



UNITED STATES COPYRIGHT OFFICE

Long Comment Regarding a Proposed Exemption Under 17 U.S.C. § 1201

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ITEM A. COMMENTER INFORMATION

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The Software Preservation Network coordinates software preservation efforts to ensure long term access to software. It connects and engages the legal, public policy, social science, natural science, information & communication technology and cultural heritage preservation communities that create and use software.

ITEM B. PROPOSED CLASS ADDRESSED

Class 9 – Computer Programs — Software Preservation

A proposed exemption for libraries, archives, museums, and other cultural heritage institutions to circumvent technological protection measures on lawfully acquired computer programs for the purposes of preserving computer programs and computer program-dependent materials.

¹ Primary contact. The Cyberlaw Clinic and Software Preservation Network thank students Austin Bohn, Evelyn Chang, Jillian Goodman, Anderson Grossman, Erika Herrera, and Erin Thomas for their work on the proposed exemption.

Privacy Act Advisory Statement: Required by the Privacy Act of 1974 (P.L. 93-579)

The authority for requesting this information is 17 U.S.C. §§ 1201(a)(1) and 705. Furnishing the requested information is voluntary. The principal use of the requested information is publication on the Copyright Office Web site and use by Copyright Office staff for purposes of the rulemaking proceeding conducted under 17 U.S.C. § 1201(a)(1). NOTE: No other advisory statement will be given in connection with this submission. Please keep this statement and refer to it if we communicate with you regarding this submission.



Long Comment Regarding a Proposed Exemption Under 17 U.S.C. § 1201

ITEM C. OVERVIEW

1. Software preservation is a valuable process that requires urgent action, as proponents argued in the initial comments.

The Librarian should grant an exemption to § 1201(a)(1) that enables preservationists and archivists to access and preserve software for scholarship and research. As proponents’ initial comment established, software loss is a pressing problem that will only worsen as ever-increasing amounts of new content and information are “born digital.” Institutions that shoulder the burden of carefully archiving software make possible the research and study of software history, the development of future software, and the preservation of software dependent works. As our society, culture, and economy become even more intertwined with software, digital preservationists and archivists provide an invaluable service—but one that is unacceptably constrained by § 1201.

All but two of the opponents to Class 9 generally accept the contentions by proponents that the current system is inoperable and that preservation of digital works is a worthwhile endeavor.² The Business Software Association (BSA) “supports the proposed exemption in principle.”³ The Entertainment Software Association (ESA) is “committed to, and actively support[s], serious professional efforts to preserve video games.”⁴ The App Association “does not oppose granting the proposed exemption . . . if the exemption includes the obsolescence limitation used in previous rulemakings.”⁵ The DVD Copy Control Association and the Advanced Access Content

² The Software & Information Industry Association (SIIA) claims that the evidence does not support any exemption. Software and Information Industry Association, Response Comment Letter Regarding Proposed Exemption Under 17 U.S.C. § 1201 Class 9 (“SIIA Comment”), 5. Although proponents appreciate that the SIIA lays out a specific class of works that could be affected and thus might be eligible for an exception, *id.*, those in the business of preserving software are more capable of determining the scope necessary to ensure the continued viability of cultural works. Likewise, the Joint Creators argue that the exemption should wait until Congressional action, a proposition that could postpone preservation indefinitely and runs counter to the purpose of the triennial rulemaking. Joint Creators and Copyright Owners, Response Comment Letter Regarding Proposed Exemption Under 17 U.S.C. § 1201 Class 9 (“Joint Creators Comment”), 13.

³ BSA | The Software Alliance, Response Comment Letter Regarding Proposed Exemption Under 17 U.S.C. § 1201 Class 9 (“BSA Comment”), 2.

⁴ Entertainment Software Association, Response Comment Letter Regarding Proposed Exemption Under 17 U.S.C. § 1201 Class 9 (“ESA Comment”), 2.

⁵ ACT | The App Association, Response Comment Letter Regarding Proposed Exemption Under 17 U.S.C. § 1201 Class 9 (“App Association Comment”), 2.

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System Licensing Administrator (DVD CCA/AACS LA) “do not dispute the basic proposition” that “many technologies have become outmoded or superseded and that there is an urgent need to be able to access the underlying technologies and content dependent on those technologies in order to ensure their preservation.”⁶ Indeed, the BSA agrees that petitioner has satisfied their burden of proving adverse impacts caused by technological protection measures (TPMs) with respect to works distributed on obsolete formats.⁷

On the whole, there is support for preservation activities and for an exemption that enables them. This reply focuses on the practical details of the proposed exemption. In terms of scope, proponents are willing to narrow their initial proposal to assuage some of the concerns of opponents, including tailoring the proposed exemption to reflect some of the limitations of 17 U.S.C. § 108. In other places, such as the suggestion to allow preservation only after the format on which software is stored becomes obsolete, the proposed limitations suggested by opponents are far too narrow to accommodate pressing needs for software preservation. In this reply, proponents will both address opponents’ arguments and explain why the opponents’ proposed limitations will exclude important preservation activity that is noninfringing and adversely affected.

2. The proposed class is a particular class of works that is limited by both use and user and should include all software.

a. Computer programs are a particular class of works.

An exemption must be defined based on “a particular class of works,”⁸ which is a narrowed and focused subset of the original list of categories in § 102 of Title 17.⁹ Opponents argue that, in order to be sufficiently narrow, the type of works included in the exemption’s scope must be a subgroup of computer programs.¹⁰

⁶ DVD Copy Control Association and Advanced Access Content System Licensing Administrator, Response Comment Letter Regarding Proposed Exemption Under 17 U.S.C. § 1201 Class 9 (“DVD CCA/AACS LA Comment”), 2.

⁷ BSA Comment at 6–7.

⁸ 17 U.S.C. § 1201(a)(1)(B).

⁹ Register of Copyrights, Section 1201 Rulemaking: Sixth Triennial Proceeding to Determine Exemptions to the Prohibition on Circumvention, Recommendation of the Register of Copyrights 17 (Oct. 8, 2015) (“2015 Recommendation”).

¹⁰ See BSA Comment at 2–3 (arguing that the 2003 and 2006 preservation exemptions contained “important limitations on the class of works [i.e., works “distributed in formats that have become obsolete” and “require the original media or hardware as a condition of access”] to which the exemptions applied—limitations that are not explicitly included in Petitioners’ . . . class”); App Association Comment at 2 (same); DVD CCA/AACS LA Comment at 2 (requesting any exemption granted to exclude CSS and AACS technologies); ESA Comment at 4–5 (requesting the exclusion of video games because of other existing and proposed exemptions); SIIA Comment at 5 (proposing a limitation to “truly obsolete” computer programs).

Computer programs are a subcategory of literary works and do not encompass an entire category of works listed under § 102 of Chapter 17. Proponents put forth an amended definition of “computer program” to match the definition of § 101 of Title 17: “[a] ‘computer program’ is a set of statements or instructions to be used directly or indirectly in a computer in order to bring about a certain result.”¹¹ This definition accurately reflects the broad range of materials addressed by software preservation efforts and the complexity of such efforts against the backdrop of rapid technological development.¹²

Opponents argue that “computer program-dependent material” is not a sufficiently narrowed “particular class” because it includes a broad definition of works.¹³ This objection is misplaced because these materials are not included in the class of works subject to the proposed exemption. The purpose of this language is to indicate that, under the proposed exemption, preservation of computer program-dependent material would be a permissible purpose for circumventing a TPM on a computer program. Computer program-dependent material that is not itself a computer program would not be included in the proposed class.

Some preservation organizations are focused on preserving computer program-dependent materials (e.g., files), as opposed to computer programs. A relevant example arises in the field of architecture, where those involved in preservation need to access AutoCAD files that are no longer readable in current versions.¹⁴ Aliza Leventhal, a librarian and archivist at a design firm, shared with proponents that the preservation of specific AutoCAD files is vital because they contain detailed information that could not be adequately contained in another file type (e.g., PDF).¹⁵ However, computer-aided drafting systems like AutoCAD are updated regularly and many architectural organizations do not keep copies of the older software. Subsequently, the details contained in the original files that are interesting and useful for later purposes are lost forever because the older files cannot be read.¹⁶ A preservation organization focused on preserving files, such as AutoCAD files, should be permitted to preserve the computer programs required to access these files, subject to the limitations of the exemption.

b. The class is further limited by use (for purposes of preservation) as well as user (preservation-oriented institutions).

¹¹ 17 U.S.C. § 101.

¹² See Software Preservation Network and Library Copyright Alliance, Initial Comment Letter Regarding Proposed Exemption Under U.S.C. § 1201 Class 9 (“Initial Comment”), at 4–5.

¹³ Joint Creators Comment at 3–4.

¹⁴ Prior to the 2014 version of AutoCAD, there were significant backwards incompatibility issues when opening older files in new software. Email from Aliza Leventhal, Corporate Librarian/Archivist, Sasaki Associates, to Kendra Albert (March 1, 2018) (on file with proponents).

¹⁵ *Id.*

¹⁶ *Id.*

The Register has been clear that an appropriately narrow class may be limited by defining the “medium on which the works are distributed, [] the particular access controls at issue, . . . [or] the particular type of use and/or user to which the exemption will apply.”¹⁷ “[T]he exemption may also take into account the adverse effects an exemption may have on the market for or value of copyrighted works,” and it may be appropriate to narrow a class by its “use or user in order to remedy the adverse effect of the prohibition and to limit the adverse consequences of an exemption.”¹⁸ It is possible that an exemption for computer programs broadly—by anyone for any purpose—would have an adverse effect on the “market for or value of” the copyrighted works. Proponents have narrowed the proposed class based on both use and user to ensure adverse effects do not occur.

The proposed class is limited in use by requiring circumvention to be done “for the purpose of preserving a computer program or computer program-dependent material.” This limits potential adverse consequences, such as illegal software piracy, by requiring that the exemption be used in furtherance of preservation activities—activities that both proponents and opponents agree are worthwhile endeavors.

Furthermore, not just anyone can claim eligibility for this exemption because their work is for “preservation” purposes: only certain groups of people have the capability to claim this exemption. The proposed class limits the users to “libraries, archives, museums, and other cultural heritage institutions.”

The Register has previously looked to § 108, which provides for reproduction and distribution by libraries and archives,¹⁹ for guidance on the scope of legitimate preservation activities.²⁰ However, the Copyright Office has noted that § 108 does not provide adequate protection for preservation activity with respect to digital materials.²¹ The incomplete fit between § 108 and the needs of modern preservationists means that the individuals and organizations performing this important work must propose exemptions to § 1201 that go beyond § 108 in reasonable and limited ways.

¹⁷ 2015 Recommendation at 18.

¹⁸ Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, 80 Fed. Reg. 65,946 (“2015 Final Rule”) (internal quotation omitted); *see also* 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 19 (Nov. 17, 2006) (“2006 Recommendation”) (“depending upon the circumstances, it can be appropriate to refine a class by reference to the use or user in order to remedy the adverse effect of the prohibition and to limit the adverse consequences of an exemption”).

¹⁹ 17 U.S.C. § 108.

²⁰ 2015 Recommendation at 342.

²¹ *See* THE SECTION 108 STUDY GROUP REPORT 28 (Mar. 2008), <http://www.section108.gov/docs/Sec108StudyGroupReport.pdf> [https://perma.cc/4VPH-5P9F] (stating that § 108 “is in many respects unworkable in the digital environment”).

Recognizing this need, in the 2015 Recommendation, the Register included museums in the category of preservation-oriented institutions, because museums' preservation efforts were similar in that case.²² Additionally, the Copyright Office recently proposed adding museums to the statutory language in the 2017 Discussion Document of § 108, noting "whatever distinction between museums and libraries/archives that may have existed when drafting section 108 is no longer operative."²³ As in those cases, the Register should include museums and other cultural heritage institutions in this proposed class, because their preservation efforts are similar to the efforts of others in the proposed class, and because there is no reasonable distinction between museums (on the one hand) and libraries and archives (on the other hand) when it comes to preservation.

With regard to "other cultural heritage institutions," SIIA took issue with the potential breadth the phrase suggests,²⁴ and the Joint Creators noted its lack of definition.²⁵ As software is a new form of culture, at least compared to the works that traditional preservation institutions focus on, some of the most important and exciting work in the software preservation field is performed at organizations that may not classify themselves as libraries, museums, or archives—perhaps due to a lack of size or resources—but, in the words of the Copyright Office, have nevertheless taken on "a responsibility for the preservation and stewardship of cultural heritage."²⁶ For example, the Electronic Literature Organization, which runs an archive of important electronic literature, may not formally be a library, museum, or archive, but shares their essential characteristics and is dedicated to preservation of electronic works in such formats as Storyspace, HyperCard, and Flash.²⁷ Likewise, Rhizome, an organization that produces, champions and preserves born digital art and culture, but is not expressly a museum, library or archive, should be able to preserve works.²⁸

Such institutions share the 2017 Discussion Document's proposed conditions for § 108 eligibility, which are: (1) the institution has a public service mission; (2) the institution has trained staff or volunteers who provide professional services normally associated with a library, archives, or museum; (3) the institution's collections are composed of lawfully acquired and/or licensed materials; and (4) the institution implements reasonable digital security measures.²⁹ Additionally, the cultural heritage institutions in question share the eligibility condition already

²² 2015 Recommendation at 342.

²³ U.S. COPYRIGHT OFFICE, SECTION 108 OF TITLE 17 – A DISCUSSION DOCUMENT OF THE REGISTER OF COPYRIGHT 17 (Sept. 2017), <https://www.copyright.gov/policy/section108/discussion-document.pdf> [https://perma.cc/6B5Q-XPX4] ("§ 108 Discussion Document").

²⁴ SIIA Comment at 3.

²⁵ Joint Creators Comment at 3, n. 2.

²⁶ § 108 Discussion Document at 17.

²⁷ See Initial Comment at 28; see also *Our Role*, ELEC. LITERATURE ORG., <https://eliterature.org/what-is-e-lit> [https://perma.cc/SBJ3-BDSA].

²⁸ RHIZOME, <http://rhizome.org/about> [https://perma.cc/782G-33NV].

²⁹ § 108 Discussion Document at 19.

set out in § 108(a)(2): namely, that their collections are available to the public or to others doing research in the field.³⁰

Thus, there are two requirements needed to qualify for the exemption: the user must be a library, archive, museum, or other cultural heritage institution; and the circumvention must be for the purposes of preservation. These limitations minimize the potential for abuse and cabin the risks that opponents express concern about in their submissions.

c. The class should include video games, as the same analysis applies to them as other subcategories of software.

As the ESA notes, video games fall under the proposed definition of computer programs. Proponents maintain their position that this exemption should include video games. This proposed exemption covers a variety of important preservation activity that is covered by neither the current video game-specific exemption nor the proposed extended video game exemption. Additionally, the adverse effects, non-infringement analysis, and statutory factors are common between video games and all other forms of software.

The 2015 video game exemption was designed to re-enable access to video games where a remote server was required in order to access the game, and both proponents and opponents focused on those examples.³¹ Likewise, the proposed extension to the video game exemption considered in this rulemaking focuses on server-based preservation and the inclusion of affiliates of preservation institutions.³²

Proponents' proposed exemption for software preservation covers a different set of TPMs and preservation activities—namely, software, including video games, that may not be preserved without circumvention of a TPM but are not necessarily reliant on a server.³³ The adverse effects of § 1201 on the preservation of video games with these characteristics are the same as those raised for the broader category of software by proponents in the initial comment.³⁴ Although proponents appreciate that the ESA is uniquely concerned about video games, requiring proponents to provide a specific breakdown of how each sub-category of software would be affected by their petition goes beyond the scope of this proceeding. That said, to the extent that the ESA believes evidence specific to video games is appropriate, proponents are happy to discuss how their initial analysis and examples apply in that specific context.

³⁰ 17 U.S.C. § 108(a)(2).

³¹ 2015 Recommendation at 321–335.

³² Museum of Art and Digital Entertainment, Initial Comment Letter Regarding Proposed Exemption Under U.S.C. § 1201 Class 8, 2–3.

³³ To the extent that there is direct overlap between the Class 8 exemption (existing or proposed) and this exemption, the more specific restrictions in Class 8 should apply.

³⁴ Initial Comment at 6–9, 18–21.

As discussed in proponent's initial filing, Living Computers Museum + Labs is attempting to preserve *DarkSide*,³⁵ a video game originally released for the Commodore 64 and for Amiga.³⁶ *DarkSide*'s preservation is of historical importance, as it was an early example of a first-person shooter and was included on a Top-100 list of 1987/1988 by ACE magazine.³⁷ Released in 1988, *Dark Side* did not rely upon a server as a TPM, but the anti-circumvention provisions nonetheless may prevent the Living Computers Museum + Labs from making accessible preservation copies of the software.³⁸ The same is true of *Battle Droidz*, also mentioned in the Living Computers Museum + Labs survey response in proponents' original filing.³⁹ Without accessible preservation copies, Living Computers Museums + Labs cannot exhibit the works. For these examples, the anti-circumvention provision of § 1201 prevents the preservation of these works, and the Class 8 video game exemption does not cover any circumvention Living Computers Museums + Labs may do.

Preserving *DarkSide*, *Battle Droidz*, and other video games that meet the criteria for the Class 9 proposed exemption would be noninfringing. The 17 U.S.C. § 117 and 17 U.S.C. § 108 analysis of the preservation of a video game would be exactly the same as any other form of software.⁴⁰ Here, making a copy for preservation purposes would be covered under § 108 if the Living Computers Museum + Labs is an archive or library, as all the other statutory factors are met. With regards to fair use under § 107, the legislative history of the 1976 Copyright Act states plainly that "the making of duplicate copies for the purposes of archival preservation *certainly* falls within the scope of 'fair use.'"⁴¹ The rest of the fair use analysis is substantively the same as for other types of software, which the ESA does not dispute.

With regard to the statutory factors that the Register must consider in order to grant an exemption, the ESA claims that proponents have not shown that a broader exemption is required, and that any exemption other than the existing one would harm the market. Proponents explain why the exemption is necessary for software generally in their original comments,⁴² and provide

³⁵ Initial Comment at 26.

³⁶ *Dark Side Specs*, MOBYGAMES, <http://www.mobygames.com/game/dark-side/techinfo> [https://perma.cc/4NYJ-SMU7].

³⁷ *Dark Side Trivia*, MOBYGAMES, <http://www.mobygames.com/game/dark-side/trivia> [https://perma.cc/L9JG-EHNU].

³⁸ For a list of different technological protection measures used by the Commodore 64, see Copy Protection Methods, FLOPPY DISK PRESERVATION PROJECT, http://diskpreservation.com/dp.php?pg=protection_cbm [https://perma.cc/KBE8-GZVG]. Although some such measures may be called "copy-protection" colloquially, as pointed out by the SIIA Comments at 4 n. 8, they also may serve as access controls under § 1201 because of their software implementation. Independent of the words used to describe the technological protection measures, Living Computers Museums + Labs has explained to proponents that their staff do not feel comfortable making accessible copies for preservation because of § 1201.

³⁹ Initial Comment at 26.

⁴⁰ For that analysis, see Initial Comment at 14–18.

⁴¹ See H.R. REP. NO. 94–1476, at 73 (1976) (emphasis added).

⁴² Initial Comment at 6–9.

examples of how video games specifically are affected above. But the ESA provides no evidence as to why this exemption, especially as limited based on this reply, would harm their market. The contours of proponents' narrowed Class 9 exemption quite directly track the "nuanced judgments about the scope of preservation" that the Register made in the previous video game exemption,⁴³ while including preservation use cases that the earlier exemption did not address. Proponents for this exemption have learned from the record developed in the previous triennial rule-making, and in this one, and have scoped their request accordingly. There is no reason why once one video game exemption is granted, another exemption cannot also deal with video game preservation, especially when it corresponds to a particular set of preservationist needs.

3. In accordance with concerns expressed by the opponents, proponents are willing to limit the requested exemption to software that is no longer reasonably available in the commercial marketplace.

All opponents ask for additional limiting principles to this exemption beyond the use and user exemptions in the original proposed class. It is important that any such principle be simple to implement as the relevant technology changes over the next three years.

One potential limitation—the one a subset of opponents advocate for—is to only permit the preservation of works that are on obsolete formats as defined by § 108(c), as adopted by 2003 and 2006 software preservation exemptions.⁴⁴ The obsolescence definition in § 108 covers "format[s]" which "shall be considered obsolete if the machine or device necessary to render perceptible a work stored in that format is no longer manufactured or is no longer reasonably available in the commercial marketplace";⁴⁵ for the sake of brevity, proponents will call this definition "format obsolescence."⁴⁶

The following sections will show that format obsolescence does not provide a workable standard for software preservation. But, taking seriously the concerns of opponents regarding breadth, proponents are willing to limit the request to allow access only to software titles that are no longer reasonably available in the commercial marketplace. This restriction, combined with the use and user limitations, will minimize the potential impact of any exemption on the market.

⁴³ ESA Comments at 3.

⁴⁴ See App Association Comments at 2-3, 4; BSA Comments at 3-4. SIIA suggests a similar requirement as part of its potential list of characteristics of obsolete works "originally made available on fixed medias such as CDs, floppy disks or other media that is both no longer widely used commercially . . ." SIIA Comments at 5.

⁴⁵ 17 U.S.C. § 108(c)(2).

⁴⁶ Of course, format obsolescence is only one of the "trigger" conditions present in § 108 (c) – a library or archive may also make a replacement copy if "[the original] is damaged, deteriorating, lost, or stolen."

17 U.S.C. § 108 (c). Limiting the § 1201 exemption to only the format obsolescence trigger under § 108, as suggested by opponents, would mean that it would not even cover Congressionally-approved preservation uses.

- a. A format obsolescence limitation is inapposite due to the disjunction between the obsolescence of format and the software titles in need of preservation, as well as concerns about the continued vitality of the “format” classification altogether.**

As discussed above, § 108 of the Copyright Act contains a definition of obsolescence that is tied to the availability of the machine or devices to read a format. For example, a floppy disk containing software would be obsolete when floppy disk readers are no longer sold, or a DVD when DVD players are no longer manufactured. But software obsolescence does not map directly onto format obsolescence. For example, a work of software no longer reasonably commercially available and stored only on CDs, under the limitation proposed by opponents, could not be preserved until CD drives were no longer sold.

In practice, this is unworkable. It could be many years until CD drives are no longer commercially available, and in that time, the software stored on a CD may deteriorate until it is beyond repair, much less accessible for preservation activities. This is why § 108(c) includes damage and deterioration alongside format obsolescence as conditions that warrant copying for preservation. Indeed, information contained on a CD that has weathered regular use is estimated to survive just three years; in order for a CD to last its hypothetical hundred year lifespan, it must be completely unused or handled with the most extreme care.⁴⁷ But the knowledge, experience, and hardware required to operate, and care for, a slowly deteriorating medium dissipates with each passing year that it is not in regular circulation.⁴⁸ And even with the ultimate care, some level of visual and audio drop out, color loss, and other distortions is almost guaranteed,⁴⁹ as mediums such as VHS tapes are considered “deteriorating from the moment they are made.”⁵⁰ The danger with digital information is that even the most minimal decay can corrupt the entire work.⁵¹

Put another way, limiting preservation to format obsolescence would require digital preservation experts to sit on their hands and watch preservation-worthy, non-commercially available works disappear as long as machines to play the format on which they reside linger on store shelves. If the Register accepts opponents’ limitation of format obsolescence, an unacceptable number of works will be lost.

⁴⁷ Mike Wirth, *The Lifespan of Storage Media*, VISUALLY (Aug. 13, 2012), <https://visual.ly/community/infographic/computers/lifespan-storage-media> [https://perma.cc/G56F-2R58].

⁴⁸ Mike Casey, *Why Media Preservation Can’t Wait: The Gathering Storm*, 44 IASA J. 14, 15–16 (Jan. 2015), https://www.avpreserve.com/wp-content/uploads/2015/04/casey_iasa_journal_44_part3.pdf [https://perma.cc/WH3C-ZWTD].

⁴⁹ *The VHS Legacy Can Be Saved, But Will It?*, MOVING IMAGE ARCHIVE NEWS (Sept. 18, 2017), <http://www.movingimagearchivenews.org/the-vhs-legacy-can-be-saved-but-will-it> [https://perma.cc/74FF-PGP5].

⁵⁰ *Audiovisual Material*, COLUMBIA UNIVERSITY LIBRARIES STAFFWEB, <http://culis.columbia.edu/copyright-office/access/audiovisual.html> [https://perma.cc/BS2R-SYXV].

⁵¹ § 108 Study Group at 45.

Moreover, while format obsolescence may have made sense as a guidepost for preservation at the time of the passage of the DMCA, the amount and widespread use of born digital software available via the Internet makes the concept of format obsolescence for software, well, obsolete. Take, for example, the plethora of indie video games available on the widely-used gaming platform Itch.io.⁵² Almost all of these games are available only for digital download and will likely never be distributed in a traditional physical format. Suppose a preservationist purchased a game but could not access it due to a TPM. If the game was no longer commercially available, they would need to wait until its format became obsolete as well. But what format obsolescence would mean in this context is entirely unclear. A literal reading of the obsolescence language from § 108 that opponents seek to apply here might mean that preservationists would have to wait until computers are no longer commercially available.

In light of this fundamental confusion, making format obsolescence the only condition that triggers the preservation exemption is untenable. As time goes on, more and more “formats” will be digital and thus difficult to locate or tease out from the underlying work, rather than physical and easily identifiable. The Copyright Office should not import this digitally unworkable distinction into this exception.

b. Proponents agree to a limitation that allows preservationists to circumvent access protections only on software that is no longer reasonably available in the commercial marketplace.

In light of the complexity and confusion that current technology adds to the idea of format obsolescence, proponents request a standard that does not relate to the format of storage. Instead, it merely asks whether the work in need of preservation is reasonably available in the commercial marketplace. If it is not, librarians, archivists, and preservationists should be able to circumvent its access controls for preservation purposes. This limitation recognizes the concerns of our opponents—including the BSA’s contention that “most of the examples provided in the Petition in explaining the need for the exemption involve works stored in formats that are obsolete or otherwise no longer commercially available,”⁵³ and the App Association’s claim that “[p]etitioners’ comments . . . do not provide specific examples of how they are adversely affected in their ability to access software programs currently available in the marketplace”⁵⁴—while providing a standard that is easily definable and intuitively workable.

Here, “reasonably available in the commercial marketplace” means that new copies of the software are being sold. This aligns with the legislative history of the DMCA, which, in its discussion of legitimate preservation activities, makes clear that availability in second-hand

⁵² ITCH.IO, <http://itch.io> [https://perma.cc/6R4L-CLE8].

⁵³ BSA Comments at 2.

⁵⁴ App Association Comments at 4.

stores does not qualify as reasonably available in the commercial marketplace.⁵⁵ Preservationists should not be forced to race against the clock to ensure that the work is not lost. A limitation of reasonable availability in the commercial marketplace saves preservationists the exorbitant time and effort potentially required to locate second-hand copies. It also allows them to preserve important works as necessary without having to navigate complex thickets to locate the “format” in contemporary software, and then waiting for the format to leave the commercial marketplace.

4. The exemption should include all noninfringing preservation, under § 107, § 108 and § 117.

Opponents argue that the Copyright Office should limit any preservation-related exemptions to the contours of § 108, not allowing uses that would otherwise be noninfringing. But as proponent’s initial petition lays out, there are many preservation activities that are adversely affected by § 1201 that do not fall within the contours of § 108. Both the Copyright Office and the Library of Congress acknowledge that § 108, by itself, provides inadequate protection for the digital preservation activities of librarians and archivists.⁵⁶ As a result, any exemption to § 1201 should not be limited to the copyright exceptions specifically for libraries, but should cover all noninfringing uses. This is consistent with past practice, as the Register in prior proceedings recommended exemptions for preservation that are noninfringing but not covered under § 108.

a. Section 108 does not exclude the application of fair use, nor do opponents dispute that many preservation activities not under § 108 are noninfringing.

⁵⁵ S. REP. 105-190, at 62 (1998) (“Under this language, if the needed machine or device can only be purchased in second-hand stores, it should not be considered “reasonably available.”). The Register cited this piece of the legislative history in its 2003 Recommendation, 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 50–51 (Oct. 27, 2003) (“2003 Recommendation”), and 2006 Recommendation, at 24–30. The § 108 Discussion Document proposes an alteration to this definition that would include searching for any “usable” copy, thereby including the second-hand market. § 108 Discussion Document at 33–34. However, once the copy is no longer available in the commercial market and left solely to the second-hand market, it is simply a matter of time before it is too late to acquire a usable copy, and buying a second-hand copy raises a host of issues related to provenance and wear. It will also be easier for users of the exemption to determine whether purchasing “first-hand” copy is possible.

⁵⁶ In 2015, then-Register Maria A. Pallante made clear before the House Judiciary Committee that “there is virtually no dispute that [the library exceptions] are outdated to the point of being obsolete . . . [and] it is our view that it is untenable to leave them in their current state.” *Register’s Perspective on Copyright Review: Hearing Before the H. Comm. on the Judiciary*, 114th Cong. 5 (2015) (statement of Maria A. Pallante, Register of Copyrights and Director, U.S. Copyright Office), https://judiciary.house.gov/wp-content/uploads/2016/02/114-22_94408.pdf [<https://perma.cc/RA92-QQDR>]. In 2017, the Office noted that “[t]he rise of digital technologies has magnified significantly the outdated character of many of section 108’s provisions.” § 108 Discussion Document at 13. And, as mentioned in the initial comment, the Library of Congress has also recognized the value and necessity of digital preservation activities. Initial Comment at 3, n. 11 (citing *Why Digital Preservation is Important for Everyone*, LIBR. CONG., <http://digitalpreservation.gov/multimedia/videos/digipres.html> [<https://perma.cc/FCX6-FKY9>]).

Opponents argue that preservation activities can only be considered noninfringing uses if they comply with the constraints of § 108, and they assert that the Register has previously maintained this position.⁵⁷ This is simply not true. While proponents agree with opponents and the Register that § 108 “provides [] useful and important guidance”⁵⁸ to begin the noninfringing use analysis, the Register has not stopped there. In the 2015 Recommendation, the Register found that “[w]hile articulating express exceptions for the activities of libraries and archives, section 108 also preserves fair use.”⁵⁹ Additionally, the 2006 Recommendation, used by opponents’ comments to support their assertions, acknowledges that “there may be occasions where preservation or archival activity . . . would be noninfringing as fair use, even if it does not clearly fall within the scope of § 108. In such cases, the exemption for this class of works should also be available.”⁶⁰

Furthermore, it is inconsistent with the statute and the legislative history to limit noninfringing uses of preservation to § 108. Section 108(f)(4) provides a fair use savings clause: “Nothing in this section . . . in any way affects the right of fair use as provided by section 107.”⁶¹ The Copyright Office highlighted the importance of the fair use savings clause to preservation activities in the 2017 § 108 Discussion Document.⁶² The legislative history of the Copyright Act also supports this claim, as the conference report states that “[n]o provision of § 108 is intended to take away any rights existing under the fair use doctrine.”⁶³ Confirming this understanding, the Second Circuit found that the application of § 108 did not diminish the necessity of also analyzing library use under fair use.⁶⁴ Thus, the proposed class should not be constrained by § 108 because it involves preservation, as the opponents argue, but should also be analyzed under applicable fair use doctrine, as is consistent with the statute, Congressional intent, the Copyright Office’s Discussion Document, and the Register’s past recommendations.

Opponents do not critique the substance of proponents’ fair use analysis or attempt their own. The App Association asserts without argument that “[i]t is unlikely that the reproduction of

⁵⁷ BSA Comment at 3 (claiming that “only Section 108 provides a solid basis for such noninfringing uses”); App Association comment at 3–4 (arguing that noninfringing uses can only be found if complying with § 108); Joint Creators comment at 12–13 (asserting that the proposed exemption is not properly linked to § 108 because all previous preservation-related exemptions have been).

⁵⁸ 2015 Recommendation at 342.

⁵⁹ 2015 Recommendation at 342, n. 2323; *see* 17 U.S.C. § 108(f)(4). The opponents generally ignore or misunderstand this finding. The BSA Comment mischaracterizes the Register’s 2015 Recommendation by asserting that the Register reaffirmed its position that “Section 107 does not provide a basis for extending the scope of such exemptions beyond the uses permitted under Section 108.” BSA Comment at 5. The App Association only points to the 2003 and 2006 Recommendations. App Association Comment at 3. The Joint Creators acknowledge that the 2015 Recommendation found that “some preservation activities were likely fair uses under § 107,” but they continued to assert that § 108 limitations were required. Joint Creators Comment at 9.

⁶⁰ 2006 Recommendation at 30.

⁶¹ 17 U.S.C. § 108(f)(4).

⁶² § 108 Discussion Document at 14–16, 42–43.

⁶³ H.R. REP. NO. 94-1476, at 74 (1976); *see also* § 108 Discussion Document at 42–43.

⁶⁴ *See infra* text accompanying notes 73–76.

software programs currently available . . . would fall under the fair use exemption.”⁶⁵ However, this assertion does not point to disagreement with proponents’ analysis of the fair use factors nor provide any case law or citations. Similarly, the BSA asserts that fair use does not apply because of comments in past Recommendations.⁶⁶ However, the BSA does not attempt a fair use analysis as to whether it is applicable in this instance.⁶⁷

b. The Library of Congress has a record of granting exemptions based on multiple types of noninfringing uses, including § 107.

The Register’s Recommendations have consistently introduced the exemption process as being created “to ensure that the public can still engage in noninfringing uses of copyrighted works, such as fair use.”⁶⁸ Consequently, the Register has created numerous exemptions where uses were noninfringing under multiple legal doctrines. In 2015, the Register granted an exemption to unlock used wireless devices to connect to telecommunications networks because it facilitated noninfringing uses under § 117 and fair use.⁶⁹ In previous triennial rulemakings, the Register had only considered noninfringing uses under § 117, but, in 2015, found it necessary to expand the scope of noninfringing use by considering fair use.⁷⁰ The Register went on to grant several exceptions based on dual noninfringing uses rooted in both fair use and § 117.⁷¹ Similarly, the Register should consider that fair use provides legitimate non-infringing uses of works in the proposed class, a fact which none of the opponents’ comments have persuasively rebutted.

Furthermore, the opponents primarily argue against the application of fair use based on the 2003 and 2006 Recommendations.⁷² However, the fair use doctrine has since developed in a way that broadens the availability of fair use to preservation-related activities. In *Authors Guild v. HathiTrust*, the Second Circuit held that HathiTrust was allowed to “create a full-text searchable

⁶⁵ App Association Comment at 3.

⁶⁶ BSA Comment at 5.

⁶⁷ *See id.*

⁶⁸ Register of Copyrights, Section 1201 Rulemaking: Fifth Triennial Proceeding to Determine Exemptions to the Prohibition on Circumvention, Recommendation of the Register of Copyrights 1 (Oct. 12, 2012) (citing 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 25–26, 35); *see also* Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, 65 Fed. Reg. 64,556 (Oct. 27, 2000); 2015 Recommendation at 8; Register of Copyrights, 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 4 (June 11, 2010); 2006 Recommendation at 3; 2003 Recommendation at 4.

⁶⁹ 2015 Final Rule at 65,952–53.

⁷⁰ 2015 Recommendation at 169; *see also* 2015 Final Rule at 65,952.

⁷¹ 2015 Final Rule at 65,954 (proposed class 21 was granted based on “fair use and/or under . . . section 117”), 65,956 (proposed class 22 was granted based on fair use or, in some cases, § 117), 65,958 (proposed class 26 was granted based on fair use or under § 117); *see also id.* at 65,957 (proposed class 23 was found to be noninfringing under fair use, but still limited by § 108).

⁷² BSA Comment at 5; App Association Comment at 3.

database of copyrighted works and to provide those works in formats accessible to those with disabilities” because those activities were fair use.⁷³ There, the plaintiffs argued that fair use was inapplicable because § 108 governed,⁷⁴ similar to the opponents’ comments here. However, the court dismissed this argument in a footnote, explaining that § 108 did not diminish the need to analyze [HathiTrust’s] activities under fair use because of the § 108(f)(4) savings clause.⁷⁵ Soon after *HathiTrust*, the Second Circuit similarly held in *Authors Guild v. Google, Inc.* that “Google’s unauthorized digitizing of copyright-protected works, creation of a search functionality, and display of snippets from those works are noninfringing fair uses.”⁷⁶ These cases highlight the continued expansion of the fair use doctrine as the digital world continues to evolve, and that the Copyright Office would not “break new ground,” in the Joint Creators’ words,⁷⁷ in granting an exemption that allows for preservation that is noninfringing because of fair use.

c. Opponents’ objections to potential noninfringing use under 17 U.S.C. § 117 are likewise inapposite.

Opponents raise two arguments that the Copyright Office should not consider uses that would be noninfringing under 17 U.S.C. § 117. SIIA points out that a large amount of software is licensed, not directly sold, and therefore § 117 may not apply.⁷⁸ SIIA cites a Copyright Office report stating that the subject of ownership vs. licensing “raises complex questions” about the application of § 117, specific to the “nature of the transaction between the parties.”⁷⁹ Courts agree that the determination of whether § 117 applies to a party’s ownership of software is a complex, fact-specific matter.⁸⁰ The Register also affirmed this position in the 2015 Recommendation, where she noted that § 117 might apply to some forms of reverse engineering of server protocols for video games.⁸¹ It would be inappropriate to assume that all applications of § 117 are precluded by the licensing issue.

But even if it were reasonable to assume that no licensed software cannot be copied under § 117, SIIA’s argument is still overbroad. Proponents never suggested that § 117 will apply to all, or even most, software, but that it provides an alternate potential source of noninfringing uses

⁷³ *Authors Guild, Inc. v. HathiTrust*, 755 F.3d 87, 105 (2nd Cir. 2014).

⁷⁴ *Id.* at 94, n. 4.

⁷⁵ *Id.*; see also 17 U.S.C. § 108(f)(4).

⁷⁶ *Authors Guild v. Google, Inc.*, 804 F.3d 202, 229 (2nd Cir. 2015).

⁷⁷ Joint Creators Comment at 5.

⁷⁸ SIIA Comment at 4.

⁷⁹ U.S. COPYRIGHT OFFICE, SOFTWARE-ENABLED COMPUTER PRODUCTS: A REPORT OF THE REGISTER OF COPYRIGHTS 19, 24 (2016), <https://www.copyright.gov/policy/software/software-full-report.pdf> [https://perma.cc/KS8W-YPGE].

⁸⁰ See *Vernor v. Autodesk, Inc.*, 621 F.3d 1102, 1111 (9th Cir. 2010); *Krause v. Titleserv, Inc.*, 402 F.3d 119, 124 (2d Cir. 2005).

⁸¹ 2015 Recommendation at 336.

applicable in some preservation cases. Some software preservation, such as the Living Computers: Museums + Labs examples cited in the opening comment, may fall under § 117.⁸²

The BSA likewise takes issue with proponents' § 117 analysis. They note that in 2003, the Register failed to grant a broader exemption that covered both § 117 and § 108, and that § 117 does not cover “use” copies.⁸³ It is true that the Copyright Office failed to grant an exemption that incorporated coverage of § 117 in 2003, but the record in 2003 reflected that the Internet Archive planned to make copies to counteract format obsolescence generally, rather than solely to guard against failure.⁸⁴ Additionally, the Register determined that such copies were “use” copies because they would be loaned out to Internet Archive patrons.⁸⁵ In contrast, copies made by proponents under § 117 in this exemption round would be made solely for back-up or archiving, consistent with the statute.⁸⁶ If copies made for the purposes of archiving and preservation count as “use” copies, as the BSA seems to contend, § 117 would lose any applicability whatsoever.

5. Opponents offer no evidence that libraries' and archives' preservation activities lead to illegal circumvention or piracy.

Opponents do not offer any evidence to argue that there would be adverse market effects, like piracy, under the originally proposed limitations, let alone the further constraints included here. The App Association puts forth a conclusory argument that “granting an exemption . . . [for] programs currently available in the marketplace would negatively impact this important and growing sector of the U.S. economy.”⁸⁷ Despite this sweeping statement, the argument lacks *any* evidence or reasoning as to why preservation-oriented institutions—libraries, archives, museums, and other cultural heritage institutions—circumventing TPMs on software for purposes of preservation would have a direct or indirect impact on the commercial market for computer programs.

The BSA provides a similarly conclusory argument: “extending the exemption to cover instances where the work at issue is still available on the market . . . would adversely affect ‘the market for or value of [the] copyrighted works at issue.’”⁸⁸ The BSA cites to the Register's 2003 Recommendation as the only support for this proposition. In it, the Register found that the rulemaking must be sensitive to widespread illegal trafficking because a significant part of

⁸² Initial Comment at 18.

⁸³ BSA Comment at 6.

⁸⁴ 2003 Recommendation at 57.

⁸⁵ *Id.* at 58.

⁸⁶ See *Allen-Myland, Inc. v. Int'l Bus. Machs. Corp.*, 746 F. Supp. 520, 537, n. 19 (E.D. Pa. 1990) (§ 117(a)(2) “protects solely those copies used ‘for archival purposes *only*,’” and not copies made for use).

⁸⁷ App Association Comment at 4.

⁸⁸ BSA Comment at 7.

trafficked works are computer programs and video games, which were the works at issue.⁸⁹ But in the same paragraph, the Register found that a “more carefully tailored class” would appropriately minimize the adverse effects on the market for or value of the works, as opposed to “circumvention of all literary or audiovisual works,” which could cause significant harm.⁹⁰

Here, the proposed class is distinguished because it is tailored by use and user, and neither the BSA nor any other opponent has put forth argument or evidence that such tailoring would be insufficient to minimize the risk of adverse market effects.⁹¹ Furthermore, in response to such concerns, proponents are willing to limit the exemption’s scope to works that are not commercially available. No opponent, in this class or any other that proponents are aware of, has ever shown any evidence that § 1201 exemptions for cultural institutions, no matter how broad, have increased illegal circumvention of works by those who do not work for cultural institutions.

6. Intense time pressure threatens digital preservation, and the preservationists performing this societal function should be granted broad latitude to do their work with minimized liability concerns.

In closing, there are practical reasons why an exemption for software preservation limited by use, user, and commercial availability rather than by the legal provision under which the use is noninfringing is vital for this field. As summarized in a 2018 report on software preservation and copyright, software preservation professionals are “eager to be in legal compliance” and “fear litigation,” as well as “repercussions from potential donors and partners.”⁹² For these reasons, some software preservation professionals “avoid[] any preservation activities that involve reproducing software.”⁹³ Generally, preservation professionals are “conservative” in their practices, even at the expense of saving copies of the works.⁹⁴ A narrowly scoped or overly restrictive exemption, interpreted through the lens of conservative, permissions-driven organizations, will greatly limit preservation activities.

Proponents’ members have devoted their lives to preserving works like software and are trying to prevent collective cultural heritage from disappearing. They are willing to accept limitations on

⁸⁹ 2003 Recommendation at 62.

⁹⁰ *Id.*

⁹¹ The 2003 Recommendation differentiates between “*remedy[ing]* the adverse effects on established noninfringing uses” and merely “*minimizing* the potential adverse effects on the market for or value of [the] works.” 2003 Recommendation at 40 (emphasis added).

⁹² *The Copyright Permissions Culture in Software Preservation and Its Implications for the Cultural Record*, ASS’N OF RESEARCH LIBRARIES

28, 31 (Feb. 9, 2018), http://www.arl.org/storage/documents/2018.02.09_CopyrightPermissionsCulture.pdf [https://perma.cc/3YWM-3S3H]. Note that the Copyright Permissions report was authored in part by Brandon Butler, of SPN.

⁹³ *Id.* at 32.

⁹⁴ *Id.* at 34.

the exemption, as requested by opponents, so long as the limitations do not prevent them from preserving software for the future. But given the narrowly-scoped use and user parameters of the exemption, it is vital to allow this group of relatively conservative practitioners as much legal latitude as possible to ensure software is kept into the future.

Sample Exemption Language

Proponents request that the Copyright Office recommend that the Librarian designate the following class to be exempt from the prohibition on circumvention for the next three years:

- 1) Computer programs that have been lawfully acquired and which are no longer reasonably available in the commercial marketplace, for the purpose of preserving a computer program and/or a computer program-dependent material when a technological protection measure of a computer program renders either the computer program or computer program-dependent material inaccessible;
 - a) Provided that such activity is undertaken by an eligible library, archive, museum, or other cultural heritage institution, where such activities are carried out without any purpose of direct or indirect commercial advantage and the computer program is not distributed or made available to the public outside of the premises of eligible institutions.
- 2) For the purposes of the exemption in paragraph (1), the following definitions shall apply:
 - a) A “computer program” is a set of statements or instructions to be used directly or indirectly in a computer in order to bring about a certain result.⁹⁵
 - b) “Computer program-dependent material” refers to a digital file where accessibility requires a computer program.
 - c) A library, archive, museum, or other cultural heritage institution is considered “eligible” when it meets criteria laid out in 17 U.S.C. § 108(a)(2): that the institution is (i) open to the public, or (ii) available not only to researchers affiliated with the library or archives or with the institution of which it is a part, but also to other persons doing research in a specialized field.

ITEM D. TECHNOLOGICAL PROTECTION MEASURE(S) AND METHOD(S) OF CIRCUMVENTION

The TPMs addressed by this reply comment are the same as those addressed by proponents’ initial comment.

⁹⁵ 17 U.S.C. § 101.

ITEM E. ASSERTED ADVERSE EFFECTS ON NONINFRINGEMENT USES

Evidence addressing adverse effects on noninfringing uses is integrated into the overview, above.

DOCUMENTARY EVIDENCE

No documentary evidence is included with the reply.