (internal citations and footnotes omitted).

³¹⁶ *Id.*

³¹⁷ *Id.* at 11-12 (citing *Sega*, 977 F.2d 1510; *Connectix*, 203 F.3d 596; *Kelly v. Arriba Soft Cop.*, 336 F.3d 811 (9th Cir. 2003); and *Perfect 10, Inc. v. Amazon.com, Inc.*, 508 F.3d 1146 (9th Cir. 2007)).

³¹⁸ P5 (EFF) at 11-12.

³¹⁹ *Id.* at 13-14.

³²⁰ *Id.* at 14.

³²¹ *Id.* at 15.

³²² *Id.*

³²³ *Id.* at 3.

[have] reach[ed] more than 50% of subscribers by the end of 2011.”³²⁴ EFF also asserts that “[i]n the final quarter of 2010, more than 100 million smartphones were shipped in the United States alone, surpassing the number of personal computers sold by almost 8 million units.”³²⁵

EFF asserts that “[m]anufacturers typically configure a device’s firmware to prevent unauthorized applications from accessing certain functions of the phone or tablet,” and that such firmware is often encrypted “to prevent users from changing the default configuration.”³²⁶ In response to such restrictions, “online communities have emerged to support jailbreaking to enable a device to become interoperable with unauthorized independently created activities.”³²⁷ EFF argues that the technological restrictions on phones and tablets have an adverse effect on consumer choice and competition.³²⁸ Specifically, it notes that Apple, whose devices “refuse to run any unapproved third-party software” unless the device can identify a “special encrypted software key” associated with the software,³²⁹ has strict rules about the type of programs approved for sale through its own “App Store,” the only authorized source of iPhone and iPad applications.³³⁰

EFF alleges that although Android-based devices³³¹ are generally less restricted than Apple devices, most still employ “technological measures to block functionality and prevent the installation of certain types of software.”³³² EFF asserts that many device manufacturers “fail[] to support and upgrade the operating systems on Android smartphones to their most current versions, exposing owners to security vulnerabilities,”³³³ imposing “significant costs on application developers who cannot count on consumers running the latest version,” threatening “consumers who cannot rely on manufacturer support if a security vulnerability is discovered,” and shortening “the lifespan of the devices because owners are forced to purchase new models to avoid these risks.”³³⁴ EFF also claims that technological measures inhibit innovation by “interfering

³²⁴ *Id.*

³²⁵ *Id.*

³²⁶ *Id.* at 5. EFF explains that “firmware” is “internal software that is among the first aspects of the operating system to ‘boot-up’ when the device is powered on.” *Id.*

³²⁷ *Id.*

³²⁸ *Id.*

³²⁹ *Id.* at 6.

³³⁰ *Id.* at 5-6.

³³¹ According to EFF, Android is a “free, open-platform smartphone and tablet operating system introduced by Google and the Open Handset Alliance in 2007. . . . Today, Android is the best-selling mobile platform in the world. In October 2011, there were 190 million Android devices in use, with 32.9 million sold in the fourth quarter of 2010 alone – seven times the number sold in the fourth quarter of 2009.” *Id.* at 4 (internal citations omitted).

³³² *Id.* at 6.

³³³ *Id.* at 7.

³³⁴ *Id.*

with the ability of tablet and smartphone owners to install the third-party software that they would prefer to use,³³⁵ and by restraining competition by limiting the number of developers permitted to offer marketplace alternatives.³³⁶

d. *Argument under statutory factors*

EFF asserts that “[t]he availability of firmware for smartphones or tablets would not be adversely affected by permitting” the exemption,³³⁷ and claims that the smartphone sales have increased despite the fact that jailbreaking was exempted from the prohibition on circumvention in 2010.³³⁸ With respect to the second factor, EFF alleges that, consistent with the Register’s conclusion in 2010, “[t]here is no reason to believe that the availability of smartphone or tablet firmware for nonprofit uses will be harmed by” a jailbreaking exemption, rendering the factor neutral.³³⁹ Likewise, on the third factor, EFF believes there is no reason to believe that the proposed exemption would “curtail the availability of criticism, comment, news reporting, teaching, scholarship, or research,” and notes that “[t]o the contrary, smartphone and tablet jailbreaking have spurred both valuable commentary and important security research.”³⁴⁰ With respect to the fourth factor, EFF asserts that jailbreaking “will have no independent negative impact on the actual market for the firmware bundled with the machines,” but rather, “the proposed exemption is likely to stimulate the market for such works by providing developers with incentives to develop third party applications, thus making these devices – together with their copyrighted firmware – more attractive to consumers.”³⁴¹

Finally, beyond the four stated statutory factors, the EFF urges the Register to consider that technological measures are intended not to protect the copyrighted firmware, but, rather, to “preserve various aspects of the manufacturers’ business interests,”³⁴² asserting that the Register has previously “frowned on firmware manufacturers advancing copyright claims in their functional computer programs to support anti-competitive business practices.”³⁴³

³³⁵ *Id.* at 8.

³³⁶ *Id.*

³³⁷ *Id.* at 16.

³³⁸ *Id.*

³³⁹ *Id.* at 17.

³⁴⁰ *Id.* (describing a prominent iOS jailbreak that “has lead [sic] a vibrant discussion of, and corrections to, a security vulnerability in the process by which Safari, the iPhone’s native web browser, opens PDF files.”).

³⁴¹ *Id.* at 18.

³⁴² *Id.*

³⁴³ *Id.*

2. Opposition

Joint Creators³⁴⁴ oppose the proposal, arguing that “Congress already codified the contours of acceptable circumvention related to interoperability in [Section] 1201(f).”³⁴⁵ They also allege that because “tablet” is a term that “provides no real limitation on the scope of the proposed exemption,” the proposal fails to describe a particular class of works as required by the statute.³⁴⁶

Joint Creators further assert that technological measures help prevent piracy of copyrighted applications,³⁴⁷ and that “[w]ithout access controls that verify the legitimacy of newly installed applications, modified firmware facilitates use of infringing copies of applications.”³⁴⁸ They maintain that under the fourth statutory factor, “the relevant consideration is not limited to just the impact on the market for or value of device firmware,” but also includes “the impact on the market for or value of *all* copyrighted works utilized in connection with the firmware and the device it resides on.”³⁴⁹ They argue that the Office erred in 2010 when it concluded that a copyright owner’s “‘interests as a manufacturer and distributor of a device’ are somehow entirely separable from its interests in its copyrighted works.”³⁵⁰ They urge the Office to “thoroughly consider how circumvention that enables access to the firmware harms the overall content ecosystem that tethered devices enable copyright owners to exploit.”³⁵¹

Finally, Joint Creators allege that circumvention is not necessary to achieve proponent’s intended ends. This is because the market has provided alternatives, such as “[m]obile phones and tablets running the Android operating system [that] are available completely unlocked.”³⁵²

3. Discussion

As previously indicated, this rulemaking requires a *de novo* review of the evidence presented; “[t]he fact [that] a class was previously designated by the Librarian

³⁴⁴ The trade groups represented by Joint Creators are the Association of American Publishers, the American Society of Media Photographers, the Business Software Alliance, the Entertainment Software Association, the Motion Picture Association of America, the Picture Archive Council of America, and the Recording Industry Association of America. C12 (Joint Creators) at 1-2.

³⁴⁵ *Id.* at 19.

³⁴⁶ *Id.* at 22.

³⁴⁷ *Id.* at 21.

³⁴⁸ *Id.*

³⁴⁹ *Id.* at 20 (emphasis in original).

³⁵⁰ *Id.* at 21 (citing 2010 Recommendation at 93).

³⁵¹ *Id.* at 21.

³⁵² *Id.* at 22.

creates no presumption that redesignation is appropriate, but rather the proponent of such a class must make a *prima facie* case in each three year period.”³⁵³ Nonetheless, where, as here, the Register of Copyrights has previously developed a *legal* analysis, and there has been no pertinent change in statutory or case law – and no new persuasive arguments have been offered in the current proceeding – it is appropriate to rely upon the earlier legal analysis, provided that the evidence in the present record supports it.³⁵⁴

a. *Applicability of Section 1201(f)*

Joint Creators assert that the proposed exemption is unnecessary and beyond the scope of the rulemaking because Section 1201(f) defines “the contours of acceptable circumvention related to interoperability.”³⁵⁵ Specifically, Joint Creators assert that the proponents have not established that Section 1201(f) does not already permit the conduct in which proponents seek to engage; and, “if it were established that Congress chose not to include the conduct at issue within § 1201(f),”³⁵⁶ then proponents have failed to establish that the Librarian has the authority to upset that decision through this proceeding.

It appears that Section 1201(f) is intended to permit (1) circumvention for the purpose of identifying and analyzing elements of computer programs necessary to achieve interoperability; and (2) development of means to circumvent a technological protection measure to enable such analysis and interoperability of an independently created computer program. The Register notes that the second permitted act under Section 1201(f) provides an exemption from liability only with respect to Sections 1201(a)(2) and 1201(b). The statutory provision that is the subject of this rulemaking proceeding, Section 1201(a)(1), is not mentioned.³⁵⁷

The Register is thus confronted with an arguably ambiguous statute, the apparent purpose of which does not appear precisely to match its language. The Register could construe Section 1201(f) as covering proponents’ intended conduct, and thus decline to recommend the exemption, but a court may well disagree, subjecting a jailbreaker to potential liability. Thus, because it is unclear, at best, whether Section 1201(f) applies in this circumstance – that is, because the Register cannot determine with a reasonable degree of certainty how a court would decide the matter – the Register is compelled to proceed with an evaluation of the merits of EFF’s case.³⁵⁸

³⁵³ 2010 Recommendation at 14.

³⁵⁴ See 2006 Recommendation at 40 (finding that relying on a prior legal analysis was appropriate because “the factual posture [was] essentially the same as it was” during the prior rulemaking, and because no new arguments had been presented).

³⁵⁵ C12 (Joint Creators) at 19.

³⁵⁶ *Id.*

³⁵⁷ 17 U.S.C. § 1201(f)(2).

³⁵⁸ One might argue that Congress “occupied the field” with respect to interoperability when it enacted Section 1201(f), and that the Register cannot expand that field through this rulemaking. The Register would agree if Congress’s intent was more clear. The Register notes that, in 2000, the Copyright Office

b. *Noninfringing uses*

EFF asserts that jailbreaking for the purpose of achieving software interoperability is a fair use. Joint Creators do not directly challenge EFF's fair use analysis, but question the Copyright Office's fair use finding in the 2010 proceeding.³⁵⁹ In 2010, the Register concluded that "[a] review of the four [fair use factors] leads to the conclusion that making minor alterations in the firmware of an iPhone (or any smartphone) in order to permit independently created software applications to run on the [smartphone] is a fair use."³⁶⁰

With respect to the first fair use factor, which addresses the nature of the use, the Register in 2010 determined that although jailbreaking does not "fall within the four corners of the statutory exemption in Section 1201(f), the fact that [a smartphone owner] is engaging in jailbreaking in order to make the iPhone's firmware interoperable with an application specifically created for the [smartphone] suggests that the purpose and character of the use are favored."³⁶¹ The Register also explained that although proponents did not assert that jailbreaking was a transformative use, "a use need not be transformative in order to be a fair use."³⁶² The Register ultimately concluded that the first factor favored fair use because the person engaged in jailbreaking is doing so simply to use the firmware on the device that it was designed to operate, owned by the jailbreaker, for precisely the purpose for which it was designed.³⁶³

expressed a cautionary note about going beyond Section 1201(f). *See* 2000 Final Rule, 65 Fed. Reg. at 64,570-71. At the time, the Office was addressing reverse engineering of DVDs, a topic that bears little resemblance to the present issue. Moreover, that review of Section 1201(f) took place just two years following its enactment. Any concerns about going beyond where Congress went when it enacted the statute are now mitigated by the fact that this is the fifth triennial rulemaking, fourteen years following the enactment of the DMCA, and the Register is called upon to consider changes in the marketplace that Congress could not have foreseen – precisely the reason why Congress tasked the Office and the Library of Congress with this rulemaking.

³⁵⁹ C12 (Joint Creators) at 20 n.32.

³⁶⁰ 2010 Recommendation at 92-93.

³⁶¹ *Id.* at 93-94. In an attendant footnote, the Register explained that Section 1201(f) did not cover a smartphone owner's conduct because such an owner:

is not the person who has 'identif[ied] and analyz[ed] those elements of the program that are necessary to achieve interoperability of an independently created computer program with other programs.' *See* Section 1201(f)(1). Rather, the [smartphone] owner will be the beneficiary of that person's efforts and will be using the means provided by that person to install and run the independently created application on his or her [smartphone].

See id. (alterations to Section 1201(f)(1) in original).

³⁶² *Id.* at 95. Indeed, the Register observed that jailbreaking is "unlikely" to be considered transformative "in light of the modest modifications" made to the firmware. *Id.*

³⁶³ *Id.* at 93.

With respect to the nature of the work used, the Register observed that this second factor was “perhaps more important than usual in cases involving interoperability of computer programs.”³⁶⁴ The Office noted that the operating system is a “highly functional work[] used to operate a device,”³⁶⁵ and that the functional elements of such software – those that are modified in the course of jailbreaking – “may or may not be copyrightable.”³⁶⁶ The Register also noted that “it is customary for [firmware] to enable third party programs to interoperate with them.”³⁶⁷ The Register ultimately concluded that “the second factor decisively favors a finding of fair use.”

Regarding the third factor – which considers the amount of the work used – the Register found that although jailbreaking often requires a complete copy of the firmware to be made, the modification is *de minimis*, and the firmware is ultimately used for the very same purpose for which it was originally intended, which undermined the significance of the factor.³⁶⁸ The Register concluded that although the factor “arguably disfavor[ed] a fair use finding, the weight to be given to it under the circumstances [was] slight.”³⁶⁹

Finally, with respect to the fourth factor, which addresses market harm, the Office observed that opponents’ real concern was harm to its reputation, rather than displacement of sales of its firmware for iPhones.³⁷⁰ The Office concluded that such a concern is “not what the fourth fair use factor is intended to address.”³⁷¹

The Register next observed that three of the four factors tipped decisively in favor of fair use, concluding that:

[W]hen one “jailbreaks” a smartphone in order to make the operating system on that phone interoperable with an independently created application that has not been approved by the maker of the smartphone or the maker of the operating system, the modifications that are made purely for the purpose of such interoperability are likely to be fair uses. Case law and Congressional enactments reflect a judgment that interoperability is favored.³⁷²

³⁶⁴ *Id.* at 95.

³⁶⁵ *Id.* at 96 (citation omitted).

³⁶⁶ *Id.*

³⁶⁷ *Id.*

³⁶⁸ *Id.* at 97.

³⁶⁹ *Id.*

³⁷⁰ *Id.* at 99.

³⁷¹ *Id.* at 98.

³⁷² 2010 Recommendation at 100.

Joint Creators challenge the Register’s conclusion with respect to the first factor, asserting that “concluding that a use is ‘favored’ because it constitutes the exact opposite of a transformative use is erroneous.”³⁷³ The Register notes that the complaint misstates the 2010 finding. The Register did not conclude that the opposite of a transformative use renders the first factor favorable to a fair use finding; rather, it concluded that transformative use is not the only consideration that may cause the first factor to tip in favor of fair use.³⁷⁴ Joint Creators also assert that the Copyright Office treats operating system software as “less deserving of protection than other works.”³⁷⁵ The Office does not view operating system software as less deserving of appropriate protection, but recognizes that certain features of operating systems are “highly functional,”³⁷⁶ which is a relevant consideration in the fair use analysis.

Turning to the current proceeding, the Register notes that the factual record with respect to fair use is substantially the same as it was in 2010, and there have not been any significant developments in pertinent case law that would cause the Register to reevaluate the analytical framework applied in 2010. The purpose and character of the use is noncommercial and personal so that individual owners of smartphones may use them for the purpose for which they were intended. The nature of the copyrighted work – firmware – remains the same as it was in 2010, and it remains true that one engaged in jailbreaking need only modify the functional aspects of the firmware,³⁷⁷ which may or may not be subject to copyright protection. Those engaged in jailbreaking use only that which is necessary to engage in the activity, which is often *de minimis*,³⁷⁸ rendering the third factor potentially unfavorable, but nevertheless of minimal consequence. With respect to market harm, it is worth noting that, exemption notwithstanding, the proliferation of smartphones has increased since the last rulemaking,³⁷⁹ suggesting that the fourth factor calculus favors a fair use finding even more than it did in 2010.³⁸⁰

c. *Adverse impact*

Proponents have established that the prohibition is adversely affecting, and is likely to continue to have, an adverse impact on certain uses of mobile devices in which

³⁷³ C12 (Joint Creators) at 20.

³⁷⁴ 2010 Recommendation at 95 (“a use need not be transformative in order to be a fair use; indeed, the language of Section 107(1) does not state or imply that a use must be transformative in order to be fair.”) (citing *Campbell*, 510 U.S. at 579).

³⁷⁵ C12 (Joint Creators) at 20 n.32.

³⁷⁶ 2010 Recommendation at 96.

³⁷⁷ P5 (EFF) at 13-14.

³⁷⁸ *Id.* at 15.

³⁷⁹ P5 (EFF) at 3-4.

³⁸⁰ As in 2010, the Register cautions that “[b]ecause fair use involves a case-by-case analysis, the Register refrains from concluding that such activity will invariably constitute fair use.” 2010 Recommendation at 100 (internal citation omitted).

the firmware, a copyrightable work, is protected by technological measures.³⁸¹ The evidence in the record demonstrates that smartphones have been widely adopted and suggests that consumer acceptance of such devices will continue to increase in the future.³⁸² Moreover, the evidence presented by EFF about the success of unauthorized application sales,³⁸³ and the individual comments received with respect to this class, supports the contention that technological protection measures have an adverse effect on users and developers.

Joint Creators assert that users who want to install unauthorized applications on their smartphones and related devices do not need to circumvent, because the “marketplace for smartphone and tablet apps has matured since the last proceeding, and alternatives to circumvention now exist,”³⁸⁴ including the availability of “completely unlocked” devices running the Android operating system.³⁸⁵ The record reveals, however, that while Android is generally an open platform, its openness allows those implementing it to place certain restrictions on downstream users. As EFF explains:

Stock versions of Android allow the user to install any third-party application, even if they do not have root access to their phone. However, device manufacturers—perhaps compelled by contractual obligations with carriers—often build non-stock versions of Android that restrict users who lack root access. These restrictions can take many forms, but among them is the ability to prevent users from installing any application not obtained through a whitelisted app market. Gaining root access to the Android operating system allows a user to bypass these manufacturer-imposed restrictions.³⁸⁶

Thus, while it is fair to say that Android is an open platform for developers, and that some Android-based devices may well be “open” in some sense, the record supports a finding that a significant number of Android-based devices are “locked” in the same way that Apple’s iPhone is locked. While the development of unlocked market

³⁸¹ The existence of such technological measures is not at issue. The record supports a finding that there are a significant number of mobile devices that are protected by technological measures. As EFF describes, “[m]anufacturers typically configure a device’s firmware to prevent unauthorized applications from accessing certain functions” and such firmware is often encrypted “to prevent users from changing the default configuration.” P5 (EFF) at 5. Moreover, opponents do not contest the existence of such measures.

³⁸² P5 (EFF) at 3.

³⁸³ See, e.g., P5 (EFF) at 5 (asserting that Cydia, an online marketplace for unauthorized applications for jailbroken iPhones and iPads, reports 1.5 million visitors every day and generates \$10 million in annual revenue).

³⁸⁴ C12 (Joint Creators) at 19.

³⁸⁵ *Id.* at 22.

³⁸⁶ Letter from Marcia Hoffman, Senior Staff Attorney, Electronic Frontier Foundation, to David O. Carson, General Counsel, U.S. Copyright Office (July 2, 2012), at 3.

alternatives is promising, the record is clear that the vast majority of mobile devices sold today contain technological measures that restrict users' ability to install unauthorized applications. Perhaps in the ensuing three years, market alternatives will evolve further, and unlocked devices will become the rule rather than the exception. On the present record, the Register concludes that there remain a significant number of users that are adversely impacted by the technological measures applied to such devices.

d. *Statutory factors*

The first statutory factor requires the Register to consider the impact of the exemption on the "availability for use of copyrighted works."³⁸⁷ As the Register concluded in 2010,

[d]espite the enormous choices available to consumers, the record reveals that restrictions that do not implicate copyright interests are placed on independently created interoperable computer programs. Thus, the existing market creates legal barriers for the use of copyrighted works. An exemption would encourage the availability of additional applications for use on smartphones. At the same time, there is no reason to believe that an exemption would discourage smartphone manufacturers and those who create the operating systems for those smartphones from continuing to do so.³⁸⁸

The record clearly supports the proposition that neither smartphone manufacturers nor those who create operating systems for such phones have been adversely affected by the exemption. Since the 2010 exemption was granted, consumer adoption of smartphones has grown dramatically, and consumer choices have increased, as described previously. Moreover, the fact that neither Apple nor Google, the two dominant providers of smartphones and smartphone operating systems, objected to the proposed class during this proceeding, is strong evidence that there is unlikely to be a negative market impact.³⁸⁹

With respect to applications for use on smartphones, Joint Creators assert that jailbroken mobile devices lead to increased opportunities for piracy, arguing that "[m]yriad infringing applications are available to run on hacked devices."³⁹⁰ In support of that claim, opponents cite a handful of scattered press accounts,³⁹¹ but are "unable to

³⁸⁷ 17 U.S.C. § 1201(a)(1)(C)(i).

³⁸⁸ 2010 Recommendation at 101.

³⁸⁹ Apple did oppose the jailbreaking exemption in 2010.

³⁹⁰ C12 (Joint Creators) at 21.

³⁹¹ *Id.* n.34.

quantify” the harm.³⁹² The Register acknowledges that piracy is a significant and legitimate concern of the copyright community, but the evidence on the record demonstrates, at best, only a tenuous relationship between jailbreaking of smartphones and piracy. Further, the proposed class is limited to those executing “lawfully obtained software applications.”³⁹³ On this record – where there is no substantial showing that jailbreaking of smartphones leads to piracy – the Register believes that this qualification offers sufficient protection to copyright owners.³⁹⁴

The first factor, therefore, favors exempting the proposed class.

Neither factor two,³⁹⁵ concerning nonprofit archival, preservation, and educational purposes, nor factor three,³⁹⁶ concerning the impact on criticism, comment, and the like, is implicated by the proposed exemption. These factors are therefore neutral.

With respect to the fourth factor, the “effect of circumvention of technological measures on the market for or value of the copyrighted works,” the Register is not persuaded that the proposed exemption would adversely affect the value of the copyrighted firmware that is the class of works directly affected by the exemption. As the Copyright Office observed in 2010, “it is quite possible that the exemption could increase the market for or value of such works, since the availability of additional applications to be used on smartphones may well make them more attractive to consumers.”³⁹⁷ There is nothing on the record to suggest that the increase in smartphone proliferation will slow if the exemption is granted. Accordingly, the fourth factor favors granting the proposed exemption.

e. *Applicability to “tablets”*

After submitting its initial proposal, EFF proposed that the Register define “tablet computer,” for the purpose of this exemption, as:

- (a) a personal mobile computing device, typically featuring a

³⁹² Letter from Jesse M. Feder, Director of International Trade and Intellectual Property, Business Software Alliance to David O. Carson, General Counsel, U.S. Copyright Office (July 2, 2012), at 2.

³⁹³ Joint Creators assert that the limitation provides “hollow protection at best” because the language does not expressly prohibit infringing conduct. C12 (Joint Creators) at 21. The Register notes, however, that the regulation that implements the Librarian’s determination of appropriate exemptions has consistently recited that such exemptions apply only “to persons *who engage in noninfringing uses*” of the designated classes of works. See 37 C.F.R. § 201.40 (emphasis added). Thus, the regulatory text has traditionally made clear that parties who circumvent in order to engage in infringing conduct simply cannot avail themselves of the protections afforded by the designated exemptions.

³⁹⁴ The Register notes that the record here differs markedly from that for Proposed Class 3, in which the evidence indicates a strong correlation between circumvention of video game platforms and piracy.

³⁹⁵ 17 U.S.C. § 1201(a)(1)(C)(ii).

³⁹⁶ *Id.* at § 1201(a)(1)(C)(iii).

³⁹⁷ 2010 Recommendation at 102.

touchscreen interface,

(b) that contains hardware technically capable of running a wide variety of programs,

(c) that is designed with technological measures that restrict the installation or modification of programs on the device, and

(d) is not marketed primarily as a wireless telephone handset.³⁹⁸

Joint Creators object, asserting that the definition is “exceptionally broad” and contains a number of “vague” qualifiers that “merely highlight[] the boundless nature of the proposal.”³⁹⁹ Joint Creators further assert that the proposal “does nothing to distinguish among the myriad mobile devices offered for distinct purposes,” and questions whether it is appropriate to define a “particular class of works”⁴⁰⁰ in the context of “human interface characteristics” or for what purpose a device is marketed.⁴⁰¹

The Register appreciates the appeal of designating an exemption that applies to smartphones as well as to devices that are, in many ways, arguably larger versions of smartphones. At the same time, there is significant merit to the opposition’s concerns that the contours of this aspect of the proposed class are broad and ill defined. That is, there is a wide range of devices that might fall within the proposed, or some other, definition of “tablet,” and significant distinctions among them in terms of the way they operate, their intended purpose, and the nature of the applications they can accommodate. For example, an ebook reading device might be considered a “tablet,” as might a handheld video game device or a laptop computer. Indeed, as Joint Creators note, the definition of “personal mobile computing device” may itself be susceptible to a wide array of interpretations, each of which could be subject to its own analysis in this proceeding. At least in this case, the record does not permit the Register to conduct the appropriate analysis with respect to the various types of devices that might fall within proponents’ broadly conceived “tablet” category.

f. *NTIA comments*

NTIA notes that “the record shows substantial and unprecedented support for this exemption,”⁴⁰² pointing to the hundreds of comments received from individuals as well as the petition signed by over 25,000 individuals in support of this exemption.⁴⁰³ NTIA

³⁹⁸ E-Mail from Marcia Hoffman, Senior Staff Attorney, Electronic Frontier Foundation to Ben Golant, Assistant General Counsel, U.S. Copyright Office (June 6, 2012).

³⁹⁹ Letter from Steven J. Metalitz, Counsel for the Joint Creators to David O. Carson, General Counsel, U.S. Copyright Office (June 15, 2012) [hereinafter Joint Creators’ Letter].

⁴⁰⁰ See 17 U.S.C. § 1201(a)(1)(B).

⁴⁰¹ Joint Creators’ Letter at 2.

⁴⁰² NTIA Letter at 11.

⁴⁰³ *Id.*

notes that the record shows numerous noninfringing uses enabled by jailbreaking,⁴⁰⁴ and asserts that “the mobile application market has thrived, and continues to do so, despite – and possibly in part because of – the current exemption.”⁴⁰⁵ NTIA is further persuaded that the proposed class “should apply across platforms and devices where it is necessary to jailbreak or root devices,” including both mobile phones and tablets,⁴⁰⁶ so that the exemption will “better reflect[] today’s technology.”⁴⁰⁷ NTIA supports EFF’s proffered definition of “tablet,” noting that the definition “appropriately does not constrain the physical dimensions” of the device subject to the exemption.⁴⁰⁸

The Register and NTIA are in agreement that an appropriate exemption for smartphones is warranted but, as described above, the Register has determined that there is no current basis to extend such an exemption to include “tablets.” EFF’s proffered definition is broad and the record does not support a finding that the proposed exemption is necessary or appropriate for all of the various the devices that may fall within it.

4. Recommendation

For the reasons described above, with respect to smartphones, the proponent has satisfied its burden that technological measures applied to smartphone firmware have an adverse effect on noninfringing uses. The statutory factors also tip in favor of granting the exemption.

EFF has made a laudable effort in developing a definition that aims to capture the key characteristics of “tablets,” but the record simply does not provide a sufficient basis upon which to develop an appropriate definition for this diverse category of devices that would permit the Register to extend the proposed exemption beyond the smartphone exemption that the record supports. Perhaps in future rulemakings, as mobile computing technology evolves, such a definition will be more attainable; on this record, however, the Register must decline to recommend that the exemption include tablets.

⁴⁰⁴ *Id.* (describing various noninfringing uses).

⁴⁰⁵ *Id.* at 12.

⁴⁰⁶ *Id.* at 14.

⁴⁰⁷ *Id.*

⁴⁰⁸ *Id.*

Accordingly, in keeping with the record, the Register recommends that the Librarian designate a modified version of the proposed class that does not extend to tablets.⁴⁰⁹

Computer programs that enable wireless telephone handsets to execute lawfully obtained software applications, where circumvention is accomplished for the sole purpose of enabling interoperability of such applications with computer programs on the telephone handset.

⁴⁰⁹ At the hearing, opponents questioned the absence of the word “sole,” which appeared in the 2010 exemption (“...where circumvention is accomplished for the *sole* purpose of enabling interoperability ...”), from this rulemaking’s proposal. T Metalitz, May 17, 2012, at 96. EFF asserted that it believed “sole” and “sole purpose” had the same meaning and that it had no objection to keeping the word “sole” in the exemption language. T Hofmann, May 17, 2012, at 98. Because the record does not contain any significant discussion about the impact of the change, and because the parties appear to be in agreement, the Register’s recommendation includes the phrase “sole purpose.”

F. Proposed Class 6: Wireless telephone handsets – interoperability with alternative networks (“unlocking”)

Proponent Consumers Union (“CU”) proposes the Register recommend the following class of works:

6A: Computer programs, in the form of firmware or software, including data used by those programs, that enable mobile devices to connect to a wireless communications network, when circumvention is initiated by the owner of the device to remove a restriction that limits the device's operability to a limited number of networks, or circumvention is initiated to connect to a wireless communications network.

Proponent Youghioghenny Communications, LLC (“Youghioghenny”) proposes the Register recommend the following class of works:

6B: Computer programs, in the form of firmware or software, including data used by those programs, that enable wireless devices to connect to a wireless communications network, when circumvention is initiated by the owner of the copy of the computer program principally in order to connect to a wireless communications network and access to such communications network is authorized by the operator of such communications network.

Proponents MetroPCS Communications, Inc. (“MetroPCS”) and The Competitive Carriers Association (“RCA”) propose the Register recommend the following class of works:

6C: Computer programs, in the form of firmware or software, including data used by those programs, that enable wireless devices to connect to a wireless communications network, when circumvention is initiated by the owner of the copy of the computer program solely in order to connect to a wireless communications network and access to such communications network is authorized by the operator of such communications network.

1. Proponents' case

Proponents seek an exemption to permit circumvention to enable wireless devices to interoperate with networks other than the network on which the device was originally used.

a. *Background*

In 2006⁴¹⁰ and again in 2010⁴¹¹ the Register recommended, and the Librarian designated, a class of works that permitted the circumvention of technological protection measures applied to firmware in wireless handsets for the purpose of switching to a wireless network other than the network on which the phone was originally used.

Each of the three proposals presently before the Register seeks to expand the 2010 exemption by replacing “wireless telephone handsets” with “wireless devices,” to cover tablets and other wireless devices whose markets have evolved since the 2010 rulemaking. Because the central features of each proposal are substantially the same, the Register considers the three together.

The New America Foundation’s Open Technology Initiative (“NAF”) filed comments in support of an exemption, encouraging the Register to expand the class to include “a variety of dynamic multipurpose devices,”⁴¹² as well as to include both new and used devices.⁴¹³ NAF also urges the Register to drop the requirement that unlocked phones may be used on networks only when the user has approval of the network’s operator, arguing that some networks “want to support an open network rather than require authorization.”⁴¹⁴ Finally, NAF contends that the class should be updated to include “wireless communications networks,” as opposed to “wireless telecommunications networks,” and that unlocking does not infringe on any copyright interests.⁴¹⁵

⁴¹⁰ The 2006 class exempted “[c]omputer programs in the form of firmware that enable wireless telephone handsets to connect to a wireless telephone communication network, when circumvention is accomplished for the sole purpose of lawfully connecting to a wireless telephone communication network.” 2006 Recommendation at 42.

⁴¹¹ The 2010 class exempted “[c]omputer programs, in the form of firmware or software, that enable used wireless telephone handsets to connect to a wireless telecommunications network, when circumvention is initiated by the owner of the copy of the computer program solely in order to connect to a wireless telecommunications network and access to the network is authorized by the operator of the network.” 2010 Recommendation at 105.

⁴¹² C6 (New America Foundation) at 7.

⁴¹³ *Id.* at 8.

⁴¹⁴ *Id.* at 9.

⁴¹⁵ C6 (New America Foundation) at 9-10.

b. *Asserted noninfringing uses*

CU advances four theories of noninfringing use: (1) that the connection between a wireless device and the mobile network constitutes a “procedure, process, system, [or] method of operation” which is not entitled to copyright protection under 17 U.S.C. § 102(b);⁴¹⁶ (2) that the use of software locks to prevent customer switching constitutes copyright misuse;⁴¹⁷ (3) that the modification to the firmware is noninfringing under Section 117;⁴¹⁸ and (4) that “[r]e-flashing a handset does not change the underlying mobile phone software, but rather . . . [the] underlying variables intended by the software designer to be changed.”⁴¹⁹

Youghioghney, MetroPCS, and RCA each assert that switching networks or carriers does not implicate copyright interests at all,⁴²⁰ and even if it did, such conduct would be permitted under Section 117.⁴²¹

MetroPCS also asserts that its proposal is aimed at circumventing only that which is necessary to cause the wireless device to interoperate with other networks, not the technological measures that protect other copyrighted content on the device,⁴²² and that there are no technological impediments to implementing separate locks for network access and downloadable content.⁴²³

c. *Asserted adverse impact*

CU asserts that “there is no dispute that mobile device locks constitute technological protection measures that control access to arguably protectable works,”⁴²⁴ citing the Register’s 2010 Recommendation as support for its proposition. CU describes a variety of locking mechanisms that it asserts are used by wireless carriers to prevent consumers from switching among them.⁴²⁵ Both Youghioghney and MetroPCS, companies with significant interests in the wireless industries,⁴²⁶ assert the existence of

⁴¹⁶ P6A (CU) at 8-10.

⁴¹⁷ *Id.* at 10-13.

⁴¹⁸ *Id.* at 13 (citing the 2010 Final Rule, 75 Fed. Reg. at 43,831).

⁴¹⁹ *Id.* at 14 (citing Comment 5B (MetroPCS) in the 2008 Rulemaking and 2010 Final Rule 75 Fed. Reg. at 43,831).

⁴²⁰ P6B (Youghioghney) at 4-5; P6C (MetroPCS) at 16; P6C (RCA) at 4.

⁴²¹ P6B (Youghioghney) at 4-5; P6C (MetroPCS) at 16-17; P6C (RCA) at 4-5.

⁴²² P6B (Youghioghney) at 25.

⁴²³ *Id.* at 27.

⁴²⁴ P6A (CU) at 5.

⁴²⁵ *Id.* at 5-7 (citing the 2010 Final Rule, 75 Fed. Reg. at 43,830).

⁴²⁶ *See* P6B (Youghioghney) at 3; P6C (MetroPCS) at 7.

software locks that limit the use of phones that “are technically capable of being used to receive service on multiple compatible wireless providers’ networks.”⁴²⁷

CU alleges that if the exemption is not granted, individuals will not be permitted to unlock their old devices.⁴²⁸ They note that “huge numbers”⁴²⁹ of people have already unlocked their phones under the 2006 and 2010 exemptions, and assert that ending the exemption “will lead to higher device prices for consumers, increased electronic waste, higher costs associated with switching service providers, and more widespread mobile customer lock-in.”⁴³⁰ CU asserts that individuals would also not be able to unlock new devices that they obtain at a discount from a wireless carrier and then sell at a higher market price, so as to “recover[] the value they invest in the subsidy scheme.”⁴³¹ CU also notes that it would continue to be a violation of the anticircumvention provision to unlock tablets and other wireless devices.⁴³²

Youghioghenny asserts that software locks are impediments to a competitive marketplace.⁴³³ It notes that absent the exemption, consumers are forced to continue to do business with the carrier that sold the device to the consumer in the first instance, or to discard the device.⁴³⁴ The proposed exemption would allow carriers like Youghioghenny “let customers who want to save money continue the use of their prior devices rather than force them to buy new ones.”⁴³⁵

MetroPCS asserts that the exemption is particularly important in this rulemaking cycle because the industry is converging around new wireless communications technology, and “[c]ustomers should not be bound to a particular network in perpetuity simply to have continued use of the latest cutting edge wireless devices they acquired.”⁴³⁶ MetroPCS further asserts that although unlocked devices are available for purchase from certain carriers, those who want to use an older device are not accommodated,⁴³⁷ noting that the mere possibility that “certain carriers may unlock devices of customers who have fulfilled their contracts does not eliminate the need for the exemption.”⁴³⁸

⁴²⁷ P6B (Youghioghenny) at 3; P6C (MetroPCS) at 14-15.

⁴²⁸ P6A (CU) at 24.

⁴²⁹ *Id.* (citing a June 2011 press report that over one million unlocked iPhones are on the T-Mobile network).

⁴³⁰ *Id.* at 24.

⁴³¹ *Id.*

⁴³² *Id.* at 26.

⁴³³ P6B (Youghioghenny) at 4.

⁴³⁴ *Id.* at 5.

⁴³⁵ *Id.*

⁴³⁶ P6C (MetroPCS) at 9.

⁴³⁷ *Id.* at 19.

⁴³⁸ *Id.* (emphasis in original).

RCA, a trade association whose membership is comprised primarily of small wireless carriers, asserts that connecting a wireless device to a network does not implicate copyright law “and thus does not infringe on the rights of any copyright holder.”⁴³⁹ RCA also asserts that cell phone locks “bind wireless devices to specific carriers, not for the purpose of protecting copyrighted material, but rather to enforce their business models, and therefore significantly hinder a consumer’s freedom to choose his or her wireless provider.”⁴⁴⁰ RCA alleges that before the first exemption was designated in 2006:

“[c]hurn rates had been decreasing for a number of years,” as more and more consumers, facing the significant and escalating cost of purchasing new devices when switching wireless providers, opted to stay with their current provider. Since then, industry-wide churn rates have increased, now that consumers can unlock their wireless devices and use them on other networks.⁴⁴¹

d. *Argument under statutory factors*

CU asserts that the four statutory factors weigh in favor of the exemption.⁴⁴² Specifically, it contends that the availability for use of copyrighted works will be enhanced because “[a]lthough unlocked mobile devices are widely sold, the benefits of an unlocked device are not available to the vast majority of current device owners.”⁴⁴³ CU also asserts that the availability for use of works for nonprofit, archival, preservation, and educational purposes will be advanced because of the significant amount of web-based software and the number of educational applications available for the Android platform.⁴⁴⁴ CU contends that the third factor, concerning the impact on criticism and commentary, is neutral, and that the fourth factor, which evaluates the market for copyrighted works, favors granting the exemption because “the programs that facilitate communications connectivity are typically developed by device manufacturers, then purchased or licensed by carriers.”⁴⁴⁵ CU adds that “[c]ircumvention of device locks will not significantly affect the market for these programs.”⁴⁴⁶

⁴³⁹ P6C (RCA) at 4.

⁴⁴⁰ *Id.* at 5.

⁴⁴¹ *Id.* at 6 (quoting *Fifteenth FCC Wireless Competition Report* ¶¶ 261-62) (internal citations omitted) (alterations in original)).

⁴⁴² P6A (CU) at 14.

⁴⁴³ *Id.* at 15.

⁴⁴⁴ *Id.*

⁴⁴⁵ *Id.* at 17.

⁴⁴⁶ *Id.*

CU also encourages the Librarian and the Register to consider the consumer impact of the wireless carriers' subsidy-based business models that lock customers into long contracts,⁴⁴⁷ unfairly penalize low-income consumers,⁴⁴⁸ and prevent consumers from recovering the value of their investments.⁴⁴⁹ CU asserts that mobile locks harm the environment because old phones are easier to throw out than to use on another carrier's network,⁴⁵⁰ and they allege that device portability would encourage market innovation and bring cheaper products to market⁴⁵¹ and foster competition among wireless carriers.⁴⁵²

MetroPCS offers a similar analysis of the statutory factors, asserting with respect to the first factor, that absent the proposed exemption, "a high percentage of wireless customers are being restricted from full and fair use of their lawfully acquired wireless devices and lawfully licensed copyrighted works after fulfillment of their initial carrier contract terms."⁴⁵³ The exemption is necessary, says MetroPCS, so that the "operating system . . . and all copyrighted works which are licensed without regard to the serving carrier" are "available for use by the customers" that own the device.⁴⁵⁴

With respect to the second and third factors, MetroPCS asserts that it is not aware of any harm resulting from the 2006 and 2010 exemptions.⁴⁵⁵

On the fourth factor, MetroPCS argues that enabling a customer to switch carriers "has little or no effect" on the market for device firmware or for devices themselves, and posits that such activity might actually increase the value of devices, and thus the firmware embedded in them.⁴⁵⁶

2. Opposition

CTIA—The Wireless Association ("CTIA"), a trade association comprised of various commercial wireless service providers, objects to the proposals, as drafted, but notes that its members do not object to a "narrowly tailored and carefully limited exception" to permit individual customers of wireless carriers to unlock phones for the

⁴⁴⁷ *Id.*

⁴⁴⁸ *Id.* at 19.

⁴⁴⁹ *Id.* at 21.

⁴⁵⁰ *Id.* at 22. MetroPCS also advances an environmental argument. *See* C6C (MetroPCS) at 28.

⁴⁵¹ *Id.* at 23.

⁴⁵² *Id.*

⁴⁵³ P6C (MetroPCS) at 11.

⁴⁵⁴ *Id.*

⁴⁵⁵ *Id.* at 12.

⁴⁵⁶ *Id.*

purpose of switching networks.⁴⁵⁷ Specifically, CTIA supports an exemption that is “no broader than”:

Computer programs, in the form of firmware or software, that enable used wireless telephone handsets to connect to a wireless telecommunications network, when circumvention is *undertaken by an individual customer of a wireless service provider who owns* ~~initiated by the owner of the~~ copy of the computer program solely *for noncommercial purposes* in order to connect to a wireless telecommunications network *other than that of the service provider* and access to the network is authorized by the operator of the network.⁴⁵⁸

CTIA asserts that the practice of locking cell phones is an essential part of the wireless industry’s predominant business model, which involves subsidizing the cost of wireless handsets “in exchange for a commitment from the customer that the phone will be used on that carrier’s service (and/or that it will not be used elsewhere), so that the subsidy can eventually be recouped through payment of recurring and usage charges.”⁴⁵⁹ CITA alleges that the industry has been challenged by “large scale phone trafficking operations” that buy large quantities of pre-paid phones, unlock them, and resell them in foreign markets where carriers do not subsidize handsets.⁴⁶⁰ Those engaged in bulk unlocking, says CTIA, profit by “stealing the subsidies that carriers intended to benefit consumers.”⁴⁶¹

CTIA also alleges that the proposed exemptions are not necessary because “the largest nationwide carriers . . . have liberal, publicly available unlocking policies,”⁴⁶² and because “[u]nlocked (unsubsidized) phones are freely available from third party providers – many at low prices.”⁴⁶³

Broadly, CTIA also argues that the proponents have failed to meet their burden,⁴⁶⁴ and that the Librarian and the Register improperly failed to apply the burden during the 2010 rulemaking.⁴⁶⁵ CTIA also asserts proponents’ claim that unlocking phones is protected under Section 117 is flawed because the owners of cell phones are not owners

⁴⁵⁷ C2 (CTIA) at 2.

⁴⁵⁸ *Id.* at 64 (alterations in original).

⁴⁵⁹ *Id.* at 6.

⁴⁶⁰ *Id.*

⁴⁶¹ *Id.* at 7.

⁴⁶² *Id.* at 8-9 (describing unlocking policies for T-Mobile, Verizon Wireless, AT&T, and Virgin Mobile).

⁴⁶³ *Id.* at 5 (citing various lists of unlocked cell phones available in the marketplace).

⁴⁶⁴ *Id.* at 17-23.

⁴⁶⁵ *Id.* at 24-26.

of the software on those phones,⁴⁶⁶ that unlocking is not an “essential step” to operating the phone,⁴⁶⁷ that the proponents have failed to properly address – or have misapplied – the statutory factors,⁴⁶⁸ and that there are alternatives to circumvention that achieve the proponents’ intended objectives.⁴⁶⁹

Joint Creators⁴⁷⁰ take no position on the proposals, but encourage the Register closely to consider the state of the record with respect to the proponents’ proposed expansion of the current exemption.⁴⁷¹

3. Discussion

The Register is compelled to note that the record developed by the proponents is lacking and they improperly rely on the Copyright Office’s 2010 Recommendation as evidence for many of their factual assertions. Merely citing to conclusions drawn by the Register in past rulemakings does not itself create a factual record for purposes of a current rulemaking. As the Register has noted many times in the past, the record must be developed and reviewed *de novo* in each proceeding; a proponent is required to present a *prima facie* case, based on current evidence, that it is entitled to the proposed exemption.⁴⁷²

RCA encourages the Register and the Librarian to “adopt a presumption that the unlocking exemption remains valid beyond the traditional three year period,” asserting that the three-year limitation is “nowhere to be found in Section 1201.”⁴⁷³ RCA is correct that the requirement does not exist in the statute itself; rather, it appears in the legislative history, which states unambiguously that “the assessment of adverse impacts on particular categories of works is to be determined *de novo*” in each triennial rulemaking proceeding.⁴⁷⁴ Accordingly, the Register has consistently applied such a standard in evaluating proposed exemptions under Section 1201.

⁴⁶⁶ *Id.* at 35-37.

⁴⁶⁷ *Id.* at 37-38.

⁴⁶⁸ *Id.* at 38-42.

⁴⁶⁹ *Id.* at 42-45.

⁴⁷⁰ The trade groups represented by Joint Creators are the Association of American Publishers, the American Society of Media Photographers, the Business Software Alliance, the Entertainment Software Association, the Motion Picture Association of America, the Picture Archive Council of America, and the Recording Industry Association of America. C12 (Joint Creators) at 1-2.

⁴⁷¹ *Id.* at 32-33.

⁴⁷² See 2010 Final Rule, 75 Fed. Reg. at 43,8236 (“Proposed classes are reviewed *de novo*. The existence of a previously designated class creates no presumption or consideration of a new class, but rather the proponent of such a class of works must make a *prima facie* case in each three-year period.”); 2006 Final Rule, 71 Fed. Reg. at 68,478 (“[P]roponents of renewal of an existing exemption must make their case *de novo* . . .”); 2003 Final Rule, 68 Fed. Reg. at 62,013 (“Although a similar class was exempted in the first rulemaking, proponents are required to make their case anew every three years.”).

⁴⁷³ P6C (RCA) at 7.

⁴⁷⁴ H.R. REP. NO. 105-551, pt. 2, at 37 (1998).

a. *Noninfringing uses*

Proponents assert that the owners of mobile phones are also the owners of the copies of the computer programs on those phones and that, as owners, they are entitled to exercise their rights under Section 117,⁴⁷⁵ which gives the owner of a copy of a computer program the privilege to make or authorize the making of another copy or adaptation of that computer program under certain circumstances, such as to permit the program to be used on a particular machine.⁴⁷⁶ CTIA asserts that the Section 117 privileges do not apply because owners of wireless devices do not necessarily own the software on those devices, and that proponents have “presented no evidence that the present-day customer agreements vest ownership of the copies of copyright-protected software in the owner of a wireless phone.”⁴⁷⁷ Indeed, CTIA asserts that most wireless carriers’ agreements “confirm that the software is licensed – not sold – to the owner of the phone.”⁴⁷⁸ CTIA also argues that the privilege does not extend to the customer’s conduct because the making of a new copy or adaptation in order to use the mobile phone on a network other than the original network is not an “essential step” in the operation of a locked phone.⁴⁷⁹

The Register confronted similar arguments in the 2010 proceeding.⁴⁸⁰ In 2010, the Office reviewed relevant case law governing the determination of who “owns” a copy of a computer program for purposes of Section 117 when a license or agreement imposes restrictions on the use of the computer program, concluding that the state of the law was unclear.⁴⁸¹ The Office nevertheless determined that the proponents had made a *prima facie* case that mobile phone owners are the owners of the copies,⁴⁸² and that the opponents had rebutted that evidence only as it related to certain carriers for which customer agreements were entered into the record.⁴⁸³ The Register concluded that “[t]he record therefore leads to the conclusion that a substantial portion of mobile phone owners also own the copies of the software on their phones.”⁴⁸⁴

The Register also concluded that making RAM copies of the software in order to operate the wireless handset – even if on another network – is noninfringing under

⁴⁷⁵ P6A (CU) at 13; P6B (Youghioghney) at 5; P6C (MetroPCS) at 16-17; P6C (RCA) at 4-5.

⁴⁷⁶ See 17 U.S.C. § 117.

⁴⁷⁷ C2 (CTIA) at 35.

⁴⁷⁸ *Id.* at 36-37 (emphasis in original) (citing pertinent portions of customer agreements for AT&T, T-Mobile, Verizon Wireless, and Sprint).

⁴⁷⁹ *Id.* at 37-38 (quoting 17 U.S.C. § 117(a)(1)).

⁴⁸⁰ See generally 2010 Recommendation at 105-74.

⁴⁸¹ 2010 Recommendation at 132.

⁴⁸² *Id.* at 132.

⁴⁸³ *Id.* (“With respect to iPhones and with respect to phones sold by Virgin Mobile and T-Mobile, opponents of the proposed class have arguably rebutted [proponents’] case.”).

⁴⁸⁴ 2010 Final Rule, 75 Fed. Reg. at 43,831.

Section 117 because the statute “unambiguously states that it is not an infringement for the owner of a copy of a computer program to make a copy when the making of that copy is an essential step in the utilization of that software in conjunction with the machine.”⁴⁸⁵ The Office found that because “the software cannot be used in the phone (a device that, for purposes of Section 117, qualified as a ‘machine’) unless the RAM copies are made, the making of those copies clearly is an essential step in its utilization.”⁴⁸⁶

Finally, the Register recognized that making modifications within the computer program embedded in the phone to operate on another wireless carrier’s network would in some cases not even implicate Section 117 “because the elimination and insertion of codes or digits, or completely reflashing a phone, cannot be considered an infringement of the computer program controlling the device.”⁴⁸⁷ In other cases, where more substantial changes were required, the Register determined that although such changes could implicate the right to create derivative works, they might be privileged under Section 117. This provision permits the making of “a new copy or adaptation” that is created as an essential step in the utilization of the computer program in conjunction with a machine.⁴⁸⁸

CTIA criticized the Register’s conclusions with respect to Section 117, alleging that the Copyright Office “improperly shifted the burden of proof” when it concluded that proponents had made a *prima facie* case that mobile phone owners owned the software on those phones, while also “acknowledg[ing] that the agreements and evidence that were submitted supported the conclusion that owners of the phones were not owners of the software on those phones.”⁴⁸⁹ CTIA further asserts that the Librarian erred when he:

faulted the wireless network opponents for the state of the evidentiary record, stating that “they have not presented evidence that this [phone owners’ lack of software ownership] is always the case” and that “[t]he record therefore leads to the conclusion that a substantial portion of mobile phone owners also own the copies of the software on their phones.”⁴⁹⁰

⁴⁸⁵ 2010 Recommendation at 133.

⁴⁸⁶ *Id.* at 133-34 (citing the Report of the National Commission on New Technological Uses of Copyrighted Works at 13).

⁴⁸⁷ 2010 Final Rule, 75 Fed. Reg. at 43,831 (“When specific codes or digits are altered to identify the new network to which the phone will connect, those minor alterations of data also do not implicate any of the exclusive rights of copyright owners. And complete reflashing does not even constitute circumvention of an access control because it actually deletes the copy of the entire work that had been protected by the access control, thereby permanently denying access to that work.”).

⁴⁸⁸ *Id.*

⁴⁸⁹ C2 (CTIA) at 25 (emphasis in original).

⁴⁹⁰ *Id.* at 26 (emphasis and alterations in original).

CTIA mischaracterizes the Register's 2010 findings. It is true that the Office determined that proponents had made a *prima facie* case that owners of mobile phones owned the software on their phones, but it also determined that opponents had "arguably rebutted that case" *only* "with respect to those phones sold by Virgin Mobile and T-Mobile."⁴⁹¹

Further, the Register found that:

[I]t is impossible to conclude from the record in this proceeding that proponents' case with respect to ownership has been rebutted with respect to any other particular carrier. In other words, the Register cannot conclude that in all cases, or even in most cases, the wireless carrier retains ownership of the copies of the software that are fixed in the phones that they sell.⁴⁹²

Thus, it is not that the Register reversed the evidentiary burden as CTIA contends, but rather, that the Register reviewed the evidence on the record before her and concluded that proponents had established a *prima facie* case that mobile phone owners also own the software on those phones. Opponents were free to rebut that case, and they did so, but only as to certain wireless carriers. The record thus reflected, as the Register explained, that "a substantial portion of mobile phone owners also own the copies of the software on their phones."⁴⁹³ That conclusion was entirely consistent with the record as well as the procedural parameters of this rulemaking.

With respect to the determination of software "ownership," the Register observed that "given the uncertain state of the law ... it is difficult to predict with confidence whether a court would conclude who is the owner of the copy of the software on [a] phone."⁴⁹⁴ Then, the parties relied primarily upon *Krause v. Titleserv, Inc.*⁴⁹⁵ as the leading authority regarding ownership of computer programs.⁴⁹⁶ Since the Register rendered her 2010 Recommendation, the case law has evolved. In 2010, the Ninth Circuit issued its decision in *Vernor v. Autodesk, Inc.*,⁴⁹⁷ holding that "a software user is a licensee rather than an owner of a copy where the copyright owner (1) specifies that the user is granted a license; (2) significantly restricts the user's ability to transfer the software; and (3) imposes notable use restrictions."⁴⁹⁸

⁴⁹¹ 2010 Recommendation at 132.

⁴⁹² *Id.* at 132-33.

⁴⁹³ *Id.* at 133.

⁴⁹⁴ *Id.* at 132.

⁴⁹⁵ 402 F.3d 119 (2d Cir. 2005).

⁴⁹⁶ 2010 Recommendation at 124.

⁴⁹⁷ 621 F.3d 1102 (9th Cir. 2010).

⁴⁹⁸ *Id.* at 1111. *Vernor*'s factors differ from the factors set forth in *Krause*, the case relied upon by the parties in the Office's last rulemaking proceeding. Unlike *Vernor*, the Second Circuit in *Krause* looked at:

Proponents have made only a cursory attempt at responding to *Vernor*. Indeed, “despite the recognized importance of the underlying agreements pursuant to which the software is distributed, not one proponent has cited to any agreement by any carrier that sells copies of its software.”⁴⁹⁹ CTIA, in contrast, cites to agreements from several major national wireless carriers in an effort to “confirm that the software on the mobile handsets is licensed – not sold – to the owner of the phone.”⁵⁰⁰ In its reply comments, MetroPCS asserts that wireless carrier agreements likely fail to establish lack of customer ownership under *Vernor* because wireless providers do not impose notable use restrictions.⁵⁰¹ Specifically, it contends that “to MetroPCS’ knowledge, no wireless provider has taken the position that customers are unable to sell devices that they no longer use, or transfer them to a spouse, child or friend.”⁵⁰²

The Register concludes that the state of the law remains unclear. Although *Vernor* and *Krause* are useful guideposts in considering the status of software ownership, they are controlling precedent in only two circuits and are inconsistent in their approach; whether and how those standards would be applied in other circuits is unknown. Moreover, although CTIA contends that the four agreements in the record unequivocally support a finding that the software is merely licensed to, rather than owned by, the user,⁵⁰³ in reviewing those agreements, the Register believes that the question may be a closer call.⁵⁰⁴

Thus, the Register concludes that although proponents have failed to present any evidence in support of ownership, the lack of certainty in the law makes it impossible for proponents to have established their case in any event. Put differently, even if proponents had submitted agreements to support a claim that wireless handset software is owned rather than licensed, the uncertain state of the law would still preclude the Register from

(1) whether substantial consideration was paid for the copy; (2) whether the copy was created for the sole benefit of the purchaser; (3) whether the copy was customized to serve the purchaser’s use; (4) whether the copy was stored on property owned by the purchaser; (5) whether the creator reserved the right to repossess the copy; (6) whether the creator agreed that the purchaser had the right to possess and use the programs forever regardless of whether the relationship between the parties terminated; and (7) whether the purchaser was free to discard or destroy the copy anytime it wished. *Krause*, 402 F.3d at 124.

⁴⁹⁹ T Joseph, May 31, 2012, at 49.

⁵⁰⁰ C2 (CTIA) at 36 (citing pertinent portions of agreements from AT&T, Sprint, T-Mobile, and Verizon Wireless).

⁵⁰¹ See R6 (MetroPCS) at 16-17.

⁵⁰² *Id.* at 17.

⁵⁰³ C2 (CTIA) at 35-37.

⁵⁰⁴ For example, the Verizon Wireless agreement cited by CTIA for this purpose does not appear to contain any transfer or use restrictions, although it does specify that the agreement is a license and not an ownership transfer. See C2 (CTIA) at 36-37. Similarly, although the Sprint agreement specifies a license, and contains transfer restrictions, it is unclear, at best, whether the agreement contains use restrictions. See *id.* at 37. It is worth noting that none of the agreements cited appear to contain restrictions as stringent as those in *Vernor*. See 621 F.3d at 1104-05 (describing activation codes and license tracking); *id.* at 1105 (describing “required destruction of copies of previous versions” of the software).

developing conclusions sufficient to permit determination of the software ownership issue. In view of the legal uncertainty, the record compels a finding that some subset of wireless customers – that is, anyone considered to own the software on their phones under applicable precedent – is entitled to exercise the Section 117 privilege.

CTIA also contends that because unlocking a wireless phone is not an “essential step” in the operation of that phone, Section 117 is inapposite.⁵⁰⁵ CTIA criticizes the Register’s reliance on *Krause* in the 2010 rulemaking, noting that in that case, the software at issue “was a custom ordered program created for a particular user who changed computer systems,” which is “significantly different than standardized phone software sold and purchased for use on a specific network.”⁵⁰⁶ The Register disagrees, and concludes again that

[m]odifications to the firmware or software on the phone may be necessary to make the device functional with another service and better serve the legitimate needs of the consumer. From a copyright perspective, these individual changes benefit the purchaser despite the fact that some wireless carriers would like to have complete control over the device by restricting its use to their service. But this was precisely the concern that was expressed in many parts of the CONTU Report – that protection for computer programs had the capacity to lead to anti-competitive practices and that the use of copyright in computer programs was a means to that anti-competitive end.⁵⁰⁷

b. *Adverse impact*

It is undisputed that certain wireless devices are “locked” to a particular carrier’s network and that such locks are embedded in software protected by technological measures.⁵⁰⁸

Although proponents provide broad, generalized assertions of the harm that will ensue to consumers and small wireless carriers in the event that the exemption does not continue, none provide evidence of the “distinct, verifiable and measurable impacts” that are required to satisfy the proponents’ burden of proof.⁵⁰⁹ For example, MetroPCS

⁵⁰⁵ C2 (CTIA) at 37-38.

⁵⁰⁶ *Id.* at 38.

⁵⁰⁷ 2010 Recommendation at 137 (citing CONTU Report at 23).

⁵⁰⁸ See generally P6A (CU) at 5-7 (discussing various types of carrier locking mechanisms); P6B (Youghiogheny) at 3 n.1 (describing locking mechanisms); C2 (CTIA) at 4-10, 61-62 (discussing wireless industry business models and the role of carrier locking mechanisms).

⁵⁰⁹ 2010 Recommendation at 10 (“The required showing of ‘substantial’ adverse effect is drawn from the legislative history, where the requirement is variously stated as substantial adverse impact, distinct, verifiable, and measurable impacts, and ‘more than de minimis’ impacts.’ Similarly, for proof of “likely”

asserts that “[a]s a general matter, the behavior of the nationwide carriers – which have had the most aggressive device locking policies – has not improved since the current exemption was approved,”⁵¹⁰ but provides only scattered anecdotal evidence to support the claim.

Similarly, Youghioghenny asserts simply that, without the exemption, a device owner who seeks to switch carriers would either be unable to do so, or would be forced to discard the device because it remains tethered to the carrier that the owner no longer wishes to use.⁵¹¹ “The resulting harm is substantial,” says Youghioghenny, “not only through forced termination of the non-infringing activity, but also in presenting substantial risks and uncertainties for smaller carriers like Youghioghenny that let customers who want to save money continue use of their prior device rather than force them to buy new ones.”⁵¹²

Likewise, CU asserts, in extremely broad terms, that the adverse effects are simply that “it will become illegal under the DMCA for mobile device owners to unlock their own used devices,”⁵¹³ and that, as to new devices, “some consumers who unlock new phones to sell them may actually be committing crimes.”⁵¹⁴ In support of its claim, CU cites to the prior rulemaking, portions of the DMCA, and a small handful of press accounts about the popularity of unlocking.⁵¹⁵

RCA asserts:

Unlocking is particularly important for rural and regional carriers that lack the scope and scale to gain access to the latest, most iconic devices directly from the equipment manufacturer which, in turn, prevents rural customers from accessing the latest devices. Conversely, a failure to extend the exemption would have a substantial “adverse effect on noninfringing uses” of wireless devices and their associated firmware, software, and data.⁵¹⁶

CTIA argues that the proposed exemption is unnecessary because the market already provides a variety of wireless devices, some subsidized and locked to a particular

adverse effects on noninfringing uses, the Register found that a proponent must prove by a preponderance of 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.”) (citations omitted).

⁵¹⁰ P6C (MetroPCS) at 2.

⁵¹¹ P6B (Youghioghenny) at 5.

⁵¹² *Id.*

⁵¹³ P6A (CU) at 24.

⁵¹⁴ *Id.* at 25.

⁵¹⁵ *Id.*

⁵¹⁶ P6C (RCA) at 3 (citing 2010 Final Rule, 75 Fed. Reg. at 43,830).

carrier, others unlocked, but available at a higher cost.⁵¹⁷ In support of its claim, it provides links to a number of retailers that offer unlocked wireless phones,⁵¹⁸ and provides lists of over one hundred unlocked devices available through major national retailers such as Best Buy, Wal-Mart, and Radio Shack.⁵¹⁹ Moreover, CTIA asserts that “[w]ireless carriers are willing to unlock handsets in a wide variety of circumstances,”⁵²⁰ in support of which it cites to unlocking policies for several major national cell phone carriers.⁵²¹

Although proponents acknowledge that unlocked mobile devices are widely available for purchase,⁵²² they contend that an exemption is still necessary because some devices sold by carriers are permanently locked, and because a number of the unlocking policies contain restrictions and limitations, or such policies do not apply to all devices available from the carrier.⁵²³

Thus, say proponents, “the benefits of an unlocked device are not available to the vast majority of current device owners.”⁵²⁴ As MetroPCS argues, “[w]hile some unlocked wireless devices may be available for purchase, this prospect does not address the needs of the individual consumer who already has purchased a wireless device,”⁵²⁵ and that, as in 2010, “[t]here are still legacy phones . . . that are locked and cannot be used on an alternative wireless network.”⁵²⁶ RCA notes that a recent Federal Communications Commission study found that “the cost of purchasing a new device represents a significant deterrent to consumers wishing to switch wireless providers.”⁵²⁷

The Register concludes that the record before her supports a finding that, with respect to new wireless handsets, there are ample alternatives to circumvention – that is, the marketplace has evolved such that there is now a wide array of unlocked phone options available to consumers. While it is true that not *every* wireless device is available unlocked, and it is true that wireless carriers’ unlocking policies are not free from all restrictions and sometimes require that certain procedural requirements be met, the record

⁵¹⁷ C2 (CTIA) at 4-5.

⁵¹⁸ *Id.* at 5.

⁵¹⁹ *Id.* at Ex. A (listing unlocked phone models available through carriers or national retailers); *id.* at Ex. B (showing market prices for unlocked phones available on prepaid plans through national retailers).

⁵²⁰ *Id.* at 8.

⁵²¹ *Id.* at 8-9 (summarizing unlocking policies for T-Mobile, Verizon Wireless, AT&T, and Virgin Mobile, which CTIA asserts constitute “the vast majority of the cell phone market”).

⁵²² P6A (CU) at 15.

⁵²³ *See* R8 (CU) at 9-10.

⁵²⁴ P6A (CU) at 15.

⁵²⁵ P6C (MetroPCS) at 19.

⁵²⁶ P6C (MetroPCS) at 2-3 (quoting 2010 Recommendation at 154).

⁵²⁷ P6C (RCA) at 5 (citing Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993; Annual Report and Analysis of Competitive Market Conditions with Respect to Mobile Wireless, Including Commercial Mobile Services, Fifteenth Report, 26 FCC Rcd. 9664 ¶¶ 254-55 (2011)).

clearly demonstrates that there is a wide range of alternatives from which consumers may choose in order to obtain an unlocked wireless phone. On this record, the Register concludes that with respect to newly purchased phones, proponents have not satisfied the burden of showing adverse effects related to a technological protection measure.

With respect to “legacy” phones, however – that is, used (or perhaps unused) phones previously purchased or otherwise acquired by a consumer – the record supports a different finding. The record demonstrates that there is significant consumer interest and demand in using legacy phones on carriers other than the one that originally sold the phone to the consumer. The record also supports a finding that owners of legacy phones – particularly phones that have not been used on any wireless network for some period of time – may have difficulty obtaining unlocking codes from wireless carriers.

The Register observes that CTIA cites to various wireless carrier agreements as the basis for its position that unlocking codes are readily available in most circumstances.⁵²⁸ Because such agreements are typically in effect only during the period of time that a handset owner is actually a customer of the service, it calls into question how a user of a legacy phone that has not been used on its original carrier’s network for some time might obtain such a code.⁵²⁹ Moreover, wireless carrier agreements frequently change,⁵³⁰ and though the record reflects that *current* agreements with certain carriers explicitly permit unlocking under certain circumstances, and when certain reasonable administrative burdens have been met, it is uncertain whether this will remain true in the future, or whether prior iterations of the agreement, under which legacy phones may have been sold, contain those same provisions.

⁵²⁸ See C2 (CTIA) at 8-9.

⁵²⁹ See T Desai, May 31, 2012, at 25:

AT&T and T-Mobile will help some of their customers unlock their devices to their networks, but only if the unlocking is requested by an individual who is a current, or at least a past, customer of the company. This means that in the case of a customer who receives a used device free or at low cost that is – that is locked to another carrier . . . as far as we can tell, it is not possible to get the carrier to which the device is locked to provide the unlocking service.

Of the four agreements cited by CTIA, two explicitly refer to former customers (AT&T and T-Mobile), and one supplies the unlocking code in the agreement itself (Verizon). See C2 (CTIA) at 8-9. The Register notes that these agreements represent only a portion of the wireless industry and that it remains unclear whether other wireless carriers have similar provisions in their agreements. Put differently, notwithstanding the additional clarity that these three agreements provide with respect to their respective carriers, there remain a significant number of wireless handset users for whom unlocking policies are, at best, unclear.

⁵³⁰ See, e.g., Verizon Wireless Customer Agreement, www.verizonwireless.com/customer-agreement.shtml (last visited Oct. 9, 2012 at 11:00 am) (“We may change prices or any other term of your Service or this agreement at any time, but we’ll provide notice first, including written notice if you have Postpay Service. If you use your Service after the change takes effect, that means you’re accepting the change.”); AT&T Wireless Customer Agreement § 1.3, www.wireless.att.com/learn/articles-resources/wireless-terms.jsp (last visited Oct. 9, 2012 at 11:00 am) (“We may change any terms, conditions, rates, fees, expenses, or charges regarding your Services at any time.”).

c. *Statutory factors*

Proponents' comments provide little useful guidance on the statutory factors. Indeed, two of the proponents fully fail to address them at all.⁵³¹

The first factor requires a consideration of the impact of the prohibition on the availability for use of copyrighted works. CU asserts that “the benefits of an unlocked device are not available to the vast majority of current device owners,”⁵³² while MetroPCS contends that “wireless device locking makes [wireless handsets] less useful for customers and limits their legitimate ability to receive copyrighted works.”⁵³³

None of the proponents addresses the most relevant inquiry for this factor, which the Register has interpreted to include whether the availability of the work in a protected format enhances or inhibits public use of the work, whether the protected work is available in other formats, and, if so, whether such formats are sufficient to accommodate noninfringing uses. Notwithstanding the dearth of analysis supplied by proponents, the Register will proceed to evaluate the first factor.

The work, for purposes of this analysis, is the copyrightable firmware or locked legacy phones protected by the access control that proponents seek to circumvent. There is no indication that mobile handset firmware is sold in any way other than with the handset for which it is developed, and no indication that there are alternative “formats” available that would not require circumvention – that is, there is no evidence that users of locked legacy phones can simply install an alternative operating system that does not include carrier locks. Accordingly, the first factor favors an exemption.

Neither factor two nor three is implicated by the proposed class. These factors are therefore neutral.

The fourth factor requires the Register to consider the impact of circumvention on the market for or value of the copyrighted works. Again, proponents offered virtually no assistance on this factor, supplying little more than unsubstantiated assertions and citations to the Register's prior findings. Proponents assert that “carriers will continue to market new devices to consumers, and will continue to pay manufacturers for the rights to accompanying firmware and software.”⁵³⁴ For its part, CTIA contends that “there is reason to believe that such marketing and concomitant development of copyrighted operating software and firmware would, in fact, *decrease*, thereby lowering the market value of that software and firmware, because unauthorized unlocking would lower the

⁵³¹ See P2B (Youghioghny); P2C (RCA).

⁵³² P2A (CU) at 15.

⁵³³ P2C (MetroPCS) at 11 (footnote omitted).

⁵³⁴ P6A (CU) at 17.

incentive of creators to invest in innovation and create future works.”⁵³⁵ Neither provides specific evidence to support its respective claims.

A review of the total record, however, supports a finding that the market for software at issue – firmware sold with mobile handsets for the purpose of allowing the handset to operate – is unlikely to be affected by enabling consumers to alter that software for the purpose of using the handset on another carrier. There is nothing in the record to suggest that the market for firmware has declined in the six years following the first granting of an unlocking exemption; to the contrary, CTIA has noted that the market has evolved significantly in recent years, leading to “a myriad of choices in which to obtain a handset and initiate service.”⁵³⁶ The fourth factor therefore favors an exemption.

d. NTIA comments

NTIA asserts that the exemption is warranted despite the increasing availability of unlocked phones in the marketplace, and the trend toward wireless carriers’ unlocking of phones in certain circumstances.⁵³⁷ It asserts that the unlocking policies of most wireless carriers are not reasonable alternatives to circumvention because many such policies apply only to current customers or subscribers,⁵³⁸ because some carriers will refuse to unlock certain devices,⁵³⁹ and because unlocking policies are often contingent upon the carrier’s ability to obtain the necessary code.⁵⁴⁰ Further, “NTIA does not support the notion that it is an appropriate alternative for a current device owner to be required to purchase another device to switch carriers.”⁵⁴¹

NTIA also supports the proponents’ requests to include wireless devices other than handsets, and the expansion of the class to include “data used by” wireless handset software or firmware.⁵⁴² Finally, NTIA suggests that the Register recommend a class that permits circumvention for the purpose of connecting a wireless device to a “wireless network that offers telecommunications and/or information services,”⁵⁴³ to “capture[] the essence of what the proponents are seeking and reflect[] the current state of the wireless industry.”⁵⁴⁴

⁵³⁵ C2 (CTIA) at 41 (emphasis in original).

⁵³⁶ *Id.* at 4.

⁵³⁷ NTIA Letter at 14-15.

⁵³⁸ *Id.* at 16.

⁵³⁹ *Id.* (citations omitted).

⁵⁴⁰ *Id.*

⁵⁴¹ *Id.* at 17 (citation omitted).

⁵⁴² *Id.* at 18-19.

⁵⁴³ *Id.* at 18.

⁵⁴⁴ *Id.* at 20.

The Register and NTIA are in agreement that as to phones that consumers have already acquired from a carrier, or previously acquired phones that consumers obtain on a secondary market, an appropriate exemption is warranted. As discussed above, however, the Register finds that there is a wide variety of new unlocked phones available on the market that constitute reasonable alternatives to jailbreaking. Further, the Register finds that the record does not support the additional changes to language that the proponents seek due to a lack of evidentiary support.

4. Recommendation

The record supports a finding that proponents have met their burden of establishing that the technological measures applied to mobile handset firmware have an adverse effect on a noninfringing use of that firmware in some cases, namely, when the user owns the firmware on a legacy phone. However, the broad contours of proponents' proposed exemption are not supported by the evidentiary record. Accordingly, the Register must decline classes 6A, 6B, and 6C as proposed.⁵⁴⁵

In keeping with the Register's findings based on the limited record before her, the Register recommends that the Librarian designate the below-described class, which is a narrower, "lesser included class" of those that were proposed. The marketplace has evolved such that consumers now have access to a variety of unlocked phones. But consumers may not be able to unlock legacy phones without circumvention and carriers are unwilling to unlock phones in many cases. The recommended class more properly reflects the current state of the market as indicated by the evidence presented in this proceeding.

The recommended class provides a ninety-day transitional period for those who may acquire phones shortly after the new exemption becomes effective. As explained above, in designating an exempted class, the Register is to begin with a category of works set forth in Section 102, but has considerable latitude to shape the recommended class to achieve its intended purpose. The Register believes that a transition period is appropriate to permit affected parties to familiarize themselves with the changed rule. In taking this

⁵⁴⁵ Proponents' proposals contain a number of features that would broaden the class beyond that designated in 2010. Most notably, each of the proponents seeks to include "wireless devices" or "mobile devices" rather than "wireless telephone handsets" as found in the current exemption. See P6A (CU) at 2-4; P6B (Youghioghenny) at 2; P6C (MetroPCS) at 4-6; P6C (RCA) at 9-11. The record is, however, entirely devoid of any evidence to support the contention that, with respect to tablets, there is a "distinct, verifiable, and measurable adverse effect on noninfringing uses," as is required by this rulemaking. MetroPCS baldly asserts, for example, that "all of the reasons cited by the Copyright Office as to why wireless devices should be included in the exemption would apply equally to those functionally equivalent wireless communications devices." P6C (MetroPCS) at 5. Similarly, RCA asserts, without any evidentiary support, that "[t]he rationale for exempting traditional telephone handsets applies with equal force to other wireless devices, which larger wireless providers can 'lock' to their networks just as easily as traditional 'telephone handsets.'" P6C (RCA) at 9. At the hearing on this class, however, proponents were unable to confirm that tablets are restricted by the same technological measures that restrict mobile handsets. See T Carson, Moy, Golant, and Berry, May 31, 2012, at 104-07. Likewise, there is no evidence in the present record to support proponents' various other expansion proposals, which are presented largely in summary fashion. The Register therefore declines to incorporate those requests into the recommended class.

approach, the Register looks to precedent in copyright law allowing for similar periods of adjustment before new rules take effect.⁵⁴⁶

Computer programs, in the form of firmware or software, that enable a wireless telephone handset originally acquired from the operator of a wireless telecommunications network or retailer no later than ninety days after the effective date of this exemption to connect to a different wireless telecommunications network, if the operator of the wireless communications network to which the handset is locked has failed to unlock it within a reasonable period of time following a request by the owner of the wireless telephone handset, and when circumvention is initiated by the owner, an individual consumer, who is also the owner of the copy of the computer program in such wireless telephone handset, solely in order to connect to a different wireless telecommunications network, and such access to the network is authorized by the operator of the network.

⁵⁴⁶See, e.g., 17 U.S.C. § 708(b)(5) (120-day period before new fee schedule proposed by Register can take effect); 17 U.S.C. § 803(d)(2)(B) (new rates set by Copyright Royalty Board take effect on first day of second month after publication in *Federal Register*); 17 U.S.C. § 913(a) (no applications for registration accepted and no civil actions to be commenced until 60 days after amendment of Copyright Act to grant protection to semiconductor chips).

G. Proposed Classes 7 and 8: Motion picture excerpts – commentary, criticism, and educational uses

Proponents have submitted eight proposals requesting the designation of classes to allow the circumvention of lawfully made and acquired motion pictures and other audiovisual works protected by various access controls where the person engaging in circumvention seeks to engage in a noninfringing use.

The proposals are comprised of three subgroups:

- First, proponents of exemptions for *noncommercial videos* seek to use clips from motion pictures to create new noncommercial videos, such as remix or mash-up videos, for criticism, comment, and other noninfringing uses.
- Second, proponents of exemptions for *commercial uses by documentary filmmakers, fictional filmmakers, and multimedia ebook authors* seek to use clips from motion pictures to create documentary films, fictional (*i.e.*, nondocumentary) films, and multimedia ebooks for fair uses such as criticism or comment.
- Finally, proponents of exemptions for *educational uses* seek to use clips from motion pictures for criticism, comment, or other educational purposes by college and university professors and faculty, college and university students, and kindergarten through twelfth grade educators.

Because each proposal involves the use of clips from motion pictures or audiovisual works, the eight possible exemptions encompassed by Proposed Classes 7 and 8 are addressed collectively.

The proposed classes consist of the following:

Proponent University of Michigan Library (“UML”) proposes that the Register recommend the following class:

7A: Motion pictures on DVDs that are lawfully made and acquired and that are protected by the Content Scrambling System when circumvention is accomplished solely in order to accomplish the incorporation of short portions of motion pictures into new works for the purpose of criticism or comment, and where the person engaging in circumvention believes and has reasonable grounds for believing that circumvention is necessary to fulfill the purpose of the use in the following instances: (i) educational uses by college and university professors and

by college and university film and media studies students;
(ii) documentary filmmaking; (iii) noncommercial videos.

Proponent Electronic Frontier Foundation (“EFF”) proposes that the Register recommend the following class:

7B: Audiovisual works on DVDs that are lawfully made and acquired and that are protected by the Content Scrambling System, where circumvention is undertaken for the purpose of extracting clips for inclusion in primarily noncommercial videos that do not infringe copyright, and the person engaging in the circumvention believes and has reasonable grounds for believing that circumvention is necessary to fulfill the purpose of the use.

Proponent EFF proposes that the Register recommend the following class:

7C: Audiovisual works that are lawfully made and acquired via online distribution services, where circumvention is undertaken for the purpose of extracting clips for inclusion in primarily noncommercial videos that do not infringe copyright, and the person engaging in the circumvention believes and has reasonable grounds for believing that circumvention is necessary to fulfill the purpose of the use, and the works in question are not readily available on DVD.

Proponents International Documentary Association, Kartemquin Educational Films, Inc., National Alliance for Media Arts and Culture, and Independent Filmmaker Project (“Joint Filmmakers”) propose that the Register recommend the following class:

7D: Motion pictures that are lawfully made and acquired from DVDs protected by the Content Scrambling System and Blu-ray discs protected by Advanced Access Content System, or, if the motion picture is not reasonably available on DVD or Blu-ray or not reasonably available in sufficient audiovisual quality on DVD or Blu-ray, then from digitally transmitted video protected by an authentication protocol or by encryption, when circumvention is accomplished solely in order to incorporate short portions of motion pictures into new works for the purpose of fair use, and when the person engaging in circumvention reasonably believes that circumvention is necessary to obtain the motion picture in the following instances: (1) documentary filmmaking; or (2) fictional filmmaking.

Proponents Mark Berger, Bobette Buster, Barnet Kellman, and Gene Rosow (“Joint Ebook Authors”) propose that the Register recommend the following class:

7E: Motion pictures that are lawfully made and acquired from DVDs protected by the Content Scrambling System or, if the motion picture is not reasonably available on or not reasonably available in sufficient audiovisual quality on DVD, then from digitally transmitted video protected by an authentication protocol or by encryption, when circumvention is accomplished solely in order to incorporate short portions of motion pictures into new works for the purpose of fair use, and when the person engaging in circumvention reasonably believes that circumvention is necessary to obtain the motion picture for multimedia e-book authorship.

Proponent Library Copyright Alliance (“LCA”) proposes that the Register recommend the following class:

7F: Motion pictures on DVDs that are lawfully made and acquired and that are protected by the Content Scrambling System when circumvention is accomplished solely in order to accomplish the incorporation of short portions of motion pictures into new works for the purpose of criticism or comment, and where the person engaging in circumvention believes and has reasonable grounds for believing that circumvention is necessary to fulfill the purpose of educational uses by college and university professors and by college and university film and media studies students.

Proponents Peter Decherney, Katherine Sender, Michael X. Delli Carpini, International Communication Association, Society for Cinema and Media Studies, and American Association of University Professors (“Joint Educators”) propose that the Register recommend the following class:

7G: Audiovisual works (optical discs, streaming media, and downloads) that are lawfully made and acquired when circumvention is accomplished by college and university students or faculty (including teaching and research assistants) solely in order to incorporate short portions of video into new works for the purpose of criticism or comment.

Proponent Media Education Lab at the Harrington School of Communication and Media at the University of Rhode Island (“MEL”) proposes that the Register recommend the following class:

8. Lawfully accessed audiovisual works used for educational purposes by kindergarten through twelfth grade educators.

1. Proponents’ case

a. Background

i. Noncommercial videos

Proponents of exemptions for noncommercial videos seek to use clips from motion pictures to create noncommercial videos, such as remix or mash-up videos, for the purpose of criticism, comment, or other noninfringing uses.

The Office received three proposals for exemptions (7A, 7B, and 7C) regarding the ability to circumvent for the purpose of creating noninfringing noncommercial videos: (1) motion pictures or audiovisual works on DVDs that are protected by the Content Scrambling System (“CSS”), or (2) audiovisual works available via online distribution services and protected by various technological measures.⁵⁴⁷ All of the proposals seek exemptions similar to the Register’s 2010 recommendation⁵⁴⁸ for the

⁵⁴⁷ See P7A (UML); P7B (EFF) at 36-57; P7C (EFF) at 57-65.

⁵⁴⁸ 2010 Recommendation at 1-2. Specifically, in 2010, the Librarian recommended the following class for exemption:

Motion pictures on DVDs that are lawfully made and acquired and that are protected by the Content Scrambling System when circumvention is accomplished solely in order to accomplish the incorporation of short portions of motion pictures into new works for the purpose of criticism or comment, and where the person engaging in circumvention

creation of noncommercial videos,⁵⁴⁹ which are sometimes referred to as “vids” by their creators (known as “vidders”) and admirers.

UML’s proposal (7A) requests an exemption largely identical to the Register’s 2010 recommended exemption for motion pictures on CSS-protected DVDs, which encompassed educational uses and documentary filmmaking in addition to noncommercial videos.⁵⁵⁰ However, UML’s supporting language indicates that the exemption should apply both to motion pictures *and* audiovisual works generally. UML’s comments in support of its proposal, however, focus only on educational uses.⁵⁵¹

The other two proposals relating to noncommercial videos, by EFF (7B and 7C), seek to expand the Register’s previously recommended exemption in several significant ways.⁵⁵² EFF’s proposals indicate that the exemptions should not depend on uses that involve criticism or comment, but instead should require *only* that the use be noninfringing. EFF’s proposals also seek to broaden the 2010 exemption to cover “primarily noncommercial videos.” It states that limiting the exemptions to uses that do not involve any form of profit could improperly exclude fair uses such as videos created by a film critic who hosts the videos on a website running ads to help cover operation costs, or video editors who are commissioned to create political commentary videos or other fair use works.⁵⁵³

Both EFF and UML request that exemptions for noncommercial videos extend to all audiovisual works.⁵⁵⁴ EFF states that the proposed exemption should include all audiovisual works, including movies, television shows, commercial news, DVD extras, etc. It asserts that use of the term “motion pictures,” as opposed to “audiovisual works,” creates uncertainty because there is no clear definition of these terms other than in the Copyright Act. Alternatively, EFF requests that the proposed exemption clarify that it reflects the statutory definition of “motion pictures.”⁵⁵⁵

believes and has reasonable grounds for believing that circumvention is necessary to fulfill the purpose of the use in the following instances: (i) Educational uses by college and university professors and by college and university film and media studies students; (ii) Documentary filmmaking; (iii) Noncommercial videos.

⁵⁴⁹ *Id.*

⁵⁵⁰ *Id.*

⁵⁵¹ P7A (UML) at 3.

⁵⁵² P7B (EFF) at 36-57; P7C (EFF) at 57-65.

⁵⁵³ P7B (EFF) at 46, 48-49 (citing *In the Cut: Salt* (deconstructing scenes in the film *Salt*), *Prime Time Terror* (regarding treatment of the war on terror and the war on drugs), and *Dove OnSlaught(er)* (video remix commissioned by GreenPeace)). For ease of discussion, except as otherwise noted, the Register’s analysis of “noncommercial videos” is meant to encompass EFF’s proposals pertaining to “primarily noncommercial videos.”

⁵⁵⁴ *Id.* at 37-38; P7A (EML) at 3.

⁵⁵⁵ P7B (EFF) at 38.

As a general matter, the proposed class for noncommercial videos involves the remixing and/or modification of a preexisting work or works to criticize or comment on some aspect of the underlying works (*e.g.*, a film criticism or analysis) or to make a broader societal statement (*e.g.*, a political commentary).⁵⁵⁶ Creators of noncommercial videos believe that commenting upon a visual work in its native medium is necessary and more effective to communicate their particular perspectives.⁵⁵⁷ As described by the Organization for Transformative Works (“OTW”), which provided comments in support of EFF’s proposal, noncommercial videos “include clips from popular television shows or film [and] rework these clips in such a way that comments on or critiques the original source.”⁵⁵⁸ Proponents point out that noncommercial videos may be categorized into various genres, such as film trailer remixes, film analysis, movie mistakes, and “YouTube Poop.”⁵⁵⁹

The noncommercial videos that proponents offer as examples allegedly include some form of comment or criticism.⁵⁶⁰ While EFF acknowledges that some noncommercial videos may be infringing, it asserts that many noncommercial videos do not infringe.⁵⁶¹ For support, EFF presents evidence from a 2008 study by Professor Michael Wesch, which found that between 2,000 and 6,000 fair use noncommercial videos using protected material were uploaded each day to YouTube.⁵⁶² Additionally, EFF offers updated information from Dr. Wesch indicating that his data continues to show that users upload remix noncommercial videos at the same rate as in 2011.⁵⁶³ EFF and OTW point to several specific noncommercial videos that were created from motion pictures on CSS-protected DVDs and technologically protected online distribution services.⁵⁶⁴

ii. Commercial uses by documentary filmmakers, fictional filmmakers, and multimedia ebook authors

Proponents of exemptions for filmmakers and ebook authors seek to use clips from motion pictures in certain types of commercial works – namely, documentary films,

⁵⁵⁶ *Id.* at 36-45.

⁵⁵⁷ P7C (EFF) at 54.

⁵⁵⁸ R9 (OTW) at 2.

⁵⁵⁹ P7B (EFF) at 39-40 (“YouTube Poop” is defined as “absurdist remixes that ape and mock the lowest technical and aesthetic standards of remix culture to comment on remix culture itself.”).

⁵⁶⁰ *See id.* at 44 nn.247, 249 & 252, 46 nn.259, & 261-63, 47 nn.265-66, 48 n.277, 49 n.280, 54 n.300-02; P7C (EFF) at 58 n.320; R9 (OTW) at 4 n.3, 10 n.33, 12 n.41, 13 n.44, and 28 n.78.

⁵⁶¹ P7B (EFF) at 46.

⁵⁶² *Id.* at 39.

⁵⁶³ *Id.* at 39 n.234.

⁵⁶⁴ *See, e.g., id.* at 48-49 (citing “Primetime Terror”); P7C (EFF) at 58 (citing “It Depends on What You Pay”); R9 (OTW) at 20-22 (citing “The Test”).

fictional (*i.e.*, dramatic) films, and multimedia ebooks – to engage in fair uses such as criticism or comment.

The Office received three proposals (7A, 7D, and 7E) that address the same types of uses in different kinds of media. All of these proposals request exemptions related to the ability to circumvent motion pictures or other audiovisual works for use by creators of noninfringing commercial works.⁵⁶⁵ Proposals 7A and 7D address such commercial uses in the context of documentary and fictional films, while Proposal 7E addresses commercial uses in the context of multimedia ebooks offering film analysis. Because these three proposals – while discussing different media – all focus on commercial uses of motion picture excerpts, the three suggested classes are discussed together.

As noted above, UML’s proposal (7A) requests an exemption very similar to the exemption recommended by the Register in 2010. The UML proposal, which primarily addresses educational uses, does not provide factual or legal support in connection with uses by documentary filmmakers.⁵⁶⁶

The proposal by Joint Filmmakers (7D) seeks to expand the previously recommended exemption for documentary filmmaking in several ways. First, proponents argue that the exemption should include fictional filmmakers. Second, Joint Filmmakers indicate that the proposed exemption should not depend on uses that involve criticism or comment, but should instead require only that the use be noninfringing. Finally, they propose that the exemption include not only motion pictures on CSS-protected DVDs, but also Blu-ray discs protected by Advanced Access Content System (“AACS”) or, if the motion picture is not reasonably available on DVD or Blu-ray or is not reasonably available in sufficient audiovisual quality on DVD or Blu-ray, then motion pictures that are digitally transmitted and protected by an authentication protocol or encryption.⁵⁶⁷

Joint Ebook Authors’ proposal (7E) seeks an exemption for the use of short portions of motion pictures for the purpose of multimedia ebook authorship. Like Joint Filmmakers, Joint Ebook Authors indicate that the proposed exemption should not depend on uses that involve criticism or comment, but should instead merely require that the use be noninfringing. Joint Ebook Authors propose that the exemption include not only motion pictures on CSS-protected DVDs, but should also extend to digitally transmitted video protected by an authentication protocol or encryption if the motion picture is not reasonably available, or available in sufficient audiovisual quality, on DVD.⁵⁶⁸

⁵⁶⁵ P7A (UML); P7D (Joint Filmmakers); P7E (Joint Ebook Authors).

⁵⁶⁶ P7A (UML).

⁵⁶⁷ P7D (Joint Filmmakers).

⁵⁶⁸ P7E (Joint Ebook Authors).

iii. Educational uses

Proponents of exemptions for educational uses seek to use clips from motion pictures for purposes of criticism or comment, or other educational purposes, by college and university professors and faculty, college and university students, and kindergarten through twelfth grade educators.

The Office received four proposals (7A, 7F, 7G, and 8) for exemptions related to the ability to circumvent motion pictures or audiovisual works for use by educators and/or students.⁵⁶⁹ These proposals seek exemptions similar to one that was recommended in the 2010 rulemaking for creation of new works for the purpose of criticism or comment by college and university professors and by college and university film and media studies students.⁵⁷⁰

The proposals by UML (7A) and LCA (7F) request an exemption that, with respect to uses by educators, tracks the Register's 2010 recommendation for an exemption for circumvention of CSS-protected DVDs. Although not reflected in the text of their proposed exemption, UML asserts in its comments that the exemption should apply not only to motion pictures, but also more broadly to audiovisual works, and should also be expanded to apply to students across all disciplines of study.⁵⁷¹

Additionally, Joint Educators⁵⁷² (7G) propose exemptions to permit circumvention of audiovisual works in order to enable college and university students, as well as faculty, to incorporate short portions of video into new works for purposes of criticism or comment. Joint Educators request that the exemption include all forms of video delivery technology, including Blu-ray and digital transmission.⁵⁷³ They maintain that alternatives to circumvention, including screen capture software, are inadequate.⁵⁷⁴ They also request that the 2010 exemption be expanded to include students across all disciplines of study.⁵⁷⁵

Finally, MEL (8) requests an exemption for the circumvention of protections on lawfully accessed audiovisual works that are used for educational purposes by kindergarten through twelfth grade educators.⁵⁷⁶ While MEL does not include a requirement for the creation of new works, or that the uses be for the purposes of

⁵⁶⁹ P7A (UML); P7F (LCA); P7G (Joint Educators); P8 (MEL).

⁵⁷⁰ 2010 Recommendation at 72.

⁵⁷¹ P7A (UML) at 3.

⁵⁷² P7G (Joint Educators).

⁵⁷³ *Id.* at 12-18.

⁵⁷⁴ *Id.* at 18-20.

⁵⁷⁵ *Id.* at 20-25.

⁵⁷⁶ P8 (MEL).

criticism or comment, the Register observes that a majority of the uses offered in support of the proposal involve, or seemingly would involve, use of audiovisual materials to facilitate educational activities. Similarly, most of the uses cited as examples involve criticism or comment.⁵⁷⁷

b. *Asserted noninfringing uses*

i. Noncommercial videos

A threshold question is whether creators of noncommercial videos are making, or are likely to make, noninfringing uses of copyrighted works. The only exception to copyright owners' exclusive rights that proponents assert should apply to this activity is fair use and, therefore, the requisite four-factor analysis is required. EFF and OTW assert that the statutory fair use factors generally support a finding of fair use with respect to the use of motion picture clips by noncommercial video creators.⁵⁷⁸

Proponents assert that, under the first fair use factor, noncommercial videos are generally favored.⁵⁷⁹ EFF and OTW allege that noncommercial videos are inherently transformative because they use excerpts to create new works that do not substitute for the original. They also note that the proposed exemption is limited to "primarily noncommercial" purposes.⁵⁸⁰ EFF states that such activity generally is favored in fair use analysis.⁵⁸¹ It points to specific noncommercial videos that combine clips from motion pictures to comment on media treatment of various social issues.⁵⁸² It explains that "[c]ommentary is central to the activity of vidders" and that such uses are precisely what Section 107 was designed to protect.⁵⁸³

EFF and OTW also assert that, while the second fair use factor affords greater protection for creative works, courts have acknowledged that this factor is likely to be of little importance in cases involving the creation of transformative works.⁵⁸⁴ EFF adds that in many cases, including political commentary videos, the source work will often be

⁵⁷⁷ *Id.*

⁵⁷⁸ P7B (EFF) at 46-49; P7C (EFF) at 59-60; R9 (OTW) at 14-17.

⁵⁷⁹ P7B (EFF) at 46-49; P7C (EFF) at 59-60; R9 (OTW) at 14-17.

⁵⁸⁰ P7B (EFF) at 46-49; P7C (EFF) at 59-60; R9 (OTW) at 14-17.

⁵⁸¹ P7B at 46 (citing *Campbell*, 510 U.S. at 579); *Castle Rock Entm't, Inc. v. Carol Pub. Group, Inc.*, 150 F.3d 132, 141 (1998)).

⁵⁸² *Id.* at 46-47 (citing hñassif, *Planet of the Arabs*; Tijana Mamula, *Homophobic Friends*, Political Remix Video; *White and Nerdy*; Obsessive24, *Piece of Me*); P7C (EFF) at 59-60 (citing Gianduja Kiss, *It Depends on What You Pay*, *Monsters From the Vids*).

⁵⁸³ P7B (EFF) at 46-47.

⁵⁸⁴ *Id.* at 47 (citing *Campbell*, 510 U.S. at 598 (concluding that the second factor "adds little to the first" when the use is transformative); *Blanch v. Koons*, 467 F.3d 244, 256 (2006)); P7C (EFF) at 60; R9 (OTW) at 15.

factual, such as news footage.⁵⁸⁵ Finally, it notes that the works from which clips are drawn are usually widely and voluntarily disseminated, which favors fair use.⁵⁸⁶

EFF and OTW add that the third fair use factor favors noncommercial video creators because the excerpts taken from film or television programs generally will comprise only a small fraction of the original work.⁵⁸⁷

Regarding the fourth factor, EFF argues that, where noncommercial expression is concerned, copyright owners bear the burden of proving that the use in question undermines the economic value of the copyrighted work.⁵⁸⁸ It notes that most noncommercial videos depend on viewers having high levels of familiarity with the original works, and that they therefore do not supplant the market for the original works, and often enhance and support it.⁵⁸⁹ EFF adds that, to the extent that noncommercial videos comment on the original works, licensing is unlikely or impossible.⁵⁹⁰ OTW voices a similar view.⁵⁹¹ EFF offers that the fair use analysis that favors creators of noncommercial videos is not altered for vids that are commissioned or that reflect a limited degree of commerciality.⁵⁹² It points to three examples of commissioned vids that it claims are highly transformative in nature.⁵⁹³ It also indicates that indirect participation in commerce should not disqualify such noncommercial videos from benefiting from fair use.⁵⁹⁴

ii. Commercial uses by documentary filmmakers, fictional filmmakers, and multimedia ebook authors

Joint Filmmakers and Joint Ebook Authors urge that their proposed exemptions should not depend on uses that involve criticism or comment, but instead should require

⁵⁸⁵ P7B (EFF) at 47 (citing *Harper & Row*, 471 U.S. at 563).

⁵⁸⁶ *Id.* (citing *Kelly*, 336 F.3d at 820; *Arica Inst., Inc. v. Palmer*, 970 F.2d 1067, 1078 (1992) (plaintiff's work was "a published work available to the general public," and the second factor thus favored the defendant)).

⁵⁸⁷ *Id.* at 47-48 (citing *Wright v. Warner Books*, 953 F.2d 731 (1991); *Monster Comms., Inc. v. Turner Broadcasting Sys.*, 935 F. Supp. 490 (S.D.N.Y. 1996); *Religious Tech. Ctr. v. Pagliarina*, 908 F. Supp. 1353 (E.D. Va. 1995)); P7C (EFF) at 60; R9 (OTW) at 15-16 (citing Obsessive24, new vid - *Fall of Man* - Supernatural - Castiel/Dean; *Handlebars*; *The Price*).

⁵⁸⁸ P7B (EFF) at 48.

⁵⁸⁹ *Id.*

⁵⁹⁰ *Id.* at 48 (citing *Campbell*, 510 U.S. at 592-93).

⁵⁹¹ R9 (OTW) at 16.

⁵⁹² P7B (EFF) at 48-49.

⁵⁹³ *Id.* (citing, among others, Prime Time Terror and Dove Onslaught(er)).

⁵⁹⁴ *Id.* (citing *Campbell*, 510 U.S. at 579; *Perfect 10*, 508 F.3d at 1166; *Bill Graham Archives v. Dorling Kindersley Ltd.*, 448 F.3d 605, 610 (2006); *Hustler Magazine Inc. v. Moral Majority Inc.*, 796 F.2d 1148, 1152-53 (1986)).

only that the use is noninfringing.⁵⁹⁵ Neither Joint Filmmakers nor Joint Ebook Authors offer a full analysis of the proposed uses under the four fair use factors. However, proponents describe numerous examples of actual or prospective uses of motion pictures for documentary films,⁵⁹⁶ fictional films,⁵⁹⁷ and multimedia ebooks addressed to film criticism or analysis.⁵⁹⁸ In so doing, they indicate that the proposed uses would facilitate lawful criticism and comment, relying on case law to support their claims.⁵⁹⁹ They also cite the ability of filmmakers and authors to look to various “best practice” guidelines for fair use in order to responsibly engage in lawful use.⁶⁰⁰ With regard to documentary films, proponents rely upon the Register’s previous finding that uses of short clips from motion pictures constitute a noninfringing fair use.⁶⁰¹

iii. Educational uses

Proponents offer only limited analysis regarding the threshold question of whether the requested exemptions for educational uses are noninfringing. UML and Joint Educators merely imply that the proposed uses are lawful under the fair use provisions in Section 107 or the educational exemptions in Section 110.⁶⁰² LCA refers to the Librarian’s previous findings that uses of short clips from motion pictures, similar to those that are the subject of the current requests, constitute noninfringing fair uses and asserts that the grounds for that finding remain true today.⁶⁰³ MEL offers an analysis of the proposed uses as noninfringing under each of the four fair use factors.⁶⁰⁴ It asserts that: (1) the first factor favors the requested exemption because of the nonprofit educational nature of the uses at issue; (2) the second factor favors the requested exemption because it will apply to works that are of special pedagogical interest or importance; (3) the third factor favors the requested exemption because the clips that will be used are usually short portions of the entire work; and (4) the fourth factor favors the requested exemption because the works used must be lawfully acquired, the new works will not normally be used outside of the educational environment, and the brief clips used are unlikely to substitute for the entire work in the market.⁶⁰⁵ MEL also highlights the

⁵⁹⁵ P7D (Joint Filmmakers) at 1-7, 19-21; P7E (Joint Ebook Authors) at 6-7, 11-13.

⁵⁹⁶ P7D (Joint Filmmakers) at 8-13, 19.

⁵⁹⁷ *Id.* at 6-7, 19.

⁵⁹⁸ P7E (Joint Ebook Authors) at 7-9.

⁵⁹⁹ P7D (Joint Filmmakers) at 6-7, 19-21 (citing, e.g., *Campbell*, 510 U.S. 569; *Wade Williams Dist., Inc. v. Am. Broad. Co., Inc.*, 00 CIV. 5002 (LMM), 2005 WL 774275 (S.D.N.Y.) (Apr. 5, 2005) at *9; *Hofheinz v. Discovery Commc’ns, Inc.*, 2001 U.S. Dist. LEXIS 14752 at *13)); P7E (Joint Ebook Authors) at 6-7, 11-12 (citing e.g. *Campbell*, 510 U.S. 569; *Folsom v. Marsh*, 9 F. Cas. 342 (C.C.D. Mass. 1841)).

⁶⁰⁰ P7D (Joint Filmmakers) at 6-7; P7E (Joint Ebook Authors) at 6.

⁶⁰¹ P7D (Joint Filmmakers) at 6.

⁶⁰² P7A (UML) at 3-4; 7G (Joint Educators) at 3.

⁶⁰³ P7F (LCA) at 2-3.

⁶⁰⁴ P8 (MEL) at 12-13.

⁶⁰⁵ *Id.*

transformative nature of the uses and notes that Section 107 specifically mentions teaching as illustrative of a fair use.⁶⁰⁶

c. *Asserted adverse impact*

i. Noncommercial videos

EFF argues that the prohibition on circumvention adversely affected the noninfringing activities of creators of noncommercial videos prior to the last exemption, and will do so again if the proposed exemption is not granted. It points out that, to the extent that the provision prohibits ripping DVDs to extract clips, the law places creators in legal jeopardy when they engage in authorship that would otherwise be protected by fair use.⁶⁰⁷ EFF states that without an exemption, a climate of fear inhibits even obvious fair uses.⁶⁰⁸ It also points out that creators of noninfringing works are deterred from lawfully challenging DMCA “takedown” notices sent to online service providers who host and link to noncommercial videos. It notes that the creator of a noncommercial video who files a counternotice pursuant to 17 U.S.C. § 512(g) to restore a video to a host site is exposed to a potential circumvention claim from the copyright owner who sent the takedown demand.⁶⁰⁹

EFF and OTW argue that the various alternatives that the opponents propose are not adequate substitutes. They assert that alternatives such as screen capture technology or making a recording with a smartphone can be cumbersome and are not as simple and straightforward as the circumvention of DVDs or online video.⁶¹⁰

Proponents also reject opponents’ suggested alternative of licensing clips.⁶¹¹ OTW notes that opponents do not offer evidence that there is any mechanism by which a noncommercial user – as opposed to a commercial entity – could select and receive suitable high-quality content from a range of movies and television shows.⁶¹² Proponents also argue that licensing is not a substitute for fair use as a matter of law, and that copyright owners cannot deprive transformative users of the right to make unauthorized uses by expressing a willingness to license.⁶¹³

⁶⁰⁶ R16 (MEL) at 8-9.

⁶⁰⁷ P7B (EFF) at 49-51, P7C (EFF) at 62-63.

⁶⁰⁸ P7B (EFF) at 49-51, P7C (EFF) at 62-63.

⁶⁰⁹ P7B (EFF) at 49-51, P7C (EFF) at 62-63.

⁶¹⁰ P7B (EFF) at 43 (citing Vidder Vidyutpataka; R9 (OTW) at 18).

⁶¹¹ P7B (EFF) at 49-51; R9 (OTW) at 31-32.

⁶¹² R9 (OTW) at 31-32.

⁶¹³ *Id.*; P7B (EFF) at 48.

ii. Commercial uses by documentary filmmakers, fictional filmmakers, and multimedia ebook authors

Proponents of the exemptions for documentary and fictional filmmakers and multimedia ebook authors assert that the requested uses would be adversely affected without exemptions permitting the circumvention of DVD CSS, AACS, and various access controls that protect digitally transmitted video.⁶¹⁴ They note that licensing clips is not a suitable option because it can be costly and is often unrealistic for those seeking to create works that comment negatively on the subject film, its characters, or the rightsholder.⁶¹⁵ They assert that obtaining content through the “analog hole” method⁶¹⁶ – *i.e.*, by recording a screen with a camera or smartphone, or using screen capture software – is insufficient because the quality of the images is too low.⁶¹⁷ They also assert that distribution outlets such as television stations require that material be submitted in high-definition format, which the alternative methods normally do not produce. They add that distribution outlets also limit the amount of content that is able to meet high-definition requirements through an “up-converting” process, which involves reformatting content from standard definition to high definition.⁶¹⁸ In their reply comments, Joint Filmmakers assert that the suggestion that alternatives to circumvention meet their needs reveals a misunderstanding of the technical requirements faced by filmmakers in light of broadcaster and distributor standards.⁶¹⁹

Based on proponents’ submissions, however, it is also apparent that distribution outlets such as PBS are willing to make accommodations when a filmmaker cannot obtain higher-quality material.⁶²⁰ The record also shows that the stated standards are not enforced in an overly strict manner.⁶²¹ Indeed, proponents did not identify instances where filmmakers were refused access to distribution outlets based either on a shortcoming in video quality or a format concern.

⁶¹⁴ P7D (Joint Filmmakers) at 21-24; P7E (Joint EBook Authors) at 11-15.

⁶¹⁵ P7D (Joint Filmmakers) at 4-6.

⁶¹⁶ The “analog hole” method involves connecting the analog output of an authorized player to the input of a computer or other capture device, which results in somewhat degraded images.

⁶¹⁷ P7D (Joint Filmmakers) at 15-18; P7E (Joint EBook Authors) at 15.

⁶¹⁸ P7D (Joint Filmmakers) at 15-18; P7E (Joint EBook Authors) at 10-11.

⁶¹⁹ R11 (International Documentary Association, Kartemquin Educational Films, Inc., and National Alliance for Media Arts and Culture) at 4-5.

⁶²⁰ P7D (Joint Filmmakers) at 11 (citing *PBS Technical Operating Specifications: Program Submission* (2010 Edition), 2 (stating PBS will accept video that is acquired in standard definition (SD) and up-converted to Sony HDCAM video format for submission), 3 (“2.1.4: *Except in the case of use or archival content where no better copies are available*, the image must be free of picture impairments associated with legacy analog equipment such as lag, smear, scratches, videotape dropouts, head switching, composite video artifacts.” (emphasis added))).

⁶²¹ T Quinn, June 4, 2012 at 239-40.

iii. Educational uses

LCA offers numerous examples of educator and student uses that it asserts are lawful fair uses and would be adversely affected by the prohibition in Section 1201(a)(1).⁶²² UML, too, offers examples of educator and student uses that it similarly asserts are noninfringing and would be negatively impacted absent the requested exemption.⁶²³ The types of uses LCA and UML cite include professorial use of motion picture clips to teach foreign languages, film history, and filmmaking techniques.⁶²⁴

Joint Educators cite numerous uses that they assert are lawful and would be adversely affected without the requested exemption.⁶²⁵ These include the use of motion picture clips by professors to teach students across a broad range of disciplines. They note that, in addition to film and media students, students outside these disciplines are asked to submit video presentations and will be adversely impacted without the requested exemption.⁶²⁶

MEL explains several situations where kindergarten through high school teachers may seek to use clips of motion pictures for classroom purposes.⁶²⁷ MEL also references claims from kindergarten through twelfth grade educators asserting a need to use motion pictures in their curricula.⁶²⁸ MEL contends that these situations establish that adverse effects will ensue without the requested exemption.⁶²⁹

During the hearings, proponents amplified their comments by highlighting several additional prospective uses of short portions of video by educators and students that they claim would be adversely affected absent the requested exemption.⁶³⁰

Both Joint Educators and LCA reject the notion that circumvention alternatives are suitable for the requested uses.⁶³¹ Joint Educators contend that the material offered on the licensing websites identified by opponents is limited to a very narrow catalog as compared to the vast offerings available through DVD or online distribution services.⁶³² LCA asserts that, even if the Register determined that screen capture is lawful, that would

⁶²² P7F (LCA).

⁶²³ P7A (UML).

⁶²⁴ P7F (LCA) at 4-19; P7A (UML) at 2-3.

⁶²⁵ P7G (Joint Educators) at 6-11.

⁶²⁶ *Id.* at 21-24.

⁶²⁷ P8 (MEL) at 2-3.

⁶²⁸ *Id.* at 5-9.

⁶²⁹ *Id.* at 9-11.

⁶³⁰ *See, e.g.*, T Decherney, June 4, 2012, at 87-89; T Hobbs, June 4, 2012, at 99-100.

⁶³¹ P7F (LCA) at 3, 12, 15; P7G (Joint Educators) at 18-20.

⁶³² *See, e.g.*, T Decherney, June 4, 2012, at 72.

be of little comfort to users who are concerned with being sued by copyright owners who may not share the Register's view about the legal status of screen capture software.⁶³³

d. *Argument under statutory factors*

i. Noncommercial videos

EFF argues that the proposed exemptions will not negatively impact the digital distribution of motion pictures because the exemptions are narrowly tailored. It asserts that, because the proposed exemptions require lawful acquisition of a copy, it will encourage lawful purchases, whereas the lack of an exemption would encourage unlawful acquisition of unprotected motion pictures.⁶³⁴ It also asserts that the alternatives to circumvention are inadequate.⁶³⁵ EFF notes that the proposed exemptions are not explicitly aimed at archival, preservation, or educational uses.⁶³⁶ However, it argues that a refusal of the exemptions would have a chilling effect on criticism and comment, which are central to vidding.⁶³⁷ It also points to the uses of noncommercial videos in the context of teaching, scholarship, and research.⁶³⁸ It argues that the transformative uses would not affect the market for or value of motion pictures. It adds that the current exemption has allowed for the creation of socially beneficial and entirely legitimate noncommercial videos, including important forms of creative expression.⁶³⁹

ii. Commercial uses by documentary filmmakers, fictional filmmakers, and multimedia ebook authors

Proponents assert that the Section 1201 statutory factors favor their requested uses.⁶⁴⁰ They argue that the proposed exemptions will not negatively impact the digital distribution of motion pictures because the exemptions are narrowly tailored to a class of users who responsibly engage in fair use activities and who circumvent only when necessary to prevent particular harm.⁶⁴¹ They also note that both documentary films and multimedia ebooks are intrinsically educational in purpose, and assert that the requested exemptions would advance criticism and comment.⁶⁴² Proponents also point to uses of

⁶³³ R1 (LCA) at 3 (citing *Ass'n for Info. Media & Equip. v. Regents of the Univ. of Cal.*, 2011 U.S. Dist. LEXIS 154011 (C.D. Cal. Oct. 3, 2011) (suit filed against UCLA alleging that use of software that copies the analog output of a DVD violates DMCA)).

⁶³⁴ P7B (EFF) at 51-53; P7C (EFF) at 63-64.

⁶³⁵ P7B (EFF) at 36-38

⁶³⁶ *Id.* at 53; P7C (EFF) at 64.

⁶³⁷ P7B (EFF) at 53-55; P7C (EFF) at 64.

⁶³⁸ P7B (EFF) at 53-55; P7C (EFF) at 64.

⁶³⁹ P7B (EFF) at 55-57; P7C (EFF) at 64.

⁶⁴⁰ P7D (Joint Filmmakers) at 28-33; P7E (Joint Ebook Authors) at 16-19.

⁶⁴¹ P7D (Joint Filmmakers) at 28-30; P7E (Joint Ebook Authors) at 16-18.

⁶⁴² P7D (Joint Filmmakers) at 31-32; P7E (Joint Ebook Authors) at 18-19.

documentary films and ebooks in the context of teaching, scholarship, and research.⁶⁴³ They argue that uses by documentary filmmakers, fictional filmmakers, and multimedia ebook authors under the proposed exemptions will not affect the market for or value of motion pictures.⁶⁴⁴ They add that the proposed exemptions will allow the creation of socially beneficial works.⁶⁴⁵

iii. Educational uses

Proponents did not offer any explicit analysis of the proposed uses under the statutory factors.

2. Opposition

a. *Noncommercial videos*

Joint Creators⁶⁴⁶ and DVD Copy Control Association (“DVD CCA”) oppose the proposals pertaining to noncommercial videos and, more generally, the use of motion pictures contained on CSS-protected DVDs.⁶⁴⁷ Joint Creators also oppose the use of motion pictures acquired via online distribution services.⁶⁴⁸

Joint Creators first question whether proponents have met the required statutory burden for an exemption.⁶⁴⁹ They assert that access controls have increased the distribution of copyrighted works.⁶⁵⁰ They also urge the Register precisely to analyze the alleged noninfringing uses to determine whether they are, in fact, noninfringing.⁶⁵¹ They assert that proponents fall short of establishing that particular videos constitute lawful uses.⁶⁵² Joint Creators also challenge the proposal to broaden the exemption to cover “primarily” noncommercial videos⁶⁵³ because the term appears to include all videos that

⁶⁴³ P7D (Joint Filmmakers) at 31-32; P7E (Joint EBook Authors) at 18-19.

⁶⁴⁴ P7D (Joint Filmmakers) at 32-33; P7E (Joint EBook Authors) at 19-20.

⁶⁴⁵ P7D (Joint Filmmakers) at 32-33; P7E (Joint EBook Authors) at 19-20.

⁶⁴⁶ The trade groups represented by Joint Creators are the Association of American Publishers, the American Society of Media Photographers, the Business Software Alliance, the Entertainment Software Association, the Motion Picture Association of America, the Picture Archive Council of America, and the Recording Industry Association of America. C12 (Joint Creators) at 1-2.

⁶⁴⁷ *Id.* at 39-40; C8 (DVD CCA) at 23-36.

⁶⁴⁸ C12 (Joint Creators) at 39-40. Joint Creators do not refer to motion pictures contained on AACSProtected Blu-ray discs in the context of noncommercial videos apparently because proponents for these uses did not request an exemption to circumvent AACSP.

⁶⁴⁹ *Id.* at 5-14.

⁶⁵⁰ *Id.* at 11-14.

⁶⁵¹ *Id.* at 35.

⁶⁵² *Id.* at 39.

⁶⁵³ *Id.*

are not themselves advertisements.⁶⁵⁴ They also take issue with the proposal to extend the exemption to cover all noninfringing uses, which would remove the existing exemption's requirement that the use be for purposes of criticism or comment.⁶⁵⁵ Joint Creators argue that such an extension would encourage people to test the limits of fair use, thus posing too much risk in light of the alternatives to circumvention.⁶⁵⁶

Joint Creators take issue with EFF's position that all creators of noncommercial videos always need the highest quality clips possible, noting that it is contrary to the Register's previous finding.⁶⁵⁷ They go on to state that, given EFF's position, confining the exemption to circumstances in which a person believes and has reasonable grounds for believing that circumvention is necessary is not a meaningful limitation.⁶⁵⁸ Finally, they indicate that allowing circumvention of protections on motion pictures acquired via online distribution services would negatively impact the market and value for those works.⁶⁵⁹

DVD CCA asserts that there are several alternatives to circumvention, including clip licensing, screen capture software, and video recording via smartphone, that would enable proponents affordably and effectively to copy short portions of motion pictures without the requested exemption.⁶⁶⁰ It states that proponents fail to establish a *prima facie* case that the prohibition against circumvention of CSS-protected DVDs has resulted in a substantial adverse effect on the noninfringing use of the protected works.⁶⁶¹ It further asserts that, because proponents allegedly fail to draw any nexus between the use of any particular work and CSS content protection technology, there is no evidence to demonstrate a substantial negative impact on the requested uses.⁶⁶²

b. *Commercial uses by documentary filmmakers, fictional filmmakers, and multimedia ebook authors*

DVD CCA opposes exemptions for documentary filmmakers, claiming that the case made for the exemption is weak.⁶⁶³ However, it notes that, if an exemption is granted for documentary filmmakers, it should be narrowed to allow use of only short

⁶⁵⁴ *Id.*

⁶⁵⁵ *Id.*

⁶⁵⁶ *Id.* at 39-40.

⁶⁵⁷ *Id.* at 40 (citing 2010 Recommendation at 75).

⁶⁵⁸ *Id.*

⁶⁵⁹ *Id.*

⁶⁶⁰ C8 (DVD CCA) at 8-16, and 44.

⁶⁶¹ *Id.* at 44-48.

⁶⁶² *Id.* at 47.

⁶⁶³ *Id.* at 18.

portions of motion pictures for fair use purposes, and only where such material is not reasonably available through noncircumventing means.⁶⁶⁴

DVD CCA then explains its view that none of the examples offered in support of the proposed exemptions for documentary filmmakers, fictional filmmakers, or multimedia ebook authors sufficiently establishes that CSS is preventing the proposed uses.⁶⁶⁵ DVD CCA asserts that there are several alternatives to circumvention, including clip licensing, screen capture software, and video recording via smartphone that would enable proponents affordably and effectively to copy short portions of motion pictures without the requested exemption.⁶⁶⁶

Joint Creators oppose the requested exemptions by noting that, while some of the proposed uses may indeed qualify as noninfringing fair uses, others do not.⁶⁶⁷ They add that it appears as if the uses, especially those by fictional filmmakers, could be accomplished without circumvention by capturing motion picture segments with a camera instead of by circumventing discs or online streams.⁶⁶⁸ In particular, they urge that the proposed exemption for circumvention of AACS-protected Blu-ray discs should not be approved. They point out that proponents concede that up-conversion processes allow them to meet the content standards of broadcasters and distributors. They also note that this proceeding is not designed to generate exemptions based on evidence of “[a]dverse impacts that flow from . . . marketplace trends, other technological developments, or changes in the roles of . . . distributors or other intermediaries.”⁶⁶⁹

The Advanced Access Content System Licensing Administrator (“AACS LA”) also opposes the requested exemptions as they apply to AACS-protected Blu-ray discs.⁶⁷⁰ It asserts that proponents have failed to make their *prima facie* case that proponents face substantial adverse effects with respect to content available only on Blu-ray.⁶⁷¹ AACS LA points out that several alternatives exist to circumvention.⁶⁷² It argues that the use of high-quality content on Blu-ray is merely a matter of convenience.⁶⁷³

⁶⁶⁴ *Id.*

⁶⁶⁵ *Id.* at 44-47.

⁶⁶⁶ *Id.* at 8-16, and 44.

⁶⁶⁷ C12 (Joint Creators) at 40-41.

⁶⁶⁸ *Id.* at 41.

⁶⁶⁹ *Id.* at 40-42 (citing House Manager’s Report at 6).

⁶⁷⁰ C4 (AACS LA) at 18-26.

⁶⁷¹ *Id.*

⁶⁷² *Id.* at 8-15.

⁶⁷³ *Id.* at 18-26.

c. Educational uses

DVD CCA and Joint Creators do not oppose the granting of an exemption covering circumvention of CSS for a variety of college and university uses that involve copying short portions of motion pictures, but assert that the exemption should be revisited, refined, and limited to conduct that is clearly noninfringing and simultaneously requires high quality.⁶⁷⁴ They oppose extending any exemption to kindergarten through twelfth grade educators or to university and college students and faculty except as to certain narrowly prescribed uses.⁶⁷⁵ They state that proponents for these requested exemptions fail to show a *prima facie* case of substantial adverse impact.⁶⁷⁶ They also point to the variety of alternatives to circumvention that facilitate the requested uses. They contend that, in light of these alternatives, the current prohibition amounts to little more than an inconvenience.⁶⁷⁷

AACS LA opposes the requested exemptions for educational uses to the extent that it would apply to AACS-protected Blu-ray discs.⁶⁷⁸ It argues that proponents of an exemption for college and university students and faculty fail to establish a substantial adverse effect on noninfringing uses of works distributed on AACS-protected Blu-ray discs.⁶⁷⁹ AACS LA further objects that the proponents of an exemption for kindergarten through twelfth grade educators have not shown any regular use of works on AACS protected Blu-ray discs.⁶⁸⁰

AACS LA asserts that, because the transition from DVD to Blu-ray is far from complete, any exemption that extends to Blu-ray is premature.⁶⁸¹ It maintains that proponents have failed to establish why alternatives to circumvention are unsatisfactory.⁶⁸² Additionally, it notes that there is no established need for the high-quality level of content available on Blu-ray discs and that alternative sources provide sufficient quality for the requested uses.⁶⁸³

⁶⁷⁴ C8 (DVD CCA) at 17-18; C12 (Joint Creators) at 34-35; R12 at 36-37.

⁶⁷⁵ C8 (DVD CCA) at 39-43; C12 (Joint Creators) at 36-37, 42-43.

⁶⁷⁶ C8 (DVD CCA) at 42-43.

⁶⁷⁷ *Id.*

⁶⁷⁸ C4 (AACS LA) at 32-43.

⁶⁷⁹ *Id.*

⁶⁸⁰ *Id.* at 39-40.

⁶⁸¹ *Id.* at 37.

⁶⁸² *Id.* at 33-35.

⁶⁸³ *Id.* at 40-43.

3. Hearing and Post-Hearing Technical Demonstrations and Other Evidence

Proponents and opponents of Proposed Classes 7 and 8 were invited to augment their written comments by presenting additional evidence at public hearings as well as by responding to a number of written questions posed by the Copyright Office following the hearings. Some parties took the opportunity to elaborate on their written submissions by presenting video and other demonstrative evidence to illustrate their points.

Proponents of the noncommercial video exemption exhibited video evidence to demonstrate the need to access high-quality motion picture content. They presented the video “Buffy vs Edward,” which explores gender dynamics in the *Buffy the Vampire Slayer* television show and the *Twilight* film series.⁶⁸⁴ The creator of this vid, Jonathan MacIntosh, explained that the production of vids requires detailed enough clips to enable cropping and zooming while avoiding blurry, distorted, or pixelated video. He referred to instances where focus on specific gestures and actions, and the quality of the excerpted material, was relevant to the desired commentary.⁶⁸⁵ Other proponents for noncommercial videos reiterated the importance of the ability to portray similar visual effects.⁶⁸⁶ Proponents asserted that quality levels are significant because it is difficult to communicate to and maintain the attention of today’s audiences without high-quality video.⁶⁸⁷

The record indicates that the proponents for noncommercial use exemptions provided several motion picture examples that could qualify as documentary videos, including *Prime Time Terror*, which analyzed how terror-related plots are portrayed in popular media, and *In the Cut: Salt*, which examined filmmaking techniques employed in the 2010 film *Salt*.⁶⁸⁸ Even though offered in relation to noncommercial uses, these examples are thus also pertinent to documentary films in general because they are illustrative of documentary filmmakers’ need to be able to portray the “sensual and subtle qualities of an image.”⁶⁸⁹

Proponents for documentary filmmakers amplified their written comments at the hearings by describing several films that would benefit from the proposed exemption.⁶⁹⁰ For example, proponents discussed the documentary film *A Good Man*, about the dancer

⁶⁸⁴ T MacIntosh, May 17, 2012, at 142-45; see also P7B (EFF) at 54 n.302.

⁶⁸⁵ T MacIntosh, May 17, 2012, at 142-45.

⁶⁸⁶ T Turk, June 4, 2012, at 326-28.

⁶⁸⁷ *Id.* at 280-81.

⁶⁸⁸ T Tushnet, June 4, 2012, at 340-41 (referencing the videos *Primetime Terror* (commenting on depictions of the war on terror) and *In the Cut: Salt* (deconstructing scenes in the film *Salt*)).

⁶⁸⁹ T Quinn, June 4, 2012, at 158.

⁶⁹⁰ In this regard, the Register observes that Joint Filmmakers’ case would have benefited from further demonstrative evidence exemplifying documentary film uses.

Bill T. Jones, which includes a scene in which Jones speaks about his awareness that he “was a black body being viewed by white bodies.”⁶⁹¹ To illustrate this point, the film includes a clip allowing viewers to see every detail of Jones’ body, including his rippling muscles and sweat. Proponents also described a prospective film about a film critic. Proponents explain how viewers will need to see high quality images from films that the critic addresses in order to understand how to perceive the images.⁶⁹²

No actual examples of fictional film uses were offered at the hearings. Instead, witnesses chose to describe films that would benefit from the proposed exemption. The uses described by proponents included a fictional film that incorporates a “dozen” motion picture clips to tell the story of a projectionist who notices an “extra” character in a scene who appears in multiple films shown in the projectionist’s theater.⁶⁹³ Proponents also described a fictional film involving characters obsessed with the film *Mad Max 2* who proceed to build a *Mad Max*-inspired automobile in a deranged effort to take over the world.⁶⁹⁴ Another example involved a proposed series of short films focusing on a family that likes to watch movies on television, and “the whole episode would be them riffing off the film that they had watched.”⁶⁹⁵ Other fictional projects under development mentioned at the hearings included a film that would incorporate scenes of Mumbai from the movie *Mission Impossible* as a contrast to a different experience of Mumbai in the newer film, and a film that would use BBC news footage to depict “the voice of the empire” in a fictionalized account of asylum seekers.⁶⁹⁶ Proponents for fictional filmmakers indicated that alternatives to circumvention would be difficult and expensive to achieve for independent filmmakers.⁶⁹⁷

The hearings also addressed quality requirements that documentary and fictional filmmakers confront when trying to distribute their videos to the public. Proponents offered explanation and citation to the standards required by the Public Broadcasting Service (“PBS”), which generally call for high-definition motion picture material. Proponents and opponents discussed the nature of these requirements as well as the technological ability to up-convert lower-quality material to meet such requirements.⁶⁹⁸

Regarding the proposed exemption for multimedia ebooks, proponents made an audiovisual presentation to demonstrate how motion picture clips would be used in a prospective ebook. Proponents showed how the excerpts would permit analysis and

⁶⁹¹ T Quinn, June 4, 2012, at 157.

⁶⁹² *Id.*

⁶⁹³ T Donaldson, May 17, 2012, at 148-49.

⁶⁹⁴ *Id.* at 149-50; *see also* P7D (Joint Filmmakers) at 19.

⁶⁹⁵ T Donaldson, May 17, 2012, at 149.

⁶⁹⁶ T Thrush, May 17, 2012, at 154-55.

⁶⁹⁷ T Donaldson, May 17, 2012, at 149.

⁶⁹⁸ *See, e.g.*, T Ruwe, Marks, Morrisette, Cohen, and Quinn, June 4, 2012, at 238-43.

commentary on the films that are the subject of the ebook.⁶⁹⁹ Proponents explained how minute details in the images – such as precise images of dust, subtle reflections, specialized lighting, and even a splattering of water – were pivotal to the desired criticism and comment, and that such details could not be captured other than through circumvention.⁷⁰⁰

With respect to the proposed educational use exemptions, proponents presented a video showing high school educators using motion picture content in class to instruct history and English students.⁷⁰¹ Proponents also described uses by both educators and students across various areas of study.⁷⁰² They noted that, in today's classrooms, students participate more directly in the pedagogical process, including making in-class presentations that require access to high-quality media clips.⁷⁰³ Proponents further asserted that high quality is necessary “because the depth of analysis rises with the quality of the images used.”⁷⁰⁴ For example, they described uses by a seventh-grade teacher instructing her students on the differences between film and television media, including the subtleties of production value and production techniques.⁷⁰⁵ They indicated that using lower-quality material can dilute the emotional impact and the force of the message, thus weakening the effect and educational value of the use.⁷⁰⁶ In an effort to establish that DVD-level quality is insufficient for educational purposes, proponents compared DVD images to Blu-ray images.⁷⁰⁷

Proponents for educational uses also discussed the importance of students' ability to manipulate high-quality video. Proponents referred to a sociology class assignment in which students created voiceovers for a series of clips that involved students looking at commodities such as diamonds and the way they are portrayed in popular media. Taking the example of diamonds, proponents noted that film quality was significant to the students' use because an audience might respond differently to an image of a clear and sparkling diamond versus one that is muddy and blurred.⁷⁰⁸

⁶⁹⁹ T Buster, June 4, 2012, at 168-78.

⁷⁰⁰ *Id.* at 243-44; T Cohen, June 4, 2012, at 178-80.

⁷⁰¹ Spiro Bolos, a supporter of Proposed Class 8 exemption for kindergarten through twelfth grade educators, showed a video of students being shown clips from films to enable comparison to works of literature. *See* T Bolos, June 4, 2012, at 42-43

⁷⁰² T Decherney, June 4, 2012, at 9-11 (*e.g.*, uses by biology professors and urban studies professors); T Hobbs, June 4, 2012, at 32 (*e.g.*, K-12 classes on film studies, science and fine and performing arts).

⁷⁰³ T Decherney, June 4, 2012, at 10-11.

⁷⁰⁴ *Id.* at 12-13.

⁷⁰⁵ T Hobbs, June 4, 2012, at 99-100.

⁷⁰⁶ T Band, June 4, 2012, at 21-22; T Hobbs, June 4, 2012, at 31.

⁷⁰⁷ T Decherney, June 4, 2012, at 13-16; *see also id.* at 90.

⁷⁰⁸ *Id.* at 87-91.

At the hearings, opponents responded to the proposed exemptions by discussing and demonstrating alternative options for obtaining motion picture excerpts for inclusion in new works. Much of the discussion focused on screen capture software and video recording via smartphone, two means of copying film clips that may not involve circumvention.

A significant point of contention at the hearings was whether screen capture software and smartphone video recording yield sufficient results for the proposed uses. Both DVD CCA and OTW made presentations to demonstrate the quality of video that could be obtained via these alternative methods.⁷⁰⁹ Proponents criticized the quality of smartphone recordings, asserting that such recordings include unacceptable distortions of the video and audio quality.⁷¹⁰ Another significant limitation was that the lower part of the screen was cut off.⁷¹¹ Screen capture technology appeared to offer more complete results, although the images were somewhat diminished in quality; the evidence indicated loss of particular frames, occasional fuzziness, loss of sense of depth, and some degree of pixelation.⁷¹²

In a series of post-hearing questions sent to hearing participants, the Copyright Office sought further input as to whether screen capture software, which is available for less than fifty dollars⁷¹³ is, or could be, sufficient for various uses alleged to be adversely affected by the prohibition.⁷¹⁴ In response, opponents indicated that screen capture technology produced sufficient results for the proposed uses,⁷¹⁵ while proponents asserted that the results were wholly insufficient for the proposed uses.⁷¹⁶

⁷⁰⁹ See, e.g., T Marks, June 4, 2012, at 190; T Turk, June 4, 2012, at 285.

⁷¹⁰ See, e.g., T Morrissette, June 4, 2012, at 148.

⁷¹¹ T Marks, June 4, 2012, at 50, 190; Taylor, May 11, 2012, Tech Demonstration Hearing Friday May 11, 2012 (no transcript) (smartphone recordings cut off the bottom portion of motion pictures intended to be recorded).

⁷¹² See, e.g., T Turk, June 4, 2012, at 286-87.

⁷¹³ See T Marks, June 4, 2012, at 190; see also T Tushnet, June 4, 2012, at 264 (more expensive types of screen capture software can cost up to \$300).

⁷¹⁴ The questions posed and responses received are available in their entirety on the Copyright Office's website. See www.copyright.gov/1201/2008/questions/index.html. Exhibits referenced in the responses are available upon request to the Copyright Office.

⁷¹⁵ DVD CCA stated that the quality of both the clip and the individual frames is excellent. See Bruce Turnbull and David Taylor (Counsel to DVD CCA) to David O. Carson, General Counsel, U.S. Copyright Office (July 24, 2012).

⁷¹⁶ In addition to addressing quality *per se*, proponents argued that images produced by screen capture are not meant to function with certain video creation tools and that the technology itself does not operate properly when using certain operating systems. See, e.g., Letter from Francesca Coppa, Rebecca Tushnet, and Tisha Turk, on behalf of the OTW, and Corynne McSherry, of the EFF, to David O. Carson, General Counsel, U.S. Copyright Office (Aug. 1, 2012). However, they failed to provide evidence that no reasonably available alternative operating systems or editing software were available for use. In fact, the record indicates that popular editing software is compatible with screen capture software. See Letter from Jack I. Lerner, of the USC Intellectual Property and Technology Law Clinic, and Michael C. Donaldson, of Donaldson & Callif LLP, to David O. Carson, General Counsel, U.S. Copyright Office (Aug. 2, 2012).

One proponent, Peter Decherney, on behalf of educational users, offered extensive analysis of the relative image qualities.⁷¹⁷ Mr. Decherney compared various still frames reproduced via screen capture to images copied from DVDs, noting the distinctions between them – such as the quality of a reflection in a subject’s eye – in terms of the emotional and contextual effects that each image conveyed. He explained that the higher level of detail available through circumvention also conveys more information about how the film may have been created.⁷¹⁸ Mr. Decherney stated that such distinctions are significant to students and professors, as the level of analysis rises and falls with the fidelity of an example: “[A] student who relies on the unreliable screen captured version [of a work] is in danger of getting it wrong, like an art history student who refuses to take off his dark sunglasses in the museum.”⁷¹⁹

In its post-hearing questions, the Office also sought to clarify the legal status of screen capture software, asking whether use of the technology depends upon the circumvention of access controls in violation of Section 1201(a)(1).⁷²⁰ In their responses, the parties generally agreed that at least some forms of screen capture software do not circumvent access controls and thus do not violate the prohibition. Some respondents, however, qualified their analyses by noting they had not examined every type of screen capture technology available and were limited to publicly available information regarding the technologies that they did examine.⁷²¹

(screen captured images, once transcoded, can be edited using programs like Avid and Final Cut Pro). Furthermore, with regard to operating systems, opponents provided testimony that screen capture software exists that is compatible with a variety of operating systems. T Marks, June 4, 2012, at 50.

⁷¹⁷ Letter from Peter Decherney, Associate Professor and Director, Cinema Studies Program, University of Pennsylvania, to David O. Carson, General Counsel (Aug. 2, 2012) [hereinafter the Decherney Letter].

⁷¹⁸ *Id.* at 2.

[I]f you look at images 3 and 4, you can see the discrepancy between the screen captured and ripped images. Focusing on the detail of the captain’s eye, we can see how much more information is revealed in the ripped version. Among other details, we can see the light reflected in the captain’s eye. Filmmakers place lights below main characters to achieve this effect, which is entirely lost in the screen captured version. The gleam in the captain’s eye makes him appear alert and alive, and we respond to him. The washed out captain of the screen captured version, on the other hand, is passive, stunned by the experience rather than reacting to it, and our identification with him is hindered.

⁷¹⁹ *Id.*

⁷²⁰ The questions posed and responses received are available in their entirety on the Copyright Office’s website.

⁷²¹ *See, e.g.*, Letter from Corynne McSherry, Intellectual Property Director, EFF, to David O. Carson, General Counsel, U.S. Copyright Office (July 18, 2012); Letter from Steven J. Metalitz on behalf of Joint Creators, to David O. Carson, General Counsel, U.S. Copyright Office (July 18, 2012).

4. Discussion

The current proposals for exemptions to allow the circumvention of lawfully obtained motion pictures⁷²² protected by access controls for various commercial, noncommercial, and “primarily noncommercial” purposes share a unifying feature in that in each case, proponents seek an exemption for the purpose of reproducing short clips to facilitate alleged noninfringing uses. Creators of noncommercial videos seek to use portions of motion pictures to create noninfringing works involving criticism or comment that they assert are transformative. Documentary filmmakers and multimedia ebook authors seek to reproduce portions of motion pictures in new works offering criticism or commentary. Fictional filmmakers wish to incorporate motion pictures into new films to convey certain messages. Film and media studies professors seek to assemble motion picture excerpts to demonstrate concepts, qualities, and techniques. Other educators seek to reproduce clips of motion pictures to illustrate points for classroom discussion.

At the outset, it should be noted that certain of the proposed exemptions for Proposed Classes 7 and 8 reference “audiovisual works” as opposed to “motion pictures.” The Register observes that Section 101 defines “motion pictures” as “audiovisual works consisting of a series of related images which, when shown in succession, impart an impression of motion, together with accompanying sounds, if any.”⁷²³ Section 101 defines “audiovisual works” somewhat more broadly, as

works that consist of a series of related images which are intrinsically intended to be shown by the use of machines or devices such as projectors, viewers, or electronic equipment, together with accompanying sounds, if any, regardless of the nature of the material objects, such as films or tapes, in which the works are embodied.⁷²⁴

Under the Copyright Act “motion pictures” are thus a subset (albeit a very large one) of “audiovisual works.” The record for Proposed Classes 7 and 8 is directed to uses of motion pictures such as movies, television shows, commercials, news, DVD extras, etc. It does not focus on uses of audiovisual works that would not be considered motion pictures under the Copyright Act.⁷²⁵ Based on the record, there is no basis for considering exemptions beyond motion pictures. In analyzing these proposed classes, the

⁷²² As discussed below, for purposes of copyright law, the term “motion pictures” includes not only movies but also works such as television shows and extra material on DVDs.

⁷²³ 17 U.S.C. § 101.

⁷²⁴ *Id.*

⁷²⁵ The record for all requested uses in Proposed Classes 7 and 8 includes only fleeting references to audiovisual works that are not also motion pictures. Such references are not detailed in the descriptions of proposed uses. *See, e.g.*, T Hobbs, June 4, 2012, at 34-35 (referring to a proposed educational use of “Madden” video games).

Register therefore treats the requested exemptions for “audiovisual works” as requests relating to motion pictures.

It is well established, and the record confirms, that CSS is a technological measure that controls access to motion pictures on DVDs, and that AACS is a measure that controls access to motion pictures on Blu-ray discs. In addition, proponents assert that the various systems that protect motion pictures available via online distribution services also constitute access controls within the meaning of Section 1201(a).⁷²⁶ For example, proponents identify and describe in detail Adobe’s Real Time Messaging Protocol Encryption (“RTMPE”) technology, which adds an encryption layer to streaming media in order to protect online services such as Hulu and UnBox.⁷²⁷ EFF identifies another Adobe product, SWF Verification, as another access control.⁷²⁸ It similarly identifies Windows Media DRM as a technological measure that controls access to motion pictures offered via download.⁷²⁹

For their part, Joint Creators state that certain download and streaming platforms that offer motion picture access, including some referenced by proponents, are “underwritten by the legislative promise of secure and robust protection for such content.”⁷³⁰ In light of proponents’ descriptions of various access controls applied to motion pictures available via online distribution services, combined with opponents’ apparent agreement that content owners widely rely on such controls to protect streamed and downloaded content, the Register concludes that a significant number of platforms that offer motion pictures via online distribution services use methods that constitute technological measures controlling access to those works.⁷³¹

a. Noninfringing uses

i. Noncommercial videos, commercial uses by documentary filmmakers and multimedia ebook authors, and educational uses

Proponents of exemptions to cover noncommercial videos, commercial uses by documentary filmmakers and multimedia ebook authors, and uses in educational contexts have shown that a significant number of the proposed uses reproduce short excerpts of

⁷²⁶ P7C (EFF) at 61; P7D (Joint Filmmakers) at 39-43.

⁷²⁷ P7C (EFF) at 61; P7D (Joint Filmmakers) at 39-43. EFF notes that Adobe itself considers RTMPE and related technologies to be technological protection measures. See P7C (EFF) at 62 (citing Adobe’s complaint in *Adobe Sys. Inc. v. Applian Techs., Inc.*, N.D. Cal. Case No. 09-cv-0228-WHA (filed Jan. 2, 2009)).

⁷²⁸ P7C (EFF) at 61.

⁷²⁹ *Id.* at 62.

⁷³⁰ C12 (Joint Creators) at 13-14.

⁷³¹ The Register notes that the landscape for access controls protecting motion pictures offered via online distribution services is constantly changing. See, e.g., T Weirick, May 17, 2012, at 160.

motion pictures for purposes of criticism and commentary. Such uses fall within the favored purposes referenced in the preamble of Section 107 and therefore are likely to be fair uses.⁷³²

More specifically, turning to the first fair use factor, proponents' stated uses tend to be transformative in nature, making brief uses of motion pictures for the purpose of criticism, comment, teaching and/or scholarship rather than for the works' original purpose. In the case of noncommercial videos, clips from motion pictures may make a point about some perceived theme or undercurrent in the subject works, for example, violence against women.⁷³³ In other situations, motion pictures clips may be used and remixed in order to make political statements about matters of public policy.⁷³⁴ In educational settings, motion pictures clips are used in film studies classes to deconstruct and reveal filmmaking techniques.⁷³⁵ In addition, professors and college and university students may use clips to serve educational needs in other types of courses.⁷³⁶ Educators of younger students may use clips to illustrate points in classroom lessons and/or raise issues for discussion.⁷³⁷

Further, despite the commercial aspect of uses by documentary filmmakers and multimedia ebook authors, the activities of these creators are often transformative in nature.⁷³⁸ In many instances, such creators use copyrighted works in order to offer

⁷³² 17 U.S.C. § 107:

Notwithstanding the provisions of sections 106 and 106A, the fair use of a copyrighted work, including such use by reproduction in copies or phonorecords or by any other means specified by that section, for purposes such as criticism, comment, news reporting, teaching (including multiple copies for classroom use), scholarship, or research, is not an infringement of copyright.

⁷³³ R9 (OTW) at 9.

⁷³⁴ P7B (EFF) at 44 (citing *Move Your Money* (commenting on the financial bailout)).

⁷³⁵ P7G (Joint Educators) at 10; P7F (LCA) at 13-14, 16-17.

⁷³⁶ P7G (Joint Educators) at 20-24 (citing uses such as university instructors assigning students to create presentations on various topics including film, media studies, anthropology, history, and chemistry).

⁷³⁷ *See, e.g.*, P8 (MEL) at 4-10 (citing uses such as kindergarten through twelfth grade teachers showing clips from various film titles to allow students to compare specific film techniques and styles, to teach nuances of stage production, and to illustrate character archetypes, tones, and plot lines); T Hobbs, June 4, 2012, at 99-100 (discussing uses of film clips to demonstrate differences in production in film versus television content); T Bolos, June 4, 2012, at 42 (discussing uses such as showing clips from films to enable comparison to works of literature that may share important themes).

⁷³⁸ P7D (Joint Filmmakers) at 8-13 (citing examples of motion picture clips used to illustrate a documentary filmmaker's point, including *The Real Rocky* (a documentary that used short clips from the *Rocky* films and *Battle Cry* to explore the inspiration behind the *Rocky* film series) and *SpOILed* (a documentary that used clips from *Black Gold* and *Quest for Fire* to illustrate how the oil industry got its start in the United States)); *see also* *Campbell*, 510 U.S. at 580, 594 (finding that parodies produced for commerce could be fair use when the parodic work uses "some elements of a prior author's composition to create a new one that, at least in part, comments on that author's works," and declining to impose a presumption that a commercial use was not fair).

criticism or commentary on the works in question. Documentary filmmakers may use motion picture clips to provide material that is directly relevant to the filmmaker's subject matter and message.⁷³⁹ Multimedia ebook authors have demonstrated how they may use clips to present film analysis.⁷⁴⁰ When a short excerpt from a motion picture is used for purposes of criticism and comment, even in a commercial context, it may well be a productive use that serves the essential function of fair use as a free speech safeguard.⁷⁴¹ While the Register does not necessarily conclude that a court would find each and every one of proponents' examples to be transformative, the record amply supports the conclusion that a substantial number of the proffered examples likely would be considered transformative.

Concerning the second fair use factor, a motion picture is generally creative in nature and thus at the core of copyright's protective purposes.⁷⁴² The Supreme Court has stated, however, that in relation to certain transformative uses, the second factor is of limited assistance in evaluating whether the use is fair.⁷⁴³ As indicated above, the Register determines that a substantial number of proponents' examples are transformative. Accordingly, the Register also concludes that the second fair use factor, while not favorable, is not especially relevant here.

Under the third fair use factor, an essential component of the proposals is that only a short portion of the work is used.⁷⁴⁴ The record evidence suggests that most of proponents' cited uses involve only brief portions of the underlying work. For example, the evidence demonstrates that, in a great many noncommercial videos, not only is each relevant clip very short (rarely longer than a few seconds), but even multiple clips from the same motion picture, when used together, comprise an extremely small fraction of the entirety of the source material.⁷⁴⁵ In relation to a typical movie of perhaps 120 minutes, the excerpts are a quantitatively small amount, comparable to brief quotations from a

⁷³⁹ P7D (Joint Filmmakers) at 8-9, 11-13 (citing uses such as filmmakers' inclusion of clips from popular films and news footage to analyze political cultural issues and the nature of various subcultures, and to explore historical figures).

⁷⁴⁰ P7E (Joint Ebook Authors) at 7-9 (citing uses such as using clips to analyze cinematic storytelling techniques or the interplay of history and specific film genres).

⁷⁴¹ *Campbell*, 510 U.S. at 583-85.

⁷⁴² Given that this analysis is generalized, and does not review specific uses, the assessment of the actual nature of a copyrighted work will vary from case to case. However, the record in this rulemaking generally revealed examples of motion pictures on the creative, rather than factual, side of the spectrum.

⁷⁴³ *Campbell*, 510 U.S. at 579.

⁷⁴⁴ The Register observes that EFF's proposed exemptions do not include the term "short portions of motion pictures," but instead use the term "clips." See P7B (EFF) at 36, 57. The Register further notes that MEL's proposal does not include a description of the amount of the work used, but several described uses involve short portions of motion pictures. See P8 (MEL) at 1, 4, 11, 12. For purposes of this fair use analysis, the Register will treat MEL's proposal as limited to short portions of works. In general, as discussed below, the Register observes that the only uses sought by the proponents that she considers to be potential fair uses for purposes of the present analysis are ones that use short portions of motion pictures, or "clips" constituting short portions of motion pictures.

⁷⁴⁵ R9 (OTW) at 15.

book.⁷⁴⁶ Similarly, as demonstrated at one of the hearings, ebook authors seek to use brief, discrete film segments to analyze cinematic storytelling.⁷⁴⁷ The record indicates that, in educational settings, the proposed uses are also usually short relative to the length of the entire work.⁷⁴⁸ Although the portions used may constitute important elements of the underlying works, the transformative nature of such uses renders them unlikely to adversely affect or supersede the potential market for or value of those works. As the Supreme Court has suggested, in certain situations, using the heart of the work may be the optimal way to avoid taking too much quantitatively, particularly when it is necessary to “conjure up” the work used.⁷⁴⁹

Under the fourth factor, when the use of the work is transformative, such as for the purpose of criticism or comment as described above, it is less likely that there will be interference with the primary or derivative markets for the underlying work. Indeed, opponents did not identify any proposed use that has harmed or likely will harm the market for or value of any copyrighted motion picture.⁷⁵⁰ Furthermore, there is nothing in the record to establish that the proponents’ planned uses would diminish the value of the copyright-protected motion pictures.⁷⁵¹

On balance, the fair use analysis demonstrates that many of the uses in which noncommercial video creators, documentary filmmakers, multimedia ebook authors, and educational users seek to engage are likely to be fair. Importantly, the Register is not making any judgment as to whether any particular use offered by the proponents is in fact fair, and it is conceivable that some may not be. Nonetheless, there is ample basis to conclude that some significant number (and probably many) of the proposed uses likely

⁷⁴⁶ While, in some cases, creators used multiple clips from the same motion picture or larger percentages of interviews contained on a DVD, the question of whether the amount used was reasonable in relation to the purpose is a fundamental fair use question that should be addressed under the rubric of fair use analysis, not precluded *per se* as a result of the prohibition on circumvention. There undoubtedly were some examples introduced into record that used an amount of the work that could disqualify the user from relying on fair use. See, e.g., C20 (Rife) at 3 (*Luminosity’s Vogue/300*, an extensive montage of scenes from the movie *300* mixed with Madonna’s recording “Vogue”).

⁷⁴⁷ T Buster, June 4, 2012, at 168-77.

⁷⁴⁸ See, e.g., P8 (MEL) at 12.

⁷⁴⁹ *Campbell*, 510 U.S. at 588-89:

But if quotation of the opening riff and the first line may be said to go to the “heart” of the original, the heart is also what most readily conjures up the song for parody, and it is the heart at which parody takes aim. Copying does not become excessive in relation to parodic purpose merely because the portion taken was the original’s heart. If 2 Live Crew had copied a significantly less memorable part of the original, it is difficult to see how its parodic character would have come through.

⁷⁵⁰ Opponents do, however, allege that several of the exemptions that would allow circumvention would harm the market for works protected by access controls. That matter is addressed below in the context of the 1201 statutory factors.

⁷⁵¹ *Campbell*, 510 U.S. at 591-92.

would qualify as noninfringing under Section 107.

ii. Commercial uses by fictional filmmakers

The Register concludes that the same fair use analysis cannot be applied to fictional filmmakers, at least on the record presented. It is true that the use of motion picture excerpts in a fictional film may enhance the film, but that does not necessarily mean that the use is fair. Notably, fictional films differ from the categories of use described above because there is no basis to assume that fictional films' primary purpose is to offer criticism or comment. Rather, the purpose of a fictional film is typically entertainment.

This is not to say that a fictional filmmakers' use of a motion picture excerpt cannot be a fair use. Under appropriate circumstances, it may well be. But fictional film proponents have chosen merely to describe their desired uses and have not presented concrete examples – such as existing films that make use of preexisting material in a clearly transformative manner – that permit the Register to make a finding of fair use in this context. As it stands, the record does not allow the Register to reach a satisfying determination as to the nature of the fictional filmmakers' proposed uses, the amount of the underlying works fictional filmmakers generally seek to use, or whether or how such uses might affect the market for the original works. In short, the Register cannot conduct an adequate fair use analysis based on the evidence presented.

Moreover, the Register notes that, to the extent they are discernible from proponents' descriptions, a number of the examples cited by proponents do not appear readily to lend themselves to a conclusion that the proposed uses would likely be considered fair. The use of an earlier work to flesh out characters and motivations in a new work, or to develop a storyline, does not inherently serve the purpose of criticism or comment on the existing work. Indeed, the use of an earlier work or works as the basis for a new work could give rise to a concern that the new use might supplant the derivative market for the existing work.

The Register therefore concludes, on the record before her, that proponents for fictional filmmakers have failed to establish that the uses in which they seek to engage are likely to be noninfringing.

b. *Adverse impact*

Other than with respect to fictional film uses,⁷⁵² proponents have established that certain noninfringing uses contemplated by Proposed Classes 7 and 8 can be achieved if circumvention is allowed. This does not necessarily mean, however, that the prohibition on circumvention is having an adverse effect on noninfringing uses. Specifically, the

⁷⁵² In light of the finding that fictional filmmakers have failed to demonstrate substantial noninfringing uses, and the deficient record with respect to this category of uses, the Register does not evaluate the proposed fictional film uses for purposes of adverse impact or the Section 1201 statutory factors.

Register must still determine whether it is possible that proponents may make noninfringing uses without circumventing access controls.

As a general matter, the Register concludes that motion pictures are not widely and reasonably available in other formats not subject to technological protections. In the past, motion pictures were still available in VHS format. However, VHS tapes are no longer commercially distributed.⁷⁵³ While the various avenues of motion picture distribution are alternatives to one another, the record indicates that all of the most popular forms of commercial distribution of motion pictures, including DVD, Blu-ray, and online distribution services, are protected by access controls.

Opponents point to clip licensing, smartphone video recording, and screen capture software as alternatives that allow proponents affordably and effectively to copy short portions of motion pictures to achieve the desired uses without resorting to circumvention.⁷⁵⁴

The record clearly shows that clip licensing is not a reasonable alternative. The record establishes that the scope of content offered through reasonably available licensing sources is far from complete.⁷⁵⁵ Furthermore, requiring a creator who is making fair use of a work to obtain a license is in tension with the Supreme Court's holding in *Campbell v. Acuff-Rose Music, Inc.*⁷⁵⁶ that rightsholders do not have an exclusive right to markets for commentary on or criticism of their copyrighted works.

Alternatively, opponents propose that users could use smartphone cameras to record relevant excerpts of motion pictures.⁷⁵⁷ Previously, the Register found that a similar alternative to circumvention – the “camcording” of content from an output monitor – imposed a significant cost that was more than a mere inconvenience.⁷⁵⁸ Opponents argue that, by contrast, the cost associated with smartphone recording does not amount to more than an inconvenience. Proponents dispute this, asserting that the cost can be significant.⁷⁵⁹ In the context of the proposed exemptions, the record regarding the true cost of smartphone recording is unclear.

⁷⁵³ P7D (Joint Filmmakers) at 1.

⁷⁵⁴ C8 (DVD CCA) at 8-16, and 44.

⁷⁵⁵ R17 (Joint Educators) at 5-7.

⁷⁵⁶ 510 U.S. 569 (1994).

⁷⁵⁷ See, e.g., C8 (DVD CCA) at 13-14; T Marks, June 4, 2012, at 50, 190; Taylor, May 11, 2012, Tech Demonstration Hearing (no transcript, video of submitted smartphone recording presentation “120511cop1330_Taylor” is available upon request to the Copyright Office).

⁷⁵⁸ 2010 Recommendation at 59.

⁷⁵⁹ T Bolos, June 4, 2012, at 77 (noting that, while smartphones appear to be cheap, they incur monthly charges that may be significant).

A number of proponents criticize the quality of smartphone recordings by asserting that they yield inferior video and audio quality.⁷⁶⁰ There is also a concern that smartphone recordings may not capture the entire image as it is meant to appear on the screen.⁷⁶¹ The Register recognizes that there is room for continued debate regarding the image quality obtainable via smartphone recordings, and is unable to conclude on this record that smartphone recordings serve as a sufficient alternative to circumvention.

In the previous proceeding, the Register found that screen capture technology offered a cost-effective alternative technique to allow reproduction of motion pictures. The Register also determined, however, that some significant number of noninfringing uses, though not all, would be adversely affected if limited to this alternative. This finding of some substantial adverse impact was based on the fact that the screen capture software examined resulted in image quality that was significantly inferior to that available via circumvention, coupled with the fact that some users required high-quality images that could only be obtained via circumvention in order to accomplish the desired noninfringing use.⁷⁶²

Unlike in the last proceeding, when the Register raised screen capture technology as a possible alternative to circumvention,⁷⁶³ in the current proceeding it is opponents who challenge the notion that exemptions are warranted in light of the availability of screen capture technology as a reasonable alternative to circumvention. DVD CCA and AACS LA point out that the image quality has greatly improved since the last proceeding. While neither opponent endorses screen capture technology generally or any particular software program, they both identify Applian's Replay Video Capture as a possible solution. They note that, while in the previous proceeding the Register found that video capture software lacked the requisite quality for certain of the noninfringing uses, no such finding should be presumed in the current proceeding.⁷⁶⁴

Both proponents and opponents address various types of screen capture technology. The presented information shows that at least some versions of this technology are not cost-prohibitive for the types of use at issue.⁷⁶⁵ Aside from the question of cost, however, proponents offer extensive evidence and commentary in an

⁷⁶⁰ R11 (International Documentary Association, Kartemquin Educational Films, Inc., and National Alliance for Media Arts and Culture) at 7; T Morrissette, June 4, 2012, at 148.

⁷⁶¹ T Marks, June 4, 2012, at 190; Taylor May 11, 2012, Tech Demonstration Hearing, Friday, May 11, 2012 (no transcript, video of submitted smartphone recording presentation "120511cop1330_Taylor" is available upon request to the Copyright Office) (the Register notes that the submitted smartphone recordings cut off the bottom portion of motion pictures intended to be recorded).

⁷⁶² 2010 Recommendation at 60-61.

⁷⁶³ 2010 Recommendation at 28 n.81 (citing T Kasunic, May 1, 2009, at 57-59).

⁷⁶⁴ C4 (AACS LA) at 11-13; C8 (DVD CCA) at 11-13 (citing *See If You Can Watch It, You Can Record It With Replay Video Capture*, Applian.com).

⁷⁶⁵ *See, e.g.*, T Marks, June 4, 2012, at 190 (screen capture software technology is available for less than \$50).

effort to establish that the results of screen capture are insufficient for their needs.⁷⁶⁶ Based on the video evidence, the accompanying explanations offered in the hearings, and the post-hearing input from proponents and opponents, the Register determines that the screen capture images, while improved in quality since the last proceeding, are still of lower quality than those available by circumvention of access controls on motion pictures. The images available from screen capture technology are somewhat diminished in clarity and depth, and may exhibit some degree of pixelation.⁷⁶⁷ As there is no serious question that screen capture technology produces lower-quality images than those that are available by circumvention, the remaining consideration is whether screen capture images are suitable for proponents' desired noninfringing uses.

Documentary filmmakers suggest that the lower-quality images generated by screen capture are not suitable for the dissemination of their films. The Register found a similar argument persuasive in the previous rulemaking based on certain distribution standards generally requiring that films adhere to specific quality standards that cannot be met by screen capture.⁷⁶⁸ Unlike in the last proceeding, however, the Register is not convinced on the present record that the distribution requirements would give rise to significant adverse effects. In this proceeding, the parties have explained the standards in greater detail, including the fact that certain accommodations are made with respect to pre-existing materials. Proponents did not make a persuasive showing that distribution is, or will be, adversely impacted due to a format or quality concern. Without such evidence, the Register is not able to conclude that the inability to obtain higher-quality images through circumvention has adverse effects on documentary filmmakers as a result of distribution standards.

Nonetheless, the record does support the conclusion that, in some cases, for other reasons, the inability to circumvent to make use of higher-quality material available on DVDs and in protected online formats is likely to impose significant adverse effects on documentary filmmakers, as well as on noncommercial video makers, multimedia ebook authors, and certain types of educational users.

Creators of noncommercial videos provided the most extensive record to support the need for higher-quality source material. Based on the video evidence presented, the Register is able to conclude that diminished quality likely would impair the criticism and comment contained in noncommercial videos. For example, the Register is able to perceive that *Buffy vs Edward* and other noncommercial videos would suffer significantly because of blurring and the loss of detail in characters' expression and sense of depth.⁷⁶⁹

⁷⁶⁶ See responses and exhibits set forth on the Office's website.

⁷⁶⁷ "Pixelation" is defined "in computer graphics and digital photography [as] ... caus[ing] (an image) to break up into pixels, as by overenlarging the image: When enlarging a photograph, first increase the resolution to avoid pixelating it." See dictionary.reference.com/browse/pixelation, last visited Oct. 24, 2012 at 8:30am. "Pixelated" means "displayed in such a manner that individual pixels are discernible." See www.merriam-webster.com/dictionary/pixelated, last visited Oct. 24, 2012 8:30am.

⁷⁶⁸ 2010 Recommendation at 65-66.

⁷⁶⁹ See Decherney Letter at 2-3.

But the record does not support a finding that all noncommercial videos necessarily require high-quality images. Some noncommercial videos offered into the record could apparently accomplish the proposed noninfringing use without a high level of image detail. For example, the noncommercial video *Planet of the Arabs* appears to convey the desired comment on the treatment of Arabs by American media quite successfully despite diminished image quality.⁷⁷⁰

Although the record is not as robust in the case of documentary filmmakers and multimedia ebook authors, it is sufficient to support a similar finding that for certain uses – *i.e.*, when trying to convey a point that depends upon the ability to perceive details or subtleties in a motion picture excerpt – documentary filmmakers and ebook authors likely will suffer adverse effects if they are unable to incorporate higher-quality images. It may, for example, be important to show rippling muscles⁷⁷¹ or particles of dust⁷⁷² to make a point. Similarly, educational uses that depend upon close analysis of film or media images may be adversely impacted if students are unable to apprehend the subtle detail or emotional impact of the images they are analyzing, such as the full brilliance of a diamond⁷⁷³ or the glint of an eye.⁷⁷⁴ Again, however, where precise detail is not required for the particular use in question – for example, where a clip is presented simply to illustrate a historical event – lower-quality screen capture images may be fully adequate to fulfill the noninfringing use.

For uses that do not require higher-quality images, the Register finds that screen capture is a satisfactory alternative to circumvention. On the present record, the Register reiterates her previous determination that the use of some types of video capture software is, for purposes of Section 1201(a)(1), “comparable to camcording the screen – a process that has been identified as a noncircumventing option for accomplishing noninfringing uses.”⁷⁷⁵ Proponents, however, maintain that even if the Register acknowledges now, as she did in 2010, that certain types of video capture software are noncircumventing, this is of little value, as there is no assurance that all copyright owners share this view.⁷⁷⁶ Proponents observe, for example, that litigation has been instituted over the use of similar methods of acquiring content protected by access controls.⁷⁷⁷

In light of the unsettled legal landscape, as discussed below, the Register finds that there is a need for limited exemptions to address the possible circumvention of

⁷⁷⁰ See P7B (EFF) at 46 (citing hnassif, *Planet of the Arabs*).

⁷⁷¹ T Quinn, June 4, 2012, at 157.

⁷⁷² *Id.* at 168-178; T Cohen, June 4, 2012, at 178-80.

⁷⁷³ T Decherney, June 4, 2012, at 87-91.

⁷⁷⁴ Decherney Letter at 2.

⁷⁷⁵ 2010 Recommendation at 60-61.

⁷⁷⁶ See, e.g., T Tushnet, June 4, 2012, at 261-62.

⁷⁷⁷ R1 (LCA) at 3 (citing *Ass’n for Info. Media & Equip. v. Regents of the Univ. of Cal.*, 2011 U.S. Dist. LEXIS 154011 (C.D. Cal. Oct. 3, 2011) (suit filed against UCLA alleging that use of software that copies the analog output of a DVD violates DMCA)).

protected motion pictures when using screen capture technology to reproduce short portions for purposes of criticism or comment.

Finally, documentary filmmakers and educational users (including college and university professors and students and kindergarten through twelfth grade educators) seek an expanded exemption to circumvent AACS-protected Blu-ray discs, in addition to CSS-protected DVDs and protected online formats.⁷⁷⁸ The evidentiary record establishes that there is some amount of motion picture material that may be available only on Blu-ray discs, such as bonus material⁷⁷⁹ or, more rarely, entire films released exclusively on Blu-ray.⁷⁸⁰ However, the few cited uses of Blu-ray-exclusive content are insignificant in number. Moreover, as discussed above, with respect to documentary filmmakers in particular, the Register is not persuaded that Blu-ray content is necessary to meet applicable distribution standards. The Register therefore concludes that the record does not reflect a substantial adverse impact due to the inability to use motion picture materials contained on Blu-ray discs.

c. *Statutory factors*

The record demonstrates that CSS technology protecting DVDs, AACS technology protecting Blu-ray discs, and various systems protecting motion pictures available via online distribution services are technological protection measures that effectively control access to copyrighted works. It also shows that there are significant amounts of noninfringing uses in which noncommercial video creators, documentary filmmakers, multimedia ebook authors, and certain educational users seek to engage that are, or are likely to be, adversely affected by the prohibition on circumvention. The final step in this review is to consider the series of factors set forth in Section 1201(a)(1)(C).

With respect to the first factor,⁷⁸¹ which addresses the availability of copyrighted works, the Register previously determined that it is questionable whether CSS protection remained a critical factor in the decision to release motion pictures in digital format, noting that DVD had become the dominant form of distribution, and remained so despite the wide availability of circumvention tools. Specifically, she stated that “while CSS-protected DVDs may very well have fostered the digital distribution of motion pictures to the public, there is no credible support for the proposition that the digital distribution of motion pictures continues to depend on the integrity of the general ‘principle’ that the

⁷⁷⁸ See P7D (Joint Filmmakers) at 23-24. Fictional filmmakers also seek access to Blu-Ray content, but, as discussed above, they have not made the requisite showing with respect to noninfringing uses. Noncommercial video makers and multimedia ebook authors do not request an exemption for Blu-ray discs. See P7B (EFF); P7C (EFF); P7E (Joint Ebook Authors).

⁷⁷⁹ 7G (Joint Educators) at 16 (Blu-ray-only *Fight Club: 10th Anniversary Edition* including bonus material not available on any of the previous DVD releases); 7D (Joint Filmmakers) at 12 (Blu-ray-only *Star Wars* release with special features).

⁷⁸⁰ 7G (Joint Educators) at 16 (Blu-ray-only *Terminator Salvation Director’s Cut*); 7D (Joint Filmmakers) at 12 (Blu-ray-only *Mortal Kombat: Legacy*).

⁷⁸¹ 17 U.S.C. § 1201(a)(1)(C)(i).

circumvention of CSS is always unlawful.”⁷⁸² Likewise, the record here does not support a finding that there can be no exception to the prohibition on circumvention for the purpose of facilitating noninfringing uses or that the overall availability of motion pictures will suffer if such an exemption is adopted. Accordingly, the first statutory factor does not weigh against properly tailored exemptions to permit the fair use of protected motion picture material.

Turning to the second statutory factor,⁷⁸³ the availability for use for nonprofit archival, preservation, and educational uses, the focus on education is, of course, relevant to the proposals relating to educational uses, as well as to a lesser degree those relating to documentary films, documentary videos, and multimedia ebooks offering film criticism. However, this factor would not appear to have any significant bearing with respect to many noncommercial videos. Overall, this factor is neutral to favorable vis-à-vis the proposed exemptions.

The third factor,⁷⁸⁴ the impact that the prohibition on circumvention has on criticism, comment, news reporting, teaching, scholarship, and research, is a critical consideration in relation to noncommercial videos, documentary filmmaking, multimedia ebook authorship, and educational uses. Each of these proposed categories seeks to enable criticism, comment, teaching, and/or scholarship. This factor therefore weighs strongly in favor of appropriately tailored exemptions to foster such uses.

The fourth factor,⁷⁸⁵ the effect of circumvention on the market for or value of copyrighted works, is relevant to all of the above-referenced uses. Motion pictures involve significant effort and expense to create and, once created, frequently become a vital part of American culture. The motion picture industry has a legitimate interest in preventing motion pictures from being copied in their entirety or in a manner that would adversely impact the market for or value of these works, including reasonable derivative markets.

Significantly, however, proponents do not seek to copy motion pictures in their entirety. Rather, the record reflects the need to use only a quantitatively small percentage of the protected works. The Register concludes that the use of such small portions in the contexts described within the approved exemptions is unlikely to supplant the market for motion pictures.

Proponents claim that their requested uses will enhance the market for copyrighted works.⁷⁸⁶ Conversely, opponents argue that the integrity of access controls, which may be negatively affected by even limited exemptions permitting circumvention,

⁷⁸² 2010 Recommendation at 57.

⁷⁸³ 17 U.S.C. § 1201(a)(1)(C)(ii).

⁷⁸⁴ *Id.* at § 1201(a)(1)(C)(iii).

⁷⁸⁵ *Id.* at § 1201(a)(1)(C)(iv).

⁷⁸⁶ *See, e.g.*, P7B (EFF) at 48.

is an important factor in preserving the value of copyrighted works.⁷⁸⁷ The Register recognizes that there is some merit to each of these positions. On the record in this proceeding, however, neither view has been firmly established. Thus, the Register concludes, on the whole, that the fourth factor does not strongly favor, but also does not weigh against, properly conceived exemptions to enable criticism and commentary.

d. NTIA comments

NTIA believes an appropriate exemption is necessary because the proposed beneficiaries lack sufficient alternatives to circumvention.⁷⁸⁸ It asserts that “generally, the technological alternatives [to circumvention] produce low-quality videos, and associated license agreements often impose significant content limitations on the final work product.”⁷⁸⁹ It notes that documentarians are “particularly hindered” by poor video quality because of the media industry’s “strict technical standards,”⁷⁹⁰ and that, as to educational uses, the availability of screen capture software may not be universal due to high costs and limited budgets.⁷⁹¹ NTIA notes that clip services are limited in scope and may not meet the needs of all users, and that licensing negotiations are “expensive and burdensome, especially when the licensee seeks to critique the copyrighted work.”⁷⁹²

NTIA proposes that the Register recommend a class that encompasses “[m]otion pictures and other similar audiovisual works on DVDs or delivered via Internet Protocol,” asserting that the class should encompass “audiovisual works,” which is broader than “motion pictures,” because the former best fits the evidentiary record.⁷⁹³ NTIA also proposes to replace “for the purpose of criticism or comment” with “for the purpose of fair use,” and would expand the applicable circumstances beyond documentary filmmaking to include educational uses by college and university professors and college students, educational uses by kindergarten through twelfth grade educators, primarily noncommercial videos, and nonfictional or educational multimedia ebooks.⁷⁹⁴

As discussed above, the evidentiary support in favor of an exemption is not uniform across the several individual proposals within Proposed Classes 7 and 8. On the record presented, the Register finds that, when a higher-quality excerpt is essential to a particular use, an exemption to permit circumvention of CSS-protected DVDs and protected online formats is appropriate. For uses where high-quality material is not

⁷⁸⁷ T Weirick, May 17, 2012, at 160; T Mackechnie, May 17, 2012, at 167.

⁷⁸⁸ NTIA Letter at 21.

⁷⁸⁹ *Id.*

⁷⁹⁰ *Id.* (citations omitted).

⁷⁹¹ *Id.* (citations omitted).

⁷⁹² *Id.* (citations omitted).

⁷⁹³ *Id.* at 21-22 and n.132.

⁷⁹⁴ *Id.* at 21-22.

critical, screen capture technology provides an adequate alternative to circumvention, and an exemption to permit the use of such technology is appropriate.

5. Recommendation

As indicated above, proponents have sufficiently identified particular technological access control measures and established that a significant number of the proposed uses are likely noninfringing. Proponents seeking an exemption for noncommercial videos, commercial documentary films, commercial multimedia ebooks offering film analysis, and certain educational uses have established that such uses are, or likely will be, adversely affected by the prohibition against circumvention when there is a need to use high-quality motion picture material to convey intended criticism or commentary.

In addition, for uses in these categories that do not require high-quality content, the Register recommends limited exemptions to address the possibility of circumvention when using screen capture technology to reproduce motion picture excerpts from CSS-protected DVDs and protected online formats.

The Register's recommended exemptions are set forth below. In making these recommendations, the Register offers some observations.

To the extent, if any, proponents seek to exempt uses of motion pictures that exceed short portions or clips, such a request is not supported by the record. The noninfringing uses presented by proponents in support of their proposals generally consist of short portions or clips. Consistent with the analysis above, the use of only short segments is critical to the Register's determination that a significant number of the desired uses are fair.

Similarly, to the extent that proponents seek an exemption for ebook authors beyond multimedia nonfiction titles offering film analysis, their request is not supported by the record. It may well be the case that there are additional fair uses by multimedia authors that would support a more broadly defined exemption, but no such uses were identified. Rather, the uses that proponents rely upon were limited to nonfiction multimedia ebook titles offering film analysis.⁷⁹⁵

Further, to the extent proponents seek an expanded exemption covering unspecified "noninfringing" or "fair" uses where circumvention is not undertaken for the purpose of criticism or comment, their request also lacks support in the record. The record indicates proponents' view that criticism or comment is central to the purpose of creating noncommercial videos.⁷⁹⁶ It is also an essential purpose of the proposed documentary filmmaking, multimedia ebook, and educational uses. Consistent with the

⁷⁹⁵ P7E (Joint EBook Authors) at 7-9.

⁷⁹⁶ P7B (EFF) at 46; R9 (OTW) at 13, 15.

analysis above, on this record, the Register considers the desire to engage in criticism or commentary to be a critical factor in establishing fair use in these contexts.⁷⁹⁷

To the extent proponents for noncommercial videos seek an expanded exemption covering “*primarily* noncommercial videos” – as opposed to “noncommercial videos” – they have not demonstrated a meaningful number of such uses that would qualify as noninfringing. It is true that a work may be commercial in nature and still be transformative.⁷⁹⁸ However, proponents identify only a single video that allegedly falls within this category in that it generated advertising revenue.⁷⁹⁹ It is not clear from the record, however, why this example should be considered “primarily noncommercial” as opposed to “primarily commercial.” Moreover, a single cited use is an insufficient basis upon which to conclude that “primarily noncommercial” uses are more likely than not to be noninfringing.

On the other hand, proponents have established a sufficient basis for clarifying that the proposed exemption for noncommercial works may include videos created pursuant to a paid commission, provided that the commissioning entity uses the work solely in a noncommercial manner. In this regard, proponents cite several examples of videos that were created pursuant to a paid commission by a noncommercial entity that were then used for noncommercial purposes.⁸⁰⁰ Based on this, the Register finds that the definition of “noncommercial videos” should clarify that noncommercial videos may include videos created pursuant to a paid commission, provided the commissioning entity uses the work solely in a noncommercial manner. Although such commissioned works might also reasonably be described as having a commercial aspect, the requirement that the video be for the purpose of criticism or comment renders any minimal commercial purpose less significant.⁸⁰¹

With respect to educational uses, the Register finds that the record supports a determination that college and university professors and other faculty, as well as students, in film studies and other courses focused on close analysis of media excerpts may sometimes need to reproduce content from CSS-protected DVDs and protected online formats to enable such analysis. Because the exemption is limited to educational activities involving close analysis, there is no basis to limit the exemption only to professors. Non-professor faculty at colleges and universities should also be permitted to take advantage of the exemption when there is a pedagogical need for high-quality source material. In addition, the record supports a finding that instructors of younger students

⁷⁹⁷ The Register thus rejects the broader formulations suggested by certain proponents that the use simply be “noninfringing” or “for the purpose of fair use.” See, e.g., P7E (Joint Ebook Authors) at 14-15. As noted, such formulations are not supported by the record, which is focused on uses offering criticism or commentary. Nor do they provide a sufficiently refined explanation of the nature of the use to which the exemption would apply.

⁷⁹⁸ *Campbell*, 510 U.S. at 584-85.

⁷⁹⁹ P7B (EFF) at 46.

⁸⁰⁰ *Id.* at 48-49.

⁸⁰¹ *Campbell*, 510 U.S. at 584-85.

sometimes engage in close analysis of motion picture excerpts in media-oriented courses. As discussed above, however, the record does not support an across-the-board finding that all faculty and students in higher education, or all kindergarten through twelfth grade educators, need to circumvent protected motion picture formats. Instead, screen capture technology is sufficient for uses that do not require close analysis. General-purpose classroom uses should be satisfied by the use of screen capture software.

Prospective users of the recommended exemptions should take care to ensure that they satisfy each requirement of the narrowly tailored exemptions before seeking to operate under their benefits. Creators and educators should consider whether there is an adequate alternative before engaging in circumvention under a recommended exemption. The Register further notes that screen capture technology should only be employed when it is reasonably represented, and offered to the public, as enabling the reproduction of motion picture content after such content has been lawfully decrypted – that is, when it is offered as a noncircumventing technology.

Finally, users of the limited exemptions should be prepared to defend their activities in light of the alternatives as they exist at the time of their use of the exemption, including any further innovations in screen capture or other technologies that may produce higher-quality results than are obtainable as of this Recommendation.

Based on the foregoing analysis, the Register recommends that the Librarian designate the following classes:

Motion pictures, as defined in 17 U.S.C. § 101, on DVDs that are lawfully made and acquired and that are protected by the Content Scrambling System, where the person engaging in circumvention believes and has reasonable grounds for believing that circumvention is necessary because reasonably available alternatives, such as noncircumventing methods or using screen capture software as provided for in alternative exemptions, are not able to produce the level of high-quality content required to achieve the desired criticism or comment on such motion pictures, and where circumvention is undertaken solely in order to make use of short portions of the motion pictures for the purpose of criticism or comment in the following instances: (i) in noncommercial videos; (ii) in documentary films; (iii) in nonfiction multimedia ebooks offering film analysis; and (iv) for educational purposes in film studies or other courses requiring close analysis of film and media excerpts, by college and university faculty, college and university students, and kindergarten through twelfth grade educators. For purposes of this exemption, “noncommercial videos” includes videos created

pursuant to a paid commission, provided that the commissioning entity's use is noncommercial.

Motion pictures, as defined in 17 U.S.C. § 101, that are lawfully made and acquired via online distribution services and that are protected by various technological protection measures, where the person engaging in circumvention believes and has reasonable grounds for believing that circumvention is necessary because reasonably available alternatives, such as noncircumventing methods or using screen capture software as provided for in alternative exemptions, are not able to produce the level of high-quality content required to achieve the desired criticism or comment on such motion pictures, and where circumvention is undertaken solely in order to make use of short portions of the motion pictures for the purpose of criticism or comment in the following instances: (i) in noncommercial videos; (ii) in documentary films; (iii) in nonfiction multimedia ebooks offering film analysis; and (iv) for educational purposes in film studies or other courses requiring close analysis of film and media excerpts, by college and university faculty, college and university students, and kindergarten through twelfth grade educators. For purposes of this exemption, "noncommercial videos" includes videos created pursuant to a paid commission, provided that the commissioning entity's use is noncommercial.

Motion pictures, as defined in 17 U.S.C. § 101, on DVDs that are lawfully made and acquired and that are protected by the Content Scrambling System, where the circumvention, if any, is undertaken using screen capture technology that is reasonably represented and offered to the public as enabling the reproduction of motion picture content after such content has been lawfully decrypted, when such representations have been reasonably relied upon by the user of such technology, when the person engaging in the circumvention believes and has reasonable grounds for believing that the circumvention is necessary to achieve the desired criticism or comment, and where the circumvention is undertaken solely in order to make use of short portions of the motion pictures for the purpose of criticism or comment in the following instances: (i) in noncommercial videos; (ii) in documentary films; (iii) in

nonfiction multimedia ebooks offering film analysis; and (iv) for educational purposes by college and university faculty, college and university students, and kindergarten through twelfth grade educators. For purposes of this exemption, “noncommercial videos” includes videos created pursuant to a paid commission, provided that the commissioning entity’s use is noncommercial.

Motion pictures, as defined in 17 U.S.C. § 101, that are lawfully made and acquired via online distribution services and that are protected by various technological protection measures, where the circumvention, if any, is undertaken using screen capture technology that is reasonably represented and offered to the public as enabling the reproduction of motion picture content after such content has been lawfully decrypted, when such representations have been reasonably relied upon by the user of such technology, when the person engaging in the circumvention believes and has reasonable grounds for believing that the circumvention is necessary to achieve the desired criticism or comment, and where the circumvention is undertaken solely in order to make use of short portions of the motion pictures for the purpose of criticism or comment in the following instances: (i) in noncommercial videos; (ii) in documentary films; (iii) in nonfiction multimedia ebooks offering film analysis; and (iv) for educational purposes by college and university faculty, college and university students, and kindergarten through twelfth grade educators. For purposes of this exemption, “noncommercial videos” includes videos created pursuant to a paid commission, provided that the commissioning entity’s use is noncommercial.

H. Proposed Class 9: Motion pictures and other audiovisual works – captioning and descriptive audio

Proponents Telecommunications for the Deaf and Hard of Hearing, Inc., Gallaudet University, and the Participatory Culture Foundation (“PCF”) propose that the Register recommend the following four classes of works:

9A: Motion pictures and other audiovisual works delivered via Internet protocol (IP) protected by technological measures that control access to such works when circumvention is accomplished to facilitate the creation, improvement, or rendering of visual representations or descriptions of audible portions of such works for the purpose of improving the ability of individuals who may lawfully access such works to perceive such works.

9B: Motion pictures and other audiovisual works delivered via Internet protocol (IP) protected by technological measures that control access to such works when circumvention is accomplished to facilitate the creation, improvement, or rendering of audible representations or descriptions of visual portions of such works for the purpose of improving the ability of individuals who may lawfully access such works to perceive such works.

9C: Motion pictures and other audiovisual works on fixed disc-based media protected by technological measures that control access to such works when circumvention is accomplished to facilitate the creation, improvement, or rendering of visual representations or descriptions of audible portions of such works for the purpose of improving the ability of individuals who may lawfully access such works to perceive such works.

9D: Motion pictures and other audiovisual works on fixed disc-based media protected by technological measures that control access to such works when circumvention is accomplished to facilitate the creation, improvement, or rendering of audible representations or descriptions of visual portions of such works for the purpose of improving the ability of individuals who may lawfully access such works to perceive such works.

1. Proponents' case

Proponents seek to circumvent technological measures applied to content distributed via the internet and “fixed-disc media” for the purpose of creating, improving, and rendering captions and descriptive audio tracks to enable individuals with disabilities to perceive such works, and for the purpose of conducting research and development on technologies to enable such accessibility.

a. *Background*

Although proponents' written filings were not entirely clear, at the hearing it became apparent that proponents' primary interest is in the development of players capable of merging commercially accessible content delivered on fixed-disc media and via the internet with captions and audible descriptions of video programming (“descriptive audio”) that are created separately, generally by parties other than the copyright owner of the original copyrightable work.⁸⁰²

Proponents assert that content distributed via the internet uses “server-based authentication mechanism[s] in conjunction with trusted client code that handles license validation, license restrictions, and decryption of content.”⁸⁰³ They provide a description of several currently used protection measures, but note that “the market for IP-delivered video is currently in a state of flux with respect to digital rights management (“DRM”), leaving uncertain which product or products distributors . . . will settle upon.”⁸⁰⁴ They further assert that “it is increasingly likely that a substantial portion of IP-delivered video uses, and will continue to use, DRM technologies,” pointing to “the insistence of content creators that manufacturers of video-playback devices employ strong DRM to control access to their works.”⁸⁰⁵ With respect to fixed-disc media, proponents point to the widely used Content Scramble System (“CSS”) and the newer Advanced Access Content System (“AACS”) used to protect DVDs and Blu-ray discs, respectively.⁸⁰⁶

Proponents allege that circumvention is necessary to achieve their objectives because they require access to the “playhead,” that is, the technical timing information embedded in internet-delivered and fixed-disc-based content that would allow proper synchronization of the captions and descriptive audio with the underlying video content to which it applies.⁸⁰⁷

⁸⁰² T Reid, June 5, 2012, at 124.

⁸⁰³ P9A-D (Telecommunications for the Deaf and Hard of Hearing, Inc. (“TDI”) and Participatory Culture Foundation (“PCF”)) at 11.

⁸⁰⁴ *Id.* at 12.

⁸⁰⁵ *Id.* at 14.

⁸⁰⁶ Opponents do not challenge the notion that internet-based and fixed-disc content is protected by technological measures.

⁸⁰⁷ *See, e.g., id.* at 17.

b. *Asserted noninfringing uses*

Proponents claim that creating or improving captions and descriptive audio is a fair use, asserting that the Librarian has previously stated that making an ebook accessible to the visually impaired is a noninfringing use.⁸⁰⁸ Proponents also make a broad assertion that a footnote in *Sony Corporation of America v. Universal City Studios, Inc.* should be construed to mean that any use of a copyrighted work to enhance accessibility for an individual with disabilities is presumptively fair.⁸⁰⁹

Proponents' analysis of the four fair use factors⁸¹⁰ asserts that (1) the purpose and character of the use – enhancing accessibility and conducting research and scholarship for the same – weighs in favor of fair use; (2) the nature of the works ranges from purely creative to primarily factual, rendering the second factor either neutral or tipping in favor of fair use; (3) although adding captions or descriptive video may use the entirety of a video, it uses only the audio or video portion, respectively, and thus is not “qualitatively substantial enough to reduce the demand for” the underlying works,⁸¹¹ tipping the third factor in favor of fair use; and (4) that enhanced accessibility features will improve the market for the underlying works because they will become available to a wider audience.

c. *Asserted adverse impact*

Proponents assert that although some of the content in question is already captioned or provides descriptive audio, most does not. “Because video delivered via IP and fixed media often lacks proper captions and video descriptions,” say proponents, “denying the requested exemptions could result in diminished availability of works for deaf and blind consumers.”⁸¹² Proponents also note generally that the DMCA has a “chilling effect” on accessibility research.⁸¹³

Proponents acknowledge that the recently passed Twenty-First Century Communications and Video Accessibility Act (“CVAA”) “likely will require a substantial amount of digitally distributed programming to be captioned.”⁸¹⁴ However,

⁸⁰⁸ *Id.* at 23.

⁸⁰⁹ T Reid, June 5, 2012, at 85 (citing *Sony Corp. of Am. v. Universal City Studios*, 464 U.S. 417, 455 n.40 (1984) (“[m]aking a copy of a copyrighted work for the convenience of a blind person is expressly identified by the House Committee Report as an example of fair use, with no suggestion that anything more than a purpose to entertain or to inform need motivate the copying.”)); *cf. The Authors Guild, Inc. v. Hathitrust*, No. 11-6351 (S.D.N.Y. Oct. 10, 2012), slip op. at 21-22 (holding that creating accessible versions of certain copyrighted literary works falls “safely within the protection of fair use.”).

⁸¹⁰ *See* 17 U.S.C. § 107.

⁸¹¹ P9A-D (TDI and PCF) at 12 (internal citation omitted).

⁸¹² *Id.* at 10.

⁸¹³ *Id.* at 8.

⁸¹⁴ *Id.* at 5 (citing to Pub. L. 111-265 (2010)).

they assert that the CVAA does not extend to a wide range of content, including that which is distributed exclusively online (*e.g.*, content that does not appear first on broadcast or cable television).⁸¹⁵ The CVAA does not apply to “video clips” of programs, even when they derive from broadcast programming on which captions are otherwise required.⁸¹⁶

In recent rulemaking proceedings under the CVAA, many content producers and distributors asserted that the creation or improvement of captions and descriptive audio is burdensome and would require permission from the copyright owners. Proponents argue that such statements illustrate the content industry’s unwillingness to provide such accessibility unless forced to do so. Indeed, proponents note that, notwithstanding the assertions of opponents, the MPAA has separately asserted that “voluntarily captioning a limited amount of programming would require *eight years* to phase in.”⁸¹⁷ Proponents note that Netflix provides captions or subtitles on fewer than 5,000 of its nearly 12,000 titles and that programming with erroneous captions or descriptions should not be considered “accessible.”⁸¹⁸

Further, proponents observe that when captions do exist, they are often “riddled with errors,” and they point to a website that aims to capture humorous caption errors.⁸¹⁹ Proponents also assert that many DVDs contain subtitles, but not “captions” conforming to a particular technical standard that is useful to accessibility devices. Similarly, “the default character size, color, and opacity of the captions may hamper accessibility.”⁸²⁰ With respect to descriptive audio, proponents observe that, where such tracks exist, they may be played back at “a volume that is inappropriate relative to the original audio track.”⁸²¹

d. *Argument under statutory factors*

Proponents argue that protection of fixed-disc media and internet streams “inhibits the availability of the works for effective use by the millions of Americans who are deaf, hard of hearing, blind, or visually impaired.”⁸²² They further assert that although some programming is available in alternative, unprotected formats, the market

⁸¹⁵ *Id.*

⁸¹⁶ R7 (TDI and PCF) at 6-7.

⁸¹⁷ R7 (TDI and PCF) at 8 (emphasis in original) (citing letter from Jared S. Sher, Counsel to the Motion Picture Association of America, to Marlene H. Dortch, Secretary, Federal Communications Commission (Dec. 15, 2011)).

⁸¹⁸ *Id.* at 8-9.

⁸¹⁹ P9A-D (TDI and PCF) at 19-20 (citing captionfail.com). Proponents also note that although such errors may seem amusing, “if you’re actually watching that and trying to figure out what was actually said, it wouldn’t be so funny.” T Reid, June 5, 2012, at 112.

⁸²⁰ P9A-D (TDI and PCF) at 21.

⁸²¹ *Id.* at 22.

⁸²² *Id.* at 29.

is trending toward protected online-only content, much of which is exempted from the captioning and descriptive audio requirements of the CVAA.⁸²³

Proponents explain that the prohibition on circumvention has a “decidedly negative” impact on teaching, scholarship, research, and criticism.⁸²⁴ Not only does the prohibition stifle the research and development associated with the development of accessible technologies, it also restricts the amount of content that is perceptible by individuals with disabilities.⁸²⁵

Finally, proponents argue that the exemption would “likely have a positive effect on the value of copyrighted works” because “[t]he addition and improvement of captions and video description of a copyrighted work will increase the value of that work by expanding its potential market.”⁸²⁶

2. Opposition

AACS LA and DVD CCA filed separate but substantially similar comments.⁸²⁷ They argue that the marketplace has evolved and will continue to evolve in such a way that satisfies accessibility needs.⁸²⁸ AACS LA also asserts that the proposed exemption potentially could harm future growth of the marketplace solutions for accessibility concerns.⁸²⁹

At the hearing, the AACS LA offered a free license “to enable [] developers to work with the AACS technology to develop compatible implementations to enable accessibility programs and to add accessibility features to interoperate with the normal playback” of protected content.⁸³⁰ Although DVD CCA was not officially represented at the hearing, the representative of AACS LA, who was present, also sits on the board of DVD CCA. He indicated that DVD CCA would likely also “give a free license for research to improve accessibility ... and also be eager to work with player manufacturers to license those so that it could be one seamless operation.”⁸³¹

⁸²³ *Id.* at 29-30.

⁸²⁴ *Id.* at 32.

⁸²⁵ *Id.* at 33 (“The anticircumvention measures serve to prevent meaningful access to countless significant works by deaf, hard of hearing, blind, and visually impaired consumers. If those consumers cannot access these works, they cannot meaningfully partake in criticism of these copyrighted works.”).

⁸²⁶ *Id.* at 34.

⁸²⁷ C4 (AACS LA); R8 (DVD CCA).

⁸²⁸ C4 (AACS LA) at 29-30; R8 (DVD CCA) at 19-21.

⁸²⁹ C4 (AACS LA) at 30.

⁸³⁰ T Marks, June 5, 2012, at 68.

⁸³¹ *Id.* at 144. Following the hearing, counsel for DVD CCA confirmed that “DVD CCA is ready to work with relevant parties to develop a free license for the stated [research & development] purposes and to work with those same, or other, relevant parties to develop a license for the products and implement such technologies, in each case to the extent that such licenses are necessary in order to use DVD CCA’s CSS

Joint Creators⁸³² also assert that voluntary efforts and regulatory compliance are sufficient marketplace drivers for accessible materials. They maintain that the proposed classes are overbroad as they are “drafted to allow for uses unrelated to improving accessibility for disabled persons.”⁸³³ Joint Creators further assert that the proponents have failed to meet their burden: that circumvention is unnecessary; that proponents have presented only scattered examples of errors in captions; that such errors are little more than a “mere inconvenience”; and that the proposed underlying uses may infringe the reproduction, distribution, and adaptation rights of the copyright owners. They do not undertake a comprehensive attack on proponents’ fair use analysis, however.

3. Discussion

a. *Noninfringing uses*

The scope of proponents’ intended uses is difficult to discern from proponents’ original request. The papers are fraught with broad generalizations as to how certain technologies might be adapted to accommodate the needs of the blind, visually impaired, deaf, and hard of hearing. Beyond a few scattered examples, however, it is very difficult to discern what, precisely, proponents seek to do with their proposed exemption.

Proponents articulate three broad categories of conduct: (1) conducting research and development on accessible technologies to develop a player capable of presenting or manipulating captions or descriptive audio; (2) creating such captions or descriptive audio or corrections thereto; and (3) presenting such captions or descriptive audio along with the underlying lawfully acquired work so that individuals with disabilities may perceive them.⁸³⁴ Still, the precise contours of certain aspects of the proponents’ intended exploitation of the proposed exemption remain elusive. The record is clear that proponents would like to conduct research with the objective of developing a player capable of presenting and, in some cases, manipulating or customizing captions and/or

technology.” Letter from Bruce H. Turnbull, Counsel, DVD CCA to David Carson, General Counsel, U.S. Copyright Office (June 13, 2012). Several weeks later, proponents and opponents sent separate letters to the Copyright Office indicating that, although discussions between the parties were positive and encouraging, they failed to achieve a licensing arrangement. *See* Letter from David Jonathan Taylor, Counsel to DVD CCA and AACS LA to David Carson, General Counsel, U.S. Copyright Office (Aug. 15, 2012); Letter from Blake Reid, Counsel to Telecommunications for the Deaf and Hard of Hearing, Inc., Christian Volger, Associate Professor and Director, Technology Access Program, Gallaudet University, and Andrew Phillips, Policy Attorney, National Association of the Deaf to Maria A. Pallante, Register of Copyrights, David Carson, General Counsel, Rob Kasunic, Deputy General Counsel, Chris Reed, Senior Advisor for Policy & Special Projects, Ben Golant, Assistant General Counsel, U.S. Copyright Office (Aug. 16, 2012).

⁸³² The trade groups represented by Joint Creators are the Association of American Publishers, the American Society of Media Photographers, the Business Software Alliance, the Entertainment Software Association, the Motion Picture Association of America, the Picture Archive Council of America, and the Recording Industry Association of America. C12 (Joint Creators) at 1-2.

⁸³³ *Id.* at 44.

⁸³⁴ T Reid, June 5, 2012, at 149.

descriptive audio. But with respect to the creation of such captions or descriptive audio, the record contains only generalized representations about how they would intend to proceed, were the exemption to be granted.⁸³⁵

Proponents assert that each of the broadly defined intended uses is fair, citing to *Sony Corporation of America v. Universal Studios, Inc.*,⁸³⁶ and a sole footnote therein, which they acknowledge is merely dicta.⁸³⁷ However, fair use analyses are, by statute, necessarily fact specific; moreover, courts have cautioned that “[t]he task is not to be simplified with bright-line rules,”⁸³⁸ but rather, must be analyzed on a case-by-case basis.⁸³⁹ Most of the uses relating to the creation of captions and descriptive audio proposed by the proponents are so general that it is impossible to evaluate whether such uses would be noninfringing. For example, proponents have discussed creating captions for content that is uncaptioned, as well as fixing incorrect or poorly implemented captions – each of these distinct endeavors could well have a different outcome under a traditional fair use analysis.⁸⁴⁰ But absent any specific facts pertaining to particularized uses, such an analysis is not possible.

⁸³⁵ Indeed, at the hearing, when describing how one model might work, counsel acknowledged that he was “just hypothesizing.” *Id.* at 112.

⁸³⁶ 464 U.S. 417 (1984).

⁸³⁷ T Reid, June 5, 2012, at 84-85. In fact, the House Report referred to in *Sony* addressed much more limited circumstances:

While the making of multiple copies or phonorecords of a work for general circulation requires the permission of the copyright owner, a problem addressed in section 70 of the bill, the making of a single copy or phonorecord by an individual as a free service for a blind persons would properly be considered a fair use under section 107.

H.R. Rep. No. 94-1476, at 73 (1976).

⁸³⁸ *Campbell*, 510 U.S. at 577.

⁸³⁹ *Id.*

⁸⁴⁰ Indeed, the determination of whether such conduct is fair may well be a matter of degree. For example, one use that proponents hypothesized is to:

come up with a database by which people that are watching online videos or DVDs could say, hey, at [] one minute [into] the movie *War Horse* there’s a problem with the captions. They misspelled the name of the horse. Here’s the correct name of the horse. And we could design a player that goes out to the database and says, ah, when you’re watching the DVD *War Horse*, grab the corrected captions and insert them at that moment.

T Reid, June 5, 2012, at 112-13. If such a caption database were to contain merely corrections – that is, identification of specific points within a particular copyrightable work that are incorrect, along with the necessary fixes – one would expect the fair use calculus to differ from that of a database that contains captioning content for an entire copyrightable work. The former would appear to have little independent value beyond the work to which it is applied, while the latter could constitute a transcript, which likely constitutes a derivative work. Proponents declined to engage on this point, claiming that such uses are *per se* fair. T Reid, June 5, 2012, at 85. The Register takes no position on whether the latter activity would constitute fair use.

The record does, however, reflect one potential example: one of the proponents, PCF, operates universalsubtitles.org, a web-based crowdsourcing platform that enables volunteers to submit URLs to unprotected online videos and provide transcripts of such videos. Those videos can then be viewed, along with the crowdsourced captions, at the universalsubtitles.org website.⁸⁴¹ Although the development of a crowdsourcing framework to enhance accessibility of works is a promising technological development, it is not at all clear how this example relates to proponents' intentions.

With respect to research and development, however, the record is more developed. Dr. Christian Vogler of Gallaudet University demonstrated a software development effort aimed at creating a player to combine captions or descriptive audio with commercially available motion picture and audiovisual content.⁸⁴² That demonstration, coupled with the extensive discussion of the intended uses, provides a sufficient basis upon which to proceed with the analysis. In this regard, the Register need not perform a comprehensive fair use analysis. Having limited the scope of the evaluation to research and development of a player capable of rendering captions or descriptive audio alongside lawfully acquired content, the Register finds that the underlying purported use does not implicate the work itself, but rather, only certain non-protectable information *about* the work – *i.e.*, the timecode information accessible only through the protected “playhead.”⁸⁴³

There do not appear to be any reasonable alternatives to circumvention with respect to the proponents' intended research and player development. During the hearing, Copyright Office staff questioned the need to access the “playhead,” suggesting that most content players – DVD, Blu-ray, and online content portals – provide at least rudimentary timing information to keep viewers apprised of their progress within a particular piece of content. Proponents' response was persuasive, explaining that,

⁸⁴¹ See www.universalsubtitles.org. Proponents explained that PCF is able to caption YouTube videos because “they expose, via an application programming interface, an API, the play head of the player to the accessibility software,” which facilitates synchronization of the user-generated caption content to the underlying video. T Reid, June 5, 2012, at 111. Such models “work[] when there’s an API that exposes the play head to the developer” but “that only exists in open players that don’t have DRM.” *Id.*

⁸⁴² T Vogler, June 5, 2012, at 57-62.

⁸⁴³ Opponents note that there is an “extremely fine line” between the development of players capable of rendering certain accessible content, and trafficking in circumvention devices, which is prohibited under 17 U.S.C. § 1201(a)(2). T Metalitz, June 5, 2012, at 148. The Register acknowledges the potential conflict with the anti-trafficking provisions of the statute, but does not view those provisions as an impediment to the development of players that do not require circumvention in order to render captions or audio descriptions (for example, such a player might work alongside a player containing a decryption key licensed by AACIS LA or DVD CCA). That is, to the extent that the need to circumvent is essential only to the research and development of such players by individual researchers or institutions, then the anti-trafficking provisions do not appear to be implicated. The Register believes that appropriately limiting the language in an exemption can ensure that such an exemption would not be interpreted to permit or encourage trafficking, which is not only a violation of 17 U.S.C. § 1201(a)(2), but also beyond the scope of this rulemaking.

“accessibility software can’t get at what the eye can get at,”⁸⁴⁴ meaning that although certain timing information can be observed by a casual viewer, accessibility software cannot “see” it in the same way that a human can without access to the underlying timecode. Further, although screen reading character recognition may be one technically feasible alternative, it would be unduly burdensome because the landscape is complicated by “a variety of different user interfaces that . . . render the time code in a variety of different fonts.”⁸⁴⁵ Proponents have therefore established that access to the playhead is a necessary element for the functioning of an accessible player, and thus, a necessary element of performing research and development relating to such players for which there is no reasonable alternative.

As noted previously, both AACSLA and DVDCCA have indicated a willingness to offer a free license to those interested in developing accessibility tools for playback devices. Thus, to the extent that such licenses are offered, there exists a reasonable alternative to circumvention. But the record indicates that no such license is currently in place, and it is unclear whether such a license will ever come to fruition, much less whether such a license is likely within the three-year period that is the subject of this rulemaking. Although the talks between parties at the hearing are a promising development, and one that may very well result in an appropriate licensing arrangement, on the present record, it cannot be said that licensing is an effective alternative to proponents’ need to circumvent.

b. *Adverse impact*

Proponents have established that the prohibition is adversely affecting, and is likely to continue to have, an adverse effect on certain noninfringing uses of motion pictures and audiovisual works. The record is clear that far less than the full complement of video programming distributed commercially through the internet or on DVDs and Blu-ray discs contains captions and descriptive audio. The record is also clear that an increasing amount of content is being distributed exclusively via the internet, and it is reasonable to infer that as technology continues to evolve, the amount of programming distributed only online will likely increase. Because such content is exempt from accessibility requirements, it is reasonable to believe that there is a significant risk that less of it will be released in an accessible format.

Although the 2010 passage of the CVAA was an important step forward, the broad exemptions to that law still leave a substantial quantity of motion picture and audiovisual content that producers and distributors will not be required to render accessible.⁸⁴⁶ Even some content that is accessible in its original form, such as certain

⁸⁴⁴ T Reid, June 5, 2012, at 119.

⁸⁴⁵ *Id.* at 120.

⁸⁴⁶ *See, e.g.*, 47 U.S.C. § 613(c)(2)(C) (empowering the Federal Communications Commission to “delay or waive the effective date” of captioning requirements for internet-delivered video content upon a finding that the application of such requirements “would be economically burdensome to the providers of video programming or program owners.”); 47 U.S.C. § 613(f)(2)(D) (empowering the Federal Communications Commission to exempt from the descriptive audio requirements “a service, class of services, program, class

television broadcasts, is not accessible when placed in clip form online.⁸⁴⁷ And it is clear that although the marketplace is undergoing rapid change, it is unlikely to evolve in such a way that full accessibility of motion picture and audiovisual content will be achieved within the next three years.

c. *Statutory factors*

Regarding the first statutory factor, “the availability for use of copyrighted works,”⁸⁴⁸ “the Register has interpreted the relevant inquiry to include, (1) whether the availability of the work in protected format enhances and/or inhibits public use of particular works, (2) whether the work protected is also available in other formats (and whether those formats are protected by access controls), and (3) if alternative formats are available, whether such formats are sufficient to accommodate noninfringing uses.”⁸⁴⁹

Proponents have demonstrated that there is a wide range of content that is inaccessible to individuals with certain disabilities and as to which there is no alternative, accessible version. Further, the record also supports a finding that an increasing amount of content is made available only online, which is not subject to mandatory accessibility requirements. As a result, it is likely that a significant amount of online-only content may not be supplied with captions or descriptive audio, and will therefore be inaccessible. The record also supports a finding that even that content which is distributed with certain accessibility features may not be adequate for certain individuals.⁸⁵⁰

Although proponents have established that there is a great deal of content available only online, or only on DVD, that is not available through platforms more susceptible to accessibility features, the record with respect to this particular class of works does not support the proposition that there is content available only on Blu-ray for which there is no alternative version available. Accordingly, it would appear that with respect to Blu-ray content, there exists a reasonable market alternative as the same content is generally available also on DVD or via internet streaming. Although proponents’ proposed exemption applies to all “fixed-disc” media, the record simply does not support applying such an exemption to Blu-ray discs.⁸⁵¹

of programs, equipment, or class of equipment for which the Commission has determined that the application of such regulations would be economically burdensome.”).

⁸⁴⁷ Asked at the hearing why captions were unavailable for clips of content that was captioned during its initial broadcast, the MPAA explained that the caption file associated with a particular piece of full-length content cannot be segmented in the same way that the video can. T Kinney, June 5, 2012, at 156. Proponents dispute the assertion. T Reid, June 5, 2012, at 157.

⁸⁴⁸ 17 U.S.C. § 1201(a)(1)(C)(i).

⁸⁴⁹ 2010 Recommendation at 56 (citing 2006 Recommendation at 19-22).

⁸⁵⁰ *See, e.g.*, T Reid, June 5, 2012 at 139-40 (describing how customizing captions is “really, really important for works to actually be accessible”).

⁸⁵¹ In contrast, the record with respect to Proposed Class 7 supports the conclusion that there is some, although not a significant amount, of content available only on Blu-ray. However, because the Register has

The second statutory factor, “the availability for use of works for nonprofit archival, preservation, and educational purposes,”⁸⁵² is not particularly well developed in the record. It is worth noting, however, that the research and development efforts in which proponents seek to engage could, presumably, result in an accessible player and related technologies that would enhance educational opportunities for individuals who are blind, visually impaired, deaf, or hard of hearing.

The third statutory factor, “the impact of the prohibition on the circumvention of technological measures applied to copyrighted works has on criticism, comment, news reporting, teaching, scholarship, or research,”⁸⁵³ favors the proponents’ exemption. The substantial quantity of inaccessible content, and the likely increase in the amount of content distributed free from any requirement that it be rendered accessible, essentially limits the universe of materials with respect to which individuals with certain disabilities may engage in commentary, criticism, scholarship, and the like. In addition, the requested exemption would allow individuals with certain disabilities to access works that are, themselves, criticisms, commentary, scholarship, and related uses. Moreover, the proposed exemption would directly facilitate research for the purpose of furthering the aforementioned activities.

The fourth factor, “the effect of circumvention of the technological measures on the market for or value of copyrighted works,”⁸⁵⁴ also favors granting the exemption. Proponents have clearly articulated that the intended result of their research and development is a player capable of rendering lawfully obtained content alongside captions or descriptive audio that enable individuals with certain disabilities to perceive such content. As proponents described at the hearing:

I think it’s important to emphasize that we drafted the exemption specifically ... for users that already have lawful access to the work. We’re not envisioning the situation ... [where] somebody creat[es] an accessible version and distribute[s] it to lots of people. We don’t have anything like that in mind.

We have in mind users that have lawfully purchased the DVD, have lawfully purchased access to Netflix, lawfully can view Hulu for free, or paid Hulu Plus or whatever, and

concluded, with respect to Proposed Class 7, that the amount is not sufficiently significant to justify extending the class to include content available on Blu-ray, the disparity in proof on that issue between the two classes is of no consequence.

⁸⁵² 17 U.S.C. § 1201(a)(1)(C)(ii).

⁸⁵³ *Id.* at § 1201(a)(1)(C)(iii).

⁸⁵⁴ *Id.* at § 1201(a)(1)(C)(iv).

being able to take some piece of software or some piece of code and overlay that over the top.⁸⁵⁵

Thus, the proposed exemption may well increase interest in – and the purchase of copies of or access to – protected works because individuals who cannot currently perceive them will, assuming proponents’ research and development result in a viable player, be able to access such works, thereby enhancing the potential market for such works. At worst, the fourth factor is neutral, because proponents have stated that they have no intention of distributing accessible copies of preexisting works; moreover, the class recommended below would not extend the creation or distribution of unauthorized copies of such works. There thus appears to be no risk of proponents’ circumvention resulting in content that would have a negative impact on the market for the underlying copyrightable motion pictures or audiovisual works.⁸⁵⁶

Finally, the fifth statutory factor permits the Librarian to consider “such other factors” as appropriate.⁸⁵⁷ The Register notes, as proponents have explained, that their proposed classes are not intended merely to improve convenience, but rather, to enable individuals who are deaf, hard of hearing, blind, or visually impaired, to have meaningful access to content that they would otherwise be unable to perceive. Put differently, the proposed exemption is aimed at allowing the wide range of motion pictures and other audiovisual works that are available to the general population to be accessed and enjoyed by those with disabilities. For these individuals, the exemption represents the difference between having and not having access to the works available to everyone else.⁸⁵⁸

d. NTIA comments

NTIA supports proponents’ proposals, but encourages the Register to recraft the exemptions into three categories which it believes are supported by the record.⁸⁵⁹ Specifically, NTIA would fashion a class specifically aimed at those developing the tools to facilitate the creation, improvement or rendering of captions and descriptive audio; another class specifically for those engaged in the creation of captions and descriptive audio; and a third class for those using the captions and descriptive audio.⁸⁶⁰ NTIA specifically notes that it does not support the inclusion of Blu-ray because DVD remains the dominant format, online video distribution is outpacing Blu-ray adoption,⁸⁶¹ and the effect of the proposals on the Blu-ray market is uncertain.

⁸⁵⁵ T Reid, June 5, 2012, at 126-27.

⁸⁵⁶ *Id.* at 124 (“I don’t think we would want to be doing anything like distributing copies of the works.”).

⁸⁵⁷ 17 U.S.C. § 1201(a)(1)(C)(v).

⁸⁵⁸ T Reid, June 5, 2012, at 89-90.

⁸⁵⁹ NTIA Letter at 30.

⁸⁶⁰ *Id.* at 30-31.

⁸⁶¹ *Id.* at 29.

The Register and NTIA are in agreement on the need to “open the doors for innovation and empower the millions of Americans with visual and hearing disabilities to participate to the fullest possible extent in our society’s multimedia culture.”⁸⁶² However, for reasons described above, the Register finds that, based on the current record, a more narrowly tailored class to permit research and development of assistive technologies is appropriate. The Register encourages the continued development of accessibility technologies and encourages future proposals for exemptions to advance such efforts.

4. Recommendation

Both the Register and the Librarian have consistently supported universal accessibility, and are sympathetic to the needs of blind, visually impaired, deaf and hard of hearing communities. As a matter of policy, access to copyrighted works for individuals with such disabilities is to be encouraged. The Register has not hesitated to recommend classes aimed at improving accessibility previously when the record has supported such a recommendation. However, unless the burden of showing a *prima facie* case is met, the statutory standard established for this rulemaking does not permit the designation of a class of works. Presenting strong arguments in favor of exempting a class of works from the prohibition on circumvention is only one part of the process; a proponent must also provide sufficient facts to justify a finding that the prohibition is actually having or is likely to have an adverse effect on noninfringing uses.⁸⁶³

Here, the broad contours of proponents’ request and the absence of specific facts associated with the creation of captions and descriptive audio leads the Register to conclude that the statutory burden has not been met with respect to the particular classes proposed by proponents. Accordingly, the Register declines to recommend classes 9A, 9B, 9C, and 9D as proposed.

The record does, however, support proponents’ need for an exemption for the purpose of engaging in research and development aimed at developing players capable of rendering captions and descriptive audio during the playback of lawfully acquired copies of motion pictures and audiovisual works. The Register observes that advancing accessibility is an important public policy objective, and one that is becoming even more critical as technology advances, content becomes more diverse, and the ways it is distributed more varied. Put differently, the development of improved accessibility technology requires research, and public policy commands that such research be supported. If the fruits of such research reveal specific, particularized accessibility related uses that require circumvention of technological measures, and such uses are properly supported by an appropriate factual record, the Register will welcome requests for appropriate exemptions in future rulemakings.

⁸⁶² *Id.* at 27.

⁸⁶³ As the Register has stated previously, “[i]n determining the proper contours of a class in any particular case, the Register will look to the factual record to assess the proper scope of a class for the ensuing three-year period.” 2010 Recommendation at 17.

Accordingly, for the reasons set forth above, the Register recommends that the Librarian designate the following class – a lesser included class of those that were proposed – as supported by the record:⁸⁶⁴

Motion pictures and other audiovisual works on DVDs that are protected by the Content Scrambling System, or that are distributed by an online service and protected by technological measures that control access to such works, when circumvention is accomplished solely to access the playhead and/or related time code information embedded in copies of such works and solely for the purpose of conducting research and development for the purpose of creating players capable of rendering visual representations of the audible portions of such works and/or audible representations or descriptions of the visual portions of such works to enable an individual who is blind, visually impaired, deaf, or hard of hearing, and who has lawfully obtained a copy of such a work, to perceive the work; provided however, that the resulting player does not require circumvention of technological measures to operate.

⁸⁶⁴ The Register notes that this exemption does not extend to the creation of derivative works, which, as discussed above, may or may not infringe the copyright on the underlying works depending on the circumstances surrounding their creation. The Register notes that, to the extent proponents seek to create captions, audio descriptions, or related derivatives as part of their research efforts, they may use works that are not subject to copyright protection (*e.g.*, those that are in the public domain, government works, and the like), or works for which proponents have secured appropriate permission from the copyright owner.

I. Proposed Class 10: Motion pictures and other works on DVDs and other media – space shifting

Proponent Public Knowledge proposes that the Register recommend the following class:

10A: Motion pictures on lawfully made and lawfully acquired DVDs that are protected by the Content Scrambling System when circumvention is accomplished solely in order to accomplish the noncommercial space shifting of the contained motion picture.

Proponents Cassiopaea Tambolini, Susan Fuhs, Kellie Heistand, Andy Kossowsky, and Curt Wiederhoeft propose that the Register recommend the following class:

10B: Legally acquired digital media (motion pictures, sound recordings, and e-books) for personal use and for the purposes of making back-up copies, format shifting, access, and transfer.

1. Proponents' case

Public Knowledge and other proponents seek an exemption to permit the circumvention of works on digital media protected by access controls for purposes of noncommercial “space shifting,” *i.e.*, the copying of complete works to permit personal use on alternative devices.⁸⁶⁵

a. Background

The first proposal (10A) requests designation of a class to allow circumvention of lawfully acquired motion pictures on DVDs protected by the Content Scrambling System (CSS) for the sole purpose of noncommercial space shifting.⁸⁶⁶ Proponent Public Knowledge indicates a desire to move lawfully acquired motion pictures on DVDs to consumer electronic devices, such as tablet computers and laptop computers, that lack DVD drives. It asserts that consumers' inability to play lawfully acquired DVDs on the newest devices adversely affects noninfringing uses of the works contained on DVDs, and that a reasonable solution is for these consumers to copy the motion pictures into a format that can be viewed on the new devices.⁸⁶⁷

Public Knowledge urges that its proposed exemption “would merely allow a user to

⁸⁶⁵ P10A (Public Knowledge); P10B (Cassiopaea Tambolini, Susan Fuhs, Kellie Heistand, Andy Kossowsky).

⁸⁶⁶ P10A (Public Knowledge) at 1.

⁸⁶⁷ *Id.* at 2-3.

make use of a motion picture she has already acquired.”⁸⁶⁸ Public Knowledge states that “[w]hile copyright owners are taking tentative steps to link motion pictures purchased on DVD to digital versions playable on new devices, there is no indication that this program – if successful and sustainable – would apply retroactively to the millions of DVDs already lawfully owned by consumers and purchased when DVD was the only format available to them.”⁸⁶⁹

The second proposed class (10B) encompasses five individual proposals. Four proposals request the designation of classes to allow the circumvention of a broad array of works on digital media protected by access controls for the purposes of making backup copies, format conversion, and transfer.⁸⁷⁰ One proposal seeks a specific exemption to allow the circumvention of works protected by access controls purchased in the “Mobipocket” format for the purpose of format conversion.⁸⁷¹ Most of the proposals in this class are one page or less and offer few factual details and little or no legal analysis.

The proposals seek exemptions not unlike one that was sought in the 2006 rulemaking.⁸⁷² In that rulemaking, the Register declined to recommend a space shifting exemption, in part because most of the proponents of the requested exemptions failed to identify particular technological measures. In many cases it was unclear whether the proponents were referring to access controls or copy controls, or simply to incompatibility of formats. In the 2006 rulemaking, the only access control clearly identified in any of the comments was the CSS used to protect motion pictures on DVDs.⁸⁷³

The Register also declined to recommend a space shifting exemption in 2006 because the proponents did not offer persuasive legal arguments that space shifting was a noninfringing use and that the technological restrictions were impeding their ability to engage in noninfringing uses. In the absence of persuasive legal authority for the proposition that making copies of a work and transferring them onto a device of the user’s choosing is a noninfringing use, the Register determined that there was no basis for recommending an exemption to the prohibition on circumvention. The Register noted that an exemption may not be based simply on perceived beneficial or desirable uses, but instead it must be based on a showing that there are noninfringing uses that are or are likely to be adversely affected by the prohibition on circumvention.⁸⁷⁴

The Register also addressed space shifting in the 2003 rulemaking in her consideration of a requested exemption regarding “tethering.” In her 2003

⁸⁶⁸ *Id.* at 5.

⁸⁶⁹ *Id.*

⁸⁷⁰ P10B (Cassiopea Tambolini, Susan Fuhs, Kellie Heistand, Andy Kossowsky)

⁸⁷¹ P10B (Curt Wiederhoeft).

⁸⁷² 2006 Recommendation at 69.

⁸⁷³ P10A (Public Knowledge) at 2 (citing 2006 Recommendation at 12).

⁸⁷⁴ 2006 Recommendation at 70.

recommendation, the Register observed that “no court has held that ‘space-shifting’ is a fair use.”⁸⁷⁵ The Register indicated that where the online distribution of works is a concern, space shifting is problematic.⁸⁷⁶ She observed that the potential for unauthorized dissemination of digital works was precisely the type of concern that led to the enactment of Section 1201. Thus, to deny copyright owners the ability to limit the device on which a particular digital work will be rendered necessarily forecloses the most useful protections afforded to them by the DMCA.⁸⁷⁷

b. Legal arguments

Public Knowledge cites *RIAA v. Diamond Multimedia Systems Inc.*⁸⁷⁸ and *Sony Corporation of America v. Universal City Studios, Inc.*⁸⁷⁹ in support of its contention that space shifting is a noncommercial personal use, and therefore a fair use.⁸⁸⁰ It applies the four-factor fair use test of Section 107 in support of its assertion that the sort of space shifting for which it seeks an exemption is a noninfringing use, characterizing such space shifting as a “paradigmatic noncommercial personal use.”⁸⁸¹ Public Knowledge argues that the series of factors set forth in Section 1201(a)(1)(C) weigh in favor of granting an exemption, asserting that space shifting will not negatively impact the availability of, or harm the market for, copyrighted works, or contribute to piracy.⁸⁸² Finally, Public Knowledge claims that there are no reasonable alternatives to space shifting.⁸⁸³

Public Knowledge asks the Register to consider the requested exemption in light of current conditions, without regard to past determinations.⁸⁸⁴ It urges the Register to evaluate the legitimacy of personal space shifting through “independent examination.”⁸⁸⁵ According to Public Knowledge, “[t]he [Section 1201(a) rulemaking] process of recommending, consulting, determining, and speculating necessarily requires the Register to draw conclusions beyond parroting the statute and existing case law.”⁸⁸⁶

⁸⁷⁵ 2003 Recommendation at 130 (citing *Recording Indus. Ass’n of Am. v. Diamond Multimedia Sys. Inc.*, 180 F.3d 1072, 1079 (1999)).

⁸⁷⁶ *Id.* (citing *A & M Records, Inc. v. Napster, Inc.*, 239 F.3d 1004, 1019 (2001)).

⁸⁷⁷ *Id.*

⁸⁷⁸ 180 F.3d 1072.

⁸⁷⁹ 464 U.S. 417 (1984).

⁸⁸⁰ P10A (Public Knowledge) at 3 (citing *Sony Corp.*, 464 U.S. 417, and *Diamond Multimedia*, 180 F.3d 1072).

⁸⁸¹ *Id.* at 3-7.

⁸⁸² *Id.* at 8-20.

⁸⁸³ *Id.* at 12-18.

⁸⁸⁴ R3 (Public Knowledge) at 2.

⁸⁸⁵ *Id.* at 10.

⁸⁸⁶ *Id.*

Proponents of the second proposed class (10B) seek to exempt other digital works, including sound recordings and ebooks, in addition to motion pictures, for purposes of space shifting. They offer insufficient factual or legal analysis in support of their proposed exemptions, however.

2. Opposition

DVD CCA opposes the requested exemption by first observing that, although many new electronic devices are made without DVD drives, consumers can still play DVDs on such devices through the use of peripheral tools, *i.e.*, external drives that connect to the devices and are capable of playing DVDs.⁸⁸⁷ DVD CCA argues that just because a consumer prefers a portable device for certain purposes, it does not mean that the consumer is foreclosed from using a different device to play DVDs, or that an exemption for space shifting is warranted.⁸⁸⁸

DVD CCA further notes that, contrary to the statements made by Public Knowledge, consumers have not purchased the motion picture itself, but a DVD copy of the motion picture, which affords only the right to access the work according to the DVD format specifications, *i.e.*, through the use of a DVD player. DVD CCA explains that consumers are able to purchase the copy at its retail price – typically less than twenty dollars – because it is distributed on a specific medium that will only play back on a licensed player.⁸⁸⁹ It asserts that the Register has recognized that there is no unqualified right to access a work on a particular device.⁸⁹⁰ DVD CCA contends that the proposed class would overwhelm the purpose of Section 1201 by undermining the CSS system, which remains viable and continues to be protected by courts.⁸⁹¹

DVD CCA additionally argues that proponents have failed to establish that the proposed uses are noninfringing. In so doing, it criticizes Public Knowledge's reliance on *RIAA v. Diamond Multimedia Systems*, which in turn cited *Sony Corporation of America v. Universal City Studios, Inc.*, noting that in an earlier rulemaking, the Register rejected reliance on *Sony* in a similar context because the Supreme Court declined to address the "librarying" of copyrighted works.⁸⁹²

⁸⁸⁷ C8 (DVD CCA) at 24 nn.55 & 56 (referencing two specific devices, the Apple Macbook Air Superdrive - MC684ZM/A, with a retail price of approximately \$90.00, and the HP Mobile USB DVD Reader, with a retail price of approximately \$50.00).

⁸⁸⁸ *Id.* at 24.

⁸⁸⁹ *Id.* at 24.

⁸⁹⁰ *Id.* (citing 2000 Final Rule, 65 Fed. Reg. at 64,569).

⁸⁹¹ *Id.* at 26-28 (citing *DVD CCA, Inc. v. Kaleidescape, Inc.*, No. 1-04-CV-031829, at 3 (Sup. Ct. Santa Clara County, Jan. 9, 2012)).

⁸⁹² *Id.* at 29-30.

DVD CCA argues that the proposal to exempt space shifting is intolerably broad and lacks the “refinements” found necessary in other cases.⁸⁹³ DVD CCA alleges that the proposed exemption would harm the market for works distributed in the DVD medium as well as that for works offered in other digital media, explaining that the proposed exemption would displace sales from existing and forthcoming digital offerings that the DMCA was meant to encourage and create “public confusion” as to what is permitted activity.⁸⁹⁴ It asserts that the requested exemption fails to satisfy the statutory factors set forth in Section 1201(a)(1)(C) and “would ... swallow[] the rule against circumvention.”⁸⁹⁵

Joint Creators⁸⁹⁶ similarly dispute Public Knowledge’s assertion that consumers are adversely affected by an inability to play DVDs on electronic devices that are not designed to play DVDs.⁸⁹⁷ They argue that Public Knowledge is incorrect in asserting that the only option for consumers who purchase movies in DVD format and wish to access them on an iPad, for example, is to “re-purchase a motion picture they already own simply to watch it on a device they own.”⁸⁹⁸ Joint Creators point to services that provide access to numerous titles for low subscription prices where there is no need to “purchase” a copy of a movie at all.⁸⁹⁹ They also note that “it is not the purpose of this rulemaking to provide consumers with the most cost-effective manner to obtain commercial video content. If the consumer wants to obtain content, there are many reasonably-priced alternatives that may fulfill the consumers’ wants and needs.”⁹⁰⁰

Joint Creators further note that many of the space shifting proposals are actually use-based exemptions that fail to identify particular classes of works, and therefore fail to justify an exemption.⁹⁰¹ They add that space shifting exemptions have previously been considered and rejected because there is no legal precedent or statutory provision establishing that space shifting is a fair use.⁹⁰² They note that the marketplace already offers numerous authorized ways for consumers to acquire works for use on the devices

⁸⁹³ *Id.* at 31-34.

⁸⁹⁴ *Id.* at 35-36.

⁸⁹⁵ *Id.* at 31-34.

⁸⁹⁶ The trade groups represented by Joint Creators are the Association of American Publishers, the American Society of Media Photographers, the Business Software Alliance, the Entertainment Software Association, the Motion Picture Association of America, the Picture Archive Council of America, and the Recording Industry Association of America. C12 (Joint Creators) at 1-2.

⁸⁹⁷ *Id.* at 48-50.

⁸⁹⁸ P10A (Public Knowledge) at 10.

⁸⁹⁹ C12 (Joint Creators) at 49.

⁹⁰⁰ *Id.* at 50 (citing 2010 Recommendation at 224).

⁹⁰¹ *Id.* at 48.

⁹⁰² *Id.* at 48-49 (citing *Campbell*, 510 U.S. 569; *Perfect 10*, 487 F.3d at 720; *Diamond Multimedia*, 180 F.3d at 1079; *UMG Recordings, Inc. v. MP3.com, Inc.*, 92 F. Supp. 2d 349 (2000)).

of their choosing.⁹⁰³ They assert that the harms alleged by proponents amount to mere inconvenience and fail to support an exemption.⁹⁰⁴

AACS LA opposes an exemption for space shifting that would apply to AACS technology protecting Blu-ray discs. It notes that proponents have failed to satisfy their burden to demonstrate that an exemption is warranted. It adds that proponents have failed to establish that space shifting is, in fact, a noninfringing act.⁹⁰⁵

3. Discussion

a. *Noninfringing uses*

The Register recognizes the significant consumer interest in the proposed exemption. As has been established in prior rulemakings, however, proponents bear the burden of demonstrating that a requested use is noninfringing. In urging that space shifting is a fair use, proponents rely principally on two cases, *RIAA v. Diamond Multimedia Systems Inc.*⁹⁰⁶ and *Sony Corporation of America v. Universal City Studios, Inc.*⁹⁰⁷ But neither of these decisions addresses or informs the space shifting activities at issue here.

As the Register has previously explained, *Diamond Multimedia* – a case in which the court was called upon to interpret the Audio Home Recording Act (“AHRA”) – “did not hold that ‘space-shifting’ is fair use. It did state, in dicta, that ‘space-shifting’ of digital and analog musical recordings is a noncommercial personal use consistent with the Audio Home Recording Act.”⁹⁰⁸ Notably, neither *Diamond Multimedia*, nor the statute it interpreted, addresses motion pictures, the focus of Public Knowledge’s proposal.⁹⁰⁹

Turning to *Sony*, which the Register has also previously considered in the context of personal copying, that case involved “time-shifting,” defined by the Supreme Court as “the practice of recording a program to view it once at a later time, and thereafter erasing it.” It did not address the legality of “librarying,” *i.e.*, the maintenance of copies of

⁹⁰³ *Id.* at 49-50 (“As PK admits, copyright owners include with many DVD and Blu-ray disc purchases digital copies of motion pictures that may be reproduced to mobile devices and computers pursuant to licenses.”).

⁹⁰⁴ *Id.* at 50.

⁹⁰⁵ C4 (AACS) at 44.

⁹⁰⁶ *Diamond Multimedia*, 180 F.3d 1072.

⁹⁰⁷ *Sony Corp.*, 464 U.S. 417.

⁹⁰⁸ 2003 Recommendation at 130 n.234.

⁹⁰⁹ See 17 U.S.C. § 1001, *et seq.* It is also worth noting that *Diamond Multimedia* held that the AHRA does not apply to computer hard drives. See *Diamond Multimedia*, 180 F.3d at 1076.

copyrighted works.⁹¹⁰ Here, by contrast, librarying is apparently among the activities contemplated by the proposed exemptions.⁹¹¹

The Register notes that the law does not guarantee access to copyrighted material in a user's preferred format or technique.⁹¹² Indeed, copyright owners typically have the legal authority to decide whether and how to exploit new formats.⁹¹³ Although it is possible that the law will evolve in such a way that some of the proponents' proposed uses may someday be accommodated, the Register reiterates her view that the Section 1201 rulemaking process "is not the forum in which to break new ground on the scope of fair use."⁹¹⁴

Neither *Diamond Multimedia* nor *Sony* provides the legal basis for a broad declaration that space shifting of audiovisual works is a noninfringing use. Moreover, more recent cases touching upon space shifting confirm that the fair use implications of various forms of space shifting are far from settled.⁹¹⁵ The Register thus proceeds to consider the argument that the requested uses satisfy the four-factor test for fair use, as set forth in 17 U.S.C. § 107.

The first fair use factor directs consideration of "the purpose and character of the use, including whether such use is of a commercial nature or is for nonprofit educational purposes."⁹¹⁶ Public Knowledge characterizes the copying of motion pictures for use on personal devices as a "paradigmatic noncommercial personal use," adding that any attempt to reproduce works for commercial purposes would place the use outside of the

⁹¹⁰ 2003 Recommendation at 106 ("In the time-shifting case, the Court explicitly did not address the issue of librarying such a work." (citing *Sony Corp.*, 464 U.S. at 423-24, 442) (limiting analysis to time-shifting, and declining to address librarying uses)).

⁹¹¹ See P10A (Public Knowledge) at 3-4 (indicating that the exemption would allow "consumers to access all of their media in a single interface and launch the video of their choice at the touch of a button").

⁹¹² *Universal City Studios, Inc. v. Corley*, 273 F.3d 429, 459 (2d. Cir. 2001); see also 2003 Recommendation at 117-18.

⁹¹³ *UMG Recordings, Inc. v. MP3.com*, 92 F. Supp. 349, 352 (S.D.N.Y. 2000) (defendants not "free[] ... to usurp a further market that directly derives from reproduction of the plaintiffs' copyrighted works") (citing *Infinity Broadcast Corp. v. Kirkwood*, 150 F.3d 104, 111 (2d Cir. 1998)).

⁹¹⁴ 2003 Recommendation at 106.

⁹¹⁵ See, e.g., *Arista Records LLC v. Myxer Inc.*, No. CV 08-03935 GAF (JCx), 2011 U.S. Dist. LEXIS 109668, at *119-20 (C.D. Cal. Apr. 1, 2011) (service permitting users to upload recordings to generate and download ringtones for their phones not engaged in fair use space shifting); *Sony BMG Music Entm't v. Tenenbaum*, 672 F. Supp.2d 217, 237 (D. Mass. 2009) ("This Court, unlike others that have spoken on the subject, can envision a scenario in which a defendant sued for file sharing could assert a plausible fair use defense – for example, the defendant who 'deleted the mp3 files after sampling them, or created mp3 files exclusively for space-shifting purposes from audio CDs they had previously purchased.") (quoting party's submission); *A&M Records, Inc. v. Napster, Inc.*, 239 F.3d 1004, 1019 (rejecting claim that peer-to-peer file sharing is a form of space shifting that constitutes fair use); *UMG Recordings, Inc.*, 92 F. Supp.2d 349 (rejecting fair use argument by online music locker service making copies of works allegedly owned by its subscribers).

⁹¹⁶ 17 USC § 107(1).

scope of its proposed exemption.⁹¹⁷ Public Knowledge further argues that the proposed exemption can facilitate a transformative use.⁹¹⁸ It maintains that integrating reproductions of motion pictures from DVDs into a consumer's media management software is analogous to the integration of thumbnail images into internet search engines found to be transformative in *Perfect 10 Inc. v. Amazon, Inc.*⁹¹⁹ In Public Knowledge's view, such integration is similar to the creation of an internet search engine, which the *Perfect 10* court considered transformative because it provides "an entirely new use for the original work."⁹²⁰

The Register does not agree with this analysis. The incorporation of reproductions of motion pictures from DVDs into a consumer's media management software is not equivalent to the provision of public search engine functionality. Rather, it is simply a means for an individual consumer to access content for the same entertainment purpose as the original work. Public Knowledge itself recognizes this when it states that one of the benefits of such integration is to launch the video of one's choosing "at the touch of a button."⁹²¹ Therefore, even though the uses contemplated by the proposed exemption may be personal and noncommercial in nature, they do not "add[] something new, with a further purpose or different character, altering the first with new expression, meaning,"⁹²² or advance criticism, comment, or any other interest enumerated in the preamble of Section 107. The first fair use factor thus does not favor a finding of fair use.

The second fair use factor directs consideration of "the nature of the copyrighted work."⁹²³ Public Knowledge agrees that the motion pictures at issue are generally creative in nature.⁹²⁴ However, it then suggests that the second factor should not significantly weigh against a finding a fair use because "the works have been published and sold to ... individuals hoping to make personal space shifting copies of the work."⁹²⁵ Nonetheless, as Public Knowledge acknowledges, creative works are "within the core of copyright's protective purposes."⁹²⁶ As such, the second factor does not favor a finding of fair use.

⁹¹⁷ P10A (Public Knowledge) at 3-4 (quoting *Diamond Multimedia*, 180 F.3d at 1079).

⁹¹⁸ *Id.*

⁹¹⁹ *Id.* (citing *Perfect 10 Inc. v. Amazon.com, Inc.*, 487 F.3d 701, 720-23 (9th Cir. 2007)).

⁹²⁰ *Id.* (citing *Perfect 10*, 487 F.3d at 721-22).

⁹²¹ *Id.* at 4.

⁹²² *Campbell*, 510 U.S. at 579.

⁹²³ 17 U.S.C. § 107(2).

⁹²⁴ P10A (Public Knowledge) at 4.

⁹²⁵ *Id.* at 4-5.

⁹²⁶ *Id.* at 4 (quoting 2010 Recommendation at 50).

The third fair use factor directs consideration of “the amount and substantiality of the portion used in relation to the copyrighted work as a whole.”⁹²⁷ Public Knowledge agrees that the third fair use factor points to the limited use of works. However, it argues that in *Sony*, the Supreme Court found complete reproductions of works to be fair and maintains that the situation in *Sony* is analogous to the requested exemption.⁹²⁸ But in *Sony*, the Court considered the home recording of broadcast television programming – or “time-shifting” – a practice which “merely enable[d] a viewer to see ... a work which he had been invited to witness in its entirety free of charge.”⁹²⁹ In contrast, the uses at issue here appear to include “librarying” copies of motion pictures contained on DVDs that are not distributed for free.⁹³⁰ As noted above, such librarying uses diverge significantly from the uses considered fair by the *Sony* Court.⁹³¹ Thus, there is no similar basis here to depart from the usual presumption that the copying of an entire work strongly detracts from a finding of fair use.

The fourth fair use factor directs consideration of “the effect of the use upon the potential market for or value of the copyrighted work.”⁹³² While Public Knowledge suggests that consumer space shifting of DVDs to other media will not harm the developing market for the online distribution of motion pictures, there is no factual record to confirm this, and the Register is unable to conclude that the broad sanctioning of this type of copying will not negatively impact this market.

In sum, the Register is not persuaded that there is a basis under current law to conclude that proponents’ uses are noninfringing.

b. *Adverse impact*

Public Knowledge argues that without the proposed exemption, consumers will be adversely affected by their inability to play lawfully acquired DVDs on electronic devices such as tablet computers and laptop computers made without DVD drives.⁹³³

The Register concludes that proponents have failed to demonstrate that the use of a reasonably priced peripheral, a different device, or an online subscription service to access and play desired content do not offer a reasonable alternative to circumvention. In other words, consumers’ inability to “access all of their media in a single interface and launch the video of their choice at the touch of a button”⁹³⁴ goes to convenience rather

⁹²⁷ 17 U.S.C. § 107(3).

⁹²⁸ P10A (Public Knowledge) at 5.

⁹²⁹ *Sony Corp.*, 464 U.S. at 449.

⁹³⁰ P10A (Public Knowledge) at 4 (discussing consumers accessing all of their media in a single interface).

⁹³¹ As the *Sony* Court explained, its reasoning did not extend to the practice of “librarying,” *i.e.*, the storing of recorded programs indefinitely to view them repeatedly. 464 U.S. at 453 n.39.

⁹³² 17 U.S.C. § 107(4).

⁹³³ P10A (Public Knowledge) at 1-3; R3 (Public Knowledge) at 12-18.

⁹³⁴ P10A (Public Knowledge) at 4.

than necessity. Accordingly, on the present record, the Register is not persuaded that the inability to engage in the space shifting activities described by proponents is having a substantial adverse impact on consumers' ability to make noninfringing uses of copyrighted works.⁹³⁵

c. *NTIA comments*

NTIA supports what it describes as a “more narrowly-constructed” version of Public Knowledge’s proposed exemption.⁹³⁶ Specifically, it supports an exemption that allows circumvention of lawfully acquired DVDs “when the DVD neither contains nor is accompanied by an additional copy of the work in an alternative digital format, and when circumvention is undertaken solely in order to accomplish the noncommercial space shifting of the contained motion picture.”⁹³⁷ NTIA voiced support for the motion picture industry’s efforts to make content available on the wide range of new devices, and encourages the industry to continue developing new offerings.⁹³⁸ It contends that by limiting the exemption to circumstances in which the market has not supplied alternatives to DVDs, “the potential adverse effect on the market is minimal.”⁹³⁹

The Register likewise supports the motion picture industry’s innovation and the development of market approaches to satisfy the demand for electronically distributed content. While the Register is sympathetic to the desire to consume content on a variety of different devices, there is no basis under current law to assume that the space shifting activities that would be permitted under NTIA’s proposal are noninfringing. Moreover, on the record before her, the Register cannot find that such activities would not adversely affect the legitimate future markets of copyright owners.

4. Recommendation

The Register concludes that proponents have failed to establish that the prohibition on circumvention is imposing an adverse impact on noninfringing uses. The Register therefore declines to recommend an exemption for Proposed Classes 10A and 10B.

⁹³⁵ Because the proponents have failed to make their case on the fundamental prerequisites to recommend an exemption, the Register sees no need to consider the statutory factors enumerated in Section 1201(a)(1)(C).

⁹³⁶ NTIA Letter at 32.

⁹³⁷ *Id.*

⁹³⁸ *Id.* at 33.

⁹³⁹ *Id.* at 32.