



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

RECOMMENDATION OF THE REGISTER OF COPYRIGHTS

OCTOBER 2024





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

October 18, 2024

Carla Hayden
Librarian of Congress
Library of Congress
101 Independence Ave. SE
Washington, DC 20540

Dear Dr. Hayden:

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 protection measures that control access to copyrighted works.

Sincerely,

A handwritten signature in black ink that reads "Shira Perlmutter".

Shira Perlmutter
Register of Copyrights and Director
U.S. Copyright Office

cc: Meg Williams, General Counsel, Library of Congress

**Section 1201 Rulemaking:
Ninth Triennial Proceeding to Determine
Exemptions to the Prohibition on Circumvention
Recommendation of the Register of Copyrights**

TABLE OF CONTENTS

I. INTRODUCTION.....	1
II. OVERVIEW OF THE NINTH TRIENNIAL RULEMAKING	3
III. LEGAL BACKGROUND.....	10
IV. RENEWAL RECOMMENDATIONS	19
V. DISCUSSION OF NEW PROPOSED CLASSES.....	44
A. Proposed Class 1: Audiovisual Works—Criticism and Comment— Noncommercial Videos	44
B. Proposed Class 2: Audiovisual Works—Criticism and Comment— Massively Open Online Courses (“MOOCs”).....	52
C. Proposed Classes 3(a) and 3(b): Audiovisual Works and Literary Works— Text and Data Mining—Scholarly Research and Teaching.....	68
D. Proposed Class 4: Computer Programs— Generative AI Research	103
E. Proposed Class 5: Computer Programs— Repair of Commercial Industrial Equipment.....	137
F. Proposed Classes 6(a) and 6(b): Computer Programs and Video Games— Preservation.....	163
G. Proposed Class 7: Computer Programs— Vehicle Operational Data.....	195

APPENDIX:

Recommended Regulatory Language

I. INTRODUCTION

In 1998, as part of the Digital Millennium Copyright Act (“DMCA”), Congress added section 1201 to Title 17 to provide greater legal protection for copyright owners in the emerging digital environment. Section 1201 generally makes it unlawful to “circumvent a technological measure that effectively controls access to” a copyrighted work.¹

Congress also established a set of permanent exemptions to the prohibition on circumvention, as well a procedure to put in place limited temporary exemptions. Every three years, the Librarian of Congress, upon the recommendation of the Register of Copyrights, is authorized to adopt temporary exemptions, with respect to certain classes of copyrighted works, to remain in effect for the ensuing three-year period. Congress established this rulemaking as a “fail-safe” mechanism to ensure that the prohibition on circumvention would not adversely affect the public’s ability to make lawful uses of copyrighted works, including activities protected by the fair use doctrine.²

The triennial rulemaking occurs through a formal public process administered by the Register, who consults with the Assistant Secretary for Communications and Information of the Department of Commerce.³ Participants must meet specific legal and evidentiary requirements in order to qualify for a temporary exemption. The Register’s recommendations are based on her conclusions as to whether each proposed exemption meets those statutory requirements.⁴ As prescribed by the statute, she considers whether the prohibition on circumvention is having, or is likely to have, adverse effects on users’ ability to make noninfringing uses of a particular class of copyrighted works. Petitioners must provide evidence sufficient to allow the Register to draw such a conclusion.

The first section 1201 rulemaking was completed in 2000, and subsequent rulemakings have taken place on a triennial basis. In the nearly 25 years since the first rulemaking, public interest and participation have grown—as has the

¹ 17 U.S.C. § 1201(a)(1)(A).

² *Id.* § 1201(a)(1)(B)–(D).

³ *Id.* § 1201(a)(1)(C).

⁴ The Office has provided detailed analyses of the statutory requirements in its 2017 policy study on section 1201 and elsewhere. See U.S. COPYRIGHT OFFICE, SECTION 1201 OF TITLE 17 at 105–127 (2017), <https://www.copyright.gov/policy/1201/section-1201-full-report.pdf> (“Section 1201 Report”).

number of temporary exemptions granted.⁵ In the first rulemaking, only two exemptions were granted; this year, the Register recommends granting over two dozen.

Several petitions the Copyright Office received during this ninth triennial rulemaking proceeding implicate major policy issues related to emerging technology. Many of these issues go beyond the scope of the authority provided to the Librarian under section 1201, and therefore cannot be addressed in this proceeding. The Register's recommendations here must be based on legal and evidentiary requirements set out in the statute. Given their importance, these issues may be the subject of current or future action in Congress or other government agencies.

This Recommendation sets forth the Register's analysis and conclusions regarding exemptions proposed for the upcoming three-year period.

⁵ *Id.* at 25.

II. OVERVIEW OF THE NINTH TRIENNIAL RULEMAKING

A. Rulemaking Process

The Copyright Office (“Office”) initiated the ninth triennial rulemaking proceeding by issuing a notice of inquiry (“NOI”) on June 8, 2023.⁶ The NOI requested petitions for renewal, comments in response to petitions for renewal, and petitions for new exemptions, including proposals to expand current exemptions.⁷ These public submissions were due between July 7, 2023 and August 25, 2023.⁸

On October 19, 2023, the Office issued a notice of proposed rulemaking (“NPRM”) identifying the existing exemptions that the Register intended to recommend for renewal, and providing a description of the proposed classes for new and expanded exemptions.⁹ Public submissions were due between December 22, 2023 and March 19, 2024. The Office received approximately 50 submissions in response to the NPRM.¹⁰

After analyzing the written comments regarding proposed new and expanded exemptions, the Office held three days of public hearings from April 16–18, 2024,

⁶ Exemptions to Permit Circumvention of Access Controls on Copyrighted Works, 88 Fed. Reg. 37,486, 37,487 (June 8, 2023) (“NOI”).

⁷ *Id.* See Exemptions to Permit Circumvention of Access Controls on Copyrighted Works, 82 Fed. Reg. 29,804, 29,806 (June 30, 2017) (petitions to expand a current exemption are treated as petitions for new exemptions) (“Renewal may only be sought for current exemptions as they are currently formulated, without modification. This means that if a proponent seeks to engage in any activities not currently permitted by an existing exemption, a petition for a new exemption must be submitted.”).

⁸ NOI at 37,486; Exemptions to Permit Circumvention of Access Controls on Copyrighted Works: Notice and Request for Public Comment, 88 Fed. Reg. 42,891 (July 5, 2023). References to renewal petitions and comments in response are by party and class name (abbreviated where appropriate) followed by “Renewal Pet.,” “Renewal Opp’n,” and “Renewal Supp.” References to petitions for new exemptions and comments in response are by party name and class number followed by “Pet.,” “Initial,” “Opp’n,” or “Reply” for comments submitted in the first, second, or third round, as applicable.

⁹ Exemptions to Permit Circumvention of Access Controls on Copyrighted Works, 88 Fed. Reg. 72,013 (Oct. 19, 2023) (“NPRM”).

¹⁰ Comments received in this rulemaking are available on the Office’s website. See *Ninth Triennial Section 1201 Proceeding, 2024 Cycle*, U.S. COPYRIGHT OFFICE, <https://www.copyright.gov/1201/2024/> (last visited Oct. 17, 2024); see also *Late Filed Comments*, U.S. COPYRIGHT OFFICE, <https://www.copyright.gov/1201/2024/late-filings/> (last visited Oct. 17, 2024).

via Zoom.¹¹ Forty-one individuals representing 19 stakeholder groups offered their views on specific proposed exemptions, and an additional four individuals took part in an audience participation session. After the hearings, the Office issued written questions to participants regarding two of the proposed classes and received seven responses.¹² It then held three *ex parte* meetings with participants concerning three proposed classes.¹³ In addition, it received three letters about the rulemaking from other federal agencies and government officials.¹⁴

The Register consulted with the National Telecommunications and Information Administration (“NTIA”), in the Department of Commerce, as required by section 1201(a)(1). NTIA actively participated in the rulemaking process, providing input at key stages in meetings convened by the Office, and participated in the virtual public hearings where it engaged directly by asking questions. NTIA communicated its views on each of the proposed exemptions in writing to the Register on September 24, 2024.¹⁵ These recommendations

¹¹ Video recordings of these hearings are available on the Office’s website and YouTube pages. See *Ninth Triennial Section 1201 Rulemaking Public Hearings*, U.S. COPYRIGHT OFFICE, <https://www.copyright.gov/1201/2024/hearings.html> (last visited Oct. 17, 2024); U.S. COPYRIGHT OFFICE, YOUTUBE, <https://www.youtube.com/uscopyrightoffice/> (last visited Oct. 17, 2024). Under each proposed class, citations to hearing transcripts refer to that particular class. Hearing transcripts for each individual class are available on the Office’s webpage. *Transcripts of Public Hearings in the Ninth Triennial Section 1201 Rulemaking*, U.S. COPYRIGHT OFFICE, <https://www.copyright.gov/1201/2024/hearing-transcripts/> (last visited Oct. 17, 2024).

¹² Participants’ post-hearing letter responses are available on the Office’s website. *Post-Hearing Questions*, U.S. COPYRIGHT OFFICE, <https://www.copyright.gov/1201/2024/post-hearing/> (last visited Oct. 17, 2024).

¹³ *Ex Parte Communications*, U.S. COPYRIGHT OFFICE, <https://www.copyright.gov/1201/2024/ex-parte-communications/> (last visited Oct. 17, 2024). The Office required participants to comply with its *ex parte* regulation, codified at 37 C.F.R. § 205.24. This regulation requires that parties submit a meeting request and summary to the Office after an *ex parte* meeting, which is substantially the same process employed in prior section 1201 rulemakings. Exemptions to Permit Circumvention of Access Controls on Copyrighted Works, 85 Fed. Reg. 65,293, 65,310 (Oct. 17, 2020).

¹⁴ The letters are available on the Office’s website. *Letters Between the U.S. Copyright Office, Other Agencies, and Other Government Officials*, U.S. COPYRIGHT OFFICE, <https://www.copyright.gov/1201/2024/USCO-letters/> (last visited Oct. 17, 2024).

¹⁵ Letter from Alan Davidson, Assistant Sec’y for Commc’ns & Info. Adm’r, Nat’l Telecomms. & Info. Admin., U.S. Dep’t of Commerce, to Shira Perlmutter, Register of Copyrights and Dir., U.S. Copyright Office (Sept. 24, 2024) (“NTIA Letter”).

incorporate and respond to that valuable input. As discussed with respect to each class of exemption, the Register and NTIA agree on many issues. On issues where views may vary, the discussions have helped to shape the Register's recommendations.

The Office has greatly benefited from the robust public participation in the ninth triennial proceeding. Having taken all views expressed into account, the Register recommends the following with regard to renewals, and the proposed new and expanded exemptions.

B. Summary of Recommendations of Renewal Exemptions

The Register recommends renewal of all of the exemptions adopted in the previous section 1201 proceeding as to which a petition for renewal was filed. As to the current exemption permitting circumvention of video games in the form of computer programs for the purpose of allowing an individual with a physical disability to use alternative software or hardware input methods, no such petition was filed.¹⁶ The following is a list of the other current exemptions, all recommended for renewal:

- Excerpts of audiovisual works,
 - For criticism or comment,
 - For use in nonfiction multimedia e-books
 - For use in documentary films and other films where the use is in parody or for a biographical or historically significant nature
 - For use in noncommercial videos
 - For educational uses,
 - By college and university or K–12 faculty and students, or employees acting at the direction of faculty
 - By faculty and employees of massive open online courses (“MOOCs”) offered by eligible educational institutions

¹⁶ NPRM at 72,015 n.19.

- By educators and participants in digital and literacy programs offered by libraries, museums and other nonprofits
- Audiovisual works, for the provision of captioning and/or audio description by disability services offices or similar units at educational institutions for students, faculty, or staff with disabilities
- Audiovisual works, for the purpose of lawful preservation or creation of a replacement copy by eligible libraries, archives, or museums
- Literary works or previously published musical works that have been fixed in the form of text or notation, for use with assistive technologies for persons who are blind or visually impaired, or who have print disabilities
- Literary works consisting of compilations of data generated by medical devices and corresponding personal monitoring systems
- Computer programs that enable wireless devices to connect to a wireless telecommunications network (“unlocking”)
- Computer programs that operate the following types of devices, to allow the device to interoperate with or to remove software applications (“jailbreaking”):
 - Smartphones
 - Tablets and portable all-purpose mobile computing devices
 - Smart TVs, including video streaming devices
 - Voice assistant devices
 - Routers and dedicated network devices
- Computer programs that operate the following types of devices, to allow diagnosis, maintenance, and repair:
 - Motorized land vehicles, marine vessels, and agricultural vehicles or vessels
 - Devices primarily designed for use by consumers, except video game consoles that do not contain optical drives

- Medical devices and systems
- Computer programs, for purposes of good-faith security research
- Video games for which outside server support has been discontinued, to allow individual play by gamers and lawful preservation of games by libraries, archives, and museums (as well as necessary jailbreaking of console computer code for preservation uses only), and lawful preservation of discontinued video games that never required server support
- Computer programs other than video games, for the lawful preservation of computer programs and computer program-dependent materials by libraries, archives, and museums
- Computer programs that operate 3D printers, to allow use of alternative material
- Computer programs, for purpose of investigating potential infringement of free and open-source computer programs

C. New and Expanded Exemptions

In addition to three new exemption requests, the Register received a number of requests to amend, or expand existing exemption classes. These requests are treated as new exemption requests and analyzed in the same manner.¹⁷

The Office organized the petitions for new or expanded exemptions into seven classes based on the categories of work and the types of activity at issue. The Register recommends that exemptions be adopted or expanded, in whole or in part, in four of those classes as follows:

- Class 3(a) and 3(b): Expansion of the exemption for audiovisual and literary works, for the purpose of text and data mining for scholarly research and teaching by allowing researchers affiliated with other nonprofit institutions of higher education to access corpora for independent research and by modifying the provisions concerning

¹⁷ Requests for language changes are not considered to be renewal petitions reviewed under the Office's streamlined renewal process. The inquiry in determining whether the renewal process should be used is whether the petition proposes any modification to the language of the exemption, regardless of its rationale.

security measures and viewing the contents of copyrighted works within a corpus.

- Class 5: New exemption for computer programs that control retail-level commercial food preparation equipment for purposes of diagnosis, maintenance, and repair.¹⁸
- Class 7: New Exemption for computer programs, for purposes of accessing, storing, and sharing operational data, including diagnostic and telematics data, of motorized land vehicles, marine vessels, and commercial and agricultural vehicles or vessels.

The Register recommends denying the following new or expanded exemption proposals:

- Class 1: Revision of the text of the exemption for excerpts of audiovisual works to incorporate language used in the fourth triennial section 1201 rulemaking.
- Class 2: Expansion of the exemption for audiovisual works for educational purposes in MOOCs to allow circumvention by online educational entities to include for-profit and unaccredited entities.
- Class 4: New exemption for computer programs, for purposes of good-faith artificial intelligence (“AI”) trustworthiness research.
- Class 6(a) and 6(b): Expansion of the exemption for preservation of computer programs and video games, except with respect to clarifying the single-user limitation in the current computer program preservation exemption to reflect that preservation institutions can allow a copy of a computer program to be accessed by as many individuals as there are circumvented copies legally owned.¹⁹

It is important to emphasize that a decision to deny a request is not based on a policy determination regarding the benefits or merits of the activity described. Rather, it is compelled by the requirements of the section 1201

¹⁸ The Register does not recommend granting an exemption for the broader proposed class, which would cover all software-enabled commercial and industrial equipment.

¹⁹ The Register does not recommend granting the proposed expansion of this exemption that would otherwise remove the single-user limitation.

rulemaking process, under which proponents must satisfy specific legal and evidentiary standards as set out below. In some instances where these standards have not been met, the underlying policy concerns could be addressed through the legislative process by establishing permanent exemptions, as the Office has urged in the past in the context of repair activities²⁰ and in this cycle as well in the context of accessibility.²¹ Petitioners also have another opportunity in the next triennial rulemaking proceeding to seek a temporary exemption and submit additional relevant evidence.

²⁰ See Section 1201 Report at 88–90 (“The Office has previously recognized section 1201’s potential effect on legitimate repair activities. In 2015 testimony to Congress, the Register noted that ‘consumers have voiced discomfort that Section 1201 prevents them from engaging in activities, such as the repair of their automobiles and farm equipment, which previously had no implications under copyright law.’”).

²¹ See also 2021 Recommendation at 314 (“[G]enerally, public policy favors removing impediments to access for individuals with disabilities.’ Accessibility is ‘not merely a matter of convenience,’ but it ensures that individuals with disabilities have ‘meaningful access to the same content that individuals without such impairments are able to perceive.’ . . . [F]or individuals with disabilities, proposed exemptions ‘may represent the difference between having and not having access to the works’ available to others. For these reasons, the Office has recommended that Congress enact a permanent exemption for accessibility into law.”) (quoting 2018 Recommendation at 104; 2012 Recommendation at 22).

III. LEGAL BACKGROUND

A. Section 1201(A)(1)

In 1998, Congress enacted the DMCA to implement provisions of the World Intellectual Property Organization (“WIPO”) Copyright Treaty and WIPO Performances and Phonograms Treaty. Title I of the DMCA added a new chapter 12 to title 17 of the United States Code, which prohibits circumvention of technological measures employed by or on behalf of copyright owners to control access to their works. In enacting section 1201, Congress recognized that the same features making digital technology a valuable delivery mechanism—the ability to quickly create and distribute near-perfect copies of works on a vast scale—also carry the potential to enable piracy to a degree unimaginable in the analog context. As a result, Congress sought to support copyright owners’ use of mechanisms known as “technological protection measures” (“TPMs”) when offering works in digital form.

Section 1201(a)(1), which governs this rulemaking proceeding, states, in pertinent part, that “[n]o person shall circumvent a technological measure that effectively controls access to a work protected under [title 17].” The phrase “circumvent a technological measure” means “to descramble a scrambled work, to decrypt an encrypted work, or otherwise to avoid, bypass, remove, deactivate, or impair a technological measure, without the authority of the copyright owner.”²² A technological measure that “effectively controls access to a work” is one that “in the ordinary course of its operation, requires the application of information, or a process or a treatment, with the authority of the copyright owner, to gain access to the work.”²³

Congress created permanent exemptions to preserve access to works for certain beneficial purposes (*e.g.*, library browsing, reverse engineering), allowing users to legally circumvent TPMs in limited circumstances. As originally drafted, however, section 1201 did not provide a process outside of legislation to create additional exemptions. The House of Representatives’ Committee on Commerce was concerned that the lack of an ability to avoid the circumvention prohibition might undermine the fair use of copyrighted works.²⁴ The Committee concluded

²² 17 U.S.C. § 1201(a)(3)(A).

²³ *Id.* § 1201(a)(3)(B).

²⁴ H.R. REP. NO. 105-551, pt. 2, at 35–36 (1998) (“Commerce Comm. Report”).

that it would “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.”²⁵ Congress thus created this rulemaking proceeding to address lawful uses of copyrighted works not covered by the permanent exemptions.

The Commerce Committee characterized the rulemaking proceeding as a “‘fail-safe’ mechanism,” stating 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.”²⁶

Section 1201(a) makes such temporary exemptions available if the Librarian of Congress determines that noninfringing uses of certain classes of works are, or are likely to be, adversely affected by the prohibition against circumvention in the succeeding three-year period.²⁷ The three-year exemption period is intended to allow exemption proposals to be “fully considered and fairly decided on the basis of real marketplace developments,”²⁸ and be flexible enough to accommodate these developments.

As explained by the Commerce Committee, “[t]he goal of the [section 1201 rulemaking] 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.”²⁹

B. Permanent Exemptions

The permanent exemptions, established in section 1201(a)(1) address nonprofit libraries, archives, and educational institutions; law enforcement, intelligence, and other government activities; reverse engineering; encryption research; protection of minors; protection of personally identifying information; and

²⁵ *Id.* at 36.

²⁶ *Id.*

²⁷ *See id.*

²⁸ *Id.*

²⁹ *Id.* at 37.

security testing. These statutory exemptions can apply to TPMs that control access to copyright works, as well as extend to trafficking in technologies, products, services, or devices that are primarily designed or produced for purposes of circumventing such TPMs.³⁰ By comparison, temporary exemptions promulgated under section 1201(a)(1) apply only to the circumvention of TPMs that control access to copyrighted works. Accordingly, the Librarian of Congress does not have authority to adopt—nor does the Register have authority to recommend—exemptions from these anti-trafficking prohibitions as part of the triennial rulemaking process.³¹ Nor can the Librarian exempt any parties from their duty to comply with other laws, including contractual obligations or non-copyright statutes or regulations.³²

C. Burden of Proof

As the Office has noted, “it is the totality of the rulemaking record (*i.e.*, the evidence provided by commenters or administratively noticed by the Office) that must, on balance, reflect the need for an exemption by a preponderance of the evidence. Such evidence must, on the whole, show that it is more likely than not that users of a copyrighted work will, in the succeeding three-year period, be adversely affected by the prohibition on circumvention in their ability to make noninfringing uses of a particular class of copyrighted works.”³³

Proponents seeking “an exemption from the prohibition on circumvention bear the burden of establishing that the requirements for granting an exemption have been satisfied.”³⁴ In the Office’s 2017 policy study on section 1201 (“Section 1201

³⁰ Section 1201(a)(2) restricts trafficking in those that are used to circumvent technological measures that control access to copyrighted works (referred to as “access controls”). Similarly, section 1201(b) restricts trafficking in those that are used to circumvent technological measures that protect the exclusive rights of the copyright owners in their works, including the right to reproduce these works (referred to as “copy controls”).

³¹ See 17 U.S.C. § 1201(a)(1)(E) (“Neither the exception under subparagraph (B) from the applicability of the prohibition contained in subparagraph (A), nor any determination made in a rulemaking conducted under subparagraph (C), may be used as a defense in any action to enforce any provision of this title other than this paragraph.”).

³² See *id.*

³³ Section 1201 Report at 112.

³⁴ U.S. COPYRIGHT OFFICE, SECTION 1201 RULEMAKING: SIXTH TRIENNIAL PROCEEDING TO DETERMINE EXEMPTIONS TO THE PROHIBITION ON CIRCUMVENTION, RECOMMENDATION OF THE REGISTER OF COPYRIGHTS at 13 (2015) (“2015 Recommendation”),

Report”), it clarified that there are “two distinct burdens: the ‘burden of persuasion,’ *i.e.*, which party loses if the evidence is closely balanced, and the ‘burden of production,’ *i.e.*, which party bears the obligation to come forward with evidence at different points in the proceeding.”³⁵ Practically speaking, “the burden of *production* will effectively be on exemption proponents, simply because they have greater knowledge of and access to evidence demonstrating adverse effects on noninfringing uses.”³⁶

As for the burden of *persuasion*, the Register will recommend granting an exemption only “when the preponderance of the evidence in the record shows that the conditions for granting an exemption have been met.”³⁷

D. Defining an Exemption Class

Section 1201(a)(1) specifies that an exemption adopted as part of this rulemaking apply to “a particular class of works.”³⁸ The starting point for determining a “particular class” is the list of categories appearing in section 102 of title 17, such as literary works, musical works, and sound recordings.³⁹ But, as the legislative history made clear, “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.”⁴⁰ For example, while the category of “literary works” under section 102(a)(1) “embraces both prose creations such as journals, periodicals or books, and computer programs of all kinds,” Congress explained that “[i]t is exceedingly unlikely that the impact of the prohibition on circumvention of access control technologies will be the same for scientific

<https://www.copyright.gov/1201/2015/registers-recommendation.pdf>. References to the Register’s recommendations in prior rulemakings are cited by the year of publication followed by “Recommendation” (*e.g.*, “2018 Recommendation”). Prior Recommendations are available on the Copyright Office website at <https://www.copyright.gov/1201/>.

³⁵ Section 1201 Report at 110 (quoting *Shaffer v. Weast*, 546 U.S. 49, 56 (2005) (quotation marks and alterations omitted)).

³⁶ *Id.*

³⁷ *Id.* at 111–12; *see* 2015 Recommendation at 13–14 (accord).

³⁸ 17 U.S.C. § 1201(a)(1)(B).

³⁹ 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 AUGUST 4, 1998, at 7 (Comm. Print 1998) (“House Manager’s Report”).

⁴⁰ Commerce Comm. Report at 38 (emphasis added).

journals as it is for computer operating systems.”⁴¹ Accordingly, “these two categories of works, while both ‘literary works,’ do not constitute a single ‘particular class’ for purposes of” section 1201(a)(1).⁴²

At the same time, Congress emphasized that the Librarian “should not draw the boundaries of ‘particular classes’ too narrowly.”⁴³ Thus, while the category of “motion pictures and other audiovisual works” in section 102 “may appropriately be subdivided, for purposes of the rulemaking, into classes such as ‘motion pictures,’ [or] ‘television programs,’” it would be inappropriate “to subdivide overly narrowly into particular genres of motion pictures, such as Westerns, comedies, or live action dramas.”⁴⁴

Determining the appropriate scope of a “class of works” for an exemption may also involve consideration of 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 them. In particular, classes may be refined by reference to the particular type of use and/or user to which the exemption will apply.⁴⁵ In some cases, “the Office’s ability to narrowly define the class is what enable[s] it to recommend the exemption at all.”⁴⁶

In sum, “[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 based upon the law and facts developed in the proceeding.⁴⁷ The Register must look to the specific record before her to assess the proper scope of the class for a proposed exemption.

E. Section 1201 Factors

In considering whether to recommend an exemption, the Register inquires: “Are users of a copyrighted work adversely affected by the prohibition on

⁴¹ House Manager’s Report at 7.

⁴² *Id.*

⁴³ *Id.*

⁴⁴ *Id.*

⁴⁵ 2015 Recommendation at 17–18; Section 1201 Report at 26.

⁴⁶ Section 1201 Report at 109.

⁴⁷ House Manager’s Report at 7.

circumvention in their ability to make noninfringing uses of a class of copyrighted works, or are users likely to be so adversely affected in the next three years?”⁴⁸ This test breaks down into several elements.

1. Copyrightable Works at Issue

The first requirement for an exemption is that the class include at least some works protected by copyright.⁴⁹ The statute refers to a “class of copyrighted works”⁵⁰ and provides that the circumvention ban applies only to a TPM that controls access to “a work protected under this title.”⁵¹

2. Noninfringing Use

The second requirement is that the proposed uses are noninfringing under title 17.⁵² Noninfringing uses include those protected by copyright exceptions, such as fair use (section 107), the exceptions for libraries and archives (section 108), and exceptions for adaptations of computer programs (section 117). As the Office has explained:

The Register will look to the Copyright Act and relevant judicial precedents when analyzing whether a proposed use is likely to be noninfringing. The statutory language requires that the use *is* or *is likely* to be noninfringing, not merely that the use might plausibly be considered noninfringing. As the Register has indicated previously, there is no “rule of doubt” favoring an exemption when it is unclear that a particular use is a fair or otherwise noninfringing use. Thus, [the record] must show more than that a particular use *could* be noninfringing. Rather, the [record] must establish that the proposed use is likely to qualify as noninfringing under relevant law.⁵³

While “this standard does not require ‘controlling precedent directly on point,’ the rulemaking is not an appropriate venue for breaking new ground in fair use

⁴⁸ Section 1201 Report at 114–15; *see* 17 U.S.C. § 1201(a)(1)(C) (italics omitted).

⁴⁹ Section 1201 Report at 115; *see* 17 U.S.C. § 1201(a)(1)(A), (a)(1)(C).

⁵⁰ 17 U.S.C. § 1201(a)(1)(C).

⁵¹ *Id.* § 1201(a)(1)(A).

⁵² Section 1201 Report at 115–17; *see* 17 U.S.C. § 1201(a)(1)(C).

⁵³ 2015 Recommendation at 15; *see* Section 1201 Report at 115–16.

jurisprudence.”⁵⁴ Proponents must therefore provide sufficient detail that the proposed uses are cognizable for the Register to evaluate and determine whether they are likely to be noninfringing under relevant statutory and case law.

3. Causation

The third requirement is that the statutory prohibition on circumventing access controls is the cause of the adverse effects.⁵⁵ “Adverse impacts that flow from other sources, or that are not clearly attributable to implementation of a technological protection measure, are outside the scope of the rulemaking.”⁵⁶ For example, adverse effects stemming from “marketplace trends, other technological developments, or changes in the roles of libraries, distributors or other intermediaries” are not cognizable harms under the statute.⁵⁷

4. Adverse Effects and the Section 1201 Statutory Factors

The final requirement is that users are either adversely affected, or are likely to be adversely affected, in their ability to make noninfringing uses during the next three years.⁵⁸ Proponents must show that circumvention is necessary to avoid the alleged adverse effects. This element is analyzed in reference to section 1201(a)(1)(C)’s statutory factors:

- (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

⁵⁴ Section 1201 Report at 10–11, 28, 116–17 (quoting 2010 Recommendation at 12).

⁵⁵ *Id.* at 115, 117; *see* 17 U.S.C. § 1201(a)(1)(C).

⁵⁶ Commerce Comm. Report at 37; House Manager’s Report at 6 (similar).

⁵⁷ House Manager’s Report at 6.

⁵⁸ Section 1201 Report at 115; *see* 17 U.S.C. § 1201(a)(1)(C).

(v) such other factors as the Librarian considers appropriate.⁵⁹

In applying these factors, the Register “balances ‘[t]he harm identified by a proponent of an exemption . . . with the harm that would result from an exemption.’”⁶⁰ Weighing these factors may require consideration of the benefits that the technological measure brings with respect to the overall creation and dissemination of works in the marketplace, in addition to any negative impact. As the legislative history explains, “the rulemaking proceedings should consider the positive as well as the adverse effects of these technologies on the availability of copyrighted materials.”⁶¹

Congress stressed that the “main focus of the rulemaking proceeding” should be on “whether a substantial diminution” of the availability of works for noninfringing uses is “*actually occurring*” in the marketplace.⁶² To prove the existence of adverse effects, it is necessary to demonstrate “distinct, verifiable and measurable impacts” occurring in the marketplace, as exemptions “should not be based upon *de minimis* impacts.”⁶³ Thus, “mere inconveniences” or “individual cases” do not satisfy the rulemaking standard.⁶⁴

To the extent a proponent relies on claimed future impacts rather than existing impacts, such future adverse impacts must be “likely.”⁶⁵ An exemption may be based upon anticipated, rather than actual, adverse impacts “only in extraordinary circumstances in which the evidence of likelihood of future

⁵⁹ 17 U.S.C. § 1201(a)(1)(C); *see* Section 1201 Report at 115, 118.

⁶⁰ Section 1201 Report at 118 (alteration and omission in original) (quoting Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, 76 Fed. Reg. 60,398, 60,403 (Sept. 29, 2011); Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, 73 Fed. Reg. 58,073, 58,078 (Oct. 6, 2008); Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, 70 Fed. Reg. 57,526, 57,528 (Oct. 3, 2005); Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, 67 Fed. Reg. 63,578, 63,581 (Oct. 15, 2002)).

⁶¹ House Manager’s Report at 6.

⁶² *Id.*

⁶³ Commerce Comm. Report at 37.

⁶⁴ House Manager’s Report at 6.

⁶⁵ 17 U.S.C. § 1201(a)(1)(B)–(C).

adverse impact during that time period is highly specific, strong and persuasive.”⁶⁶

In sum, for a finding of adverse effects, the evidence in the record “cannot be hypothetical, theoretical, or speculative, but must be real, tangible, and concrete. Ultimately, the evidence must show that adverse effects are not merely possible, but probable (*i.e.*, more likely than not to be occurring or likely to occur in the next three years).”⁶⁷

⁶⁶ House Manager’s Report at 6.

⁶⁷ Section 1201 Report at 120–21.

IV. RENEWAL RECOMMENDATIONS

In each rulemaking cycle, the number of temporary exemptions granted has increased.⁶⁸ Fortunately, the streamlined renewal process adopted in the Seventh Triennial Rulemaking in 2018 has reduced the burden on petitioners requesting renewal of existing exemptions and has facilitated the Office’s efficient evaluation of submissions.⁶⁹ Section 1201 authorizes the Librarian of Congress to adopt temporary exemptions upon the recommendation of the Register of Copyrights in a rulemaking proceeding conducted every three years, and existing exemptions are reevaluated for renewal as part of this proceeding.⁷⁰

As set forth in the NPRM, the Register received petitions to renew all but one of the twenty-six exemptions adopted in the eighth triennial rulemaking.⁷¹ The Office received six comments opposing renewal of four exemptions but determined that none demonstrated any changes in law or facts or other bases

⁶⁸ Compare 2003 Recommendation at 5 (“The first § 1201 rulemaking took place three years ago, and on October 27, 2000, the Librarian announced noninfringing users of two classes of works would not be subject to the prohibition on circumvention of access controls.”) with 2010 Recommendation at 19 (describing Office’s evaluation of exemptions for twenty-five classes of works) and 2021 Recommendation at 1 (describing Office’s evaluation of seventeen renewal classes and seventeen new classes).

⁶⁹ See NPRM at 72,015 (“The streamlined renewal process was praised by participants during the ensuing rulemaking, and the Office has employed it in subsequent rulemakings.”) (citing 2018 Recommendation at 19 n.80 (collecting transcript testimony from 2018 rulemaking)).

⁷⁰ See 17 U.S.C. § 1201(a)(1)(B)–(D); see also NPRM at 72,015 (describing streamlined renewal process).

⁷¹ A renewal petition was not filed for the current exemption permitting circumvention of video games in the form of computer programs for the purpose of allowing an individual with a physical disability to use alternative software or hardware input methods. See 37 C.F.R. § 201.40(b)(21) (2023).

for not granting the corresponding renewal petitions.⁷² Accordingly, the NPRM proposed renewing all twenty-five exemptions supported by renewal petitions.⁷³

The Register now finalizes the NPRM’s proposal to recommend renewal of all exemptions for which the Office received petitions. The renewal petitions and lack of meaningful opposition demonstrated that the conditions that led to adoption of the exemptions are likely to continue during the next triennial period. These existing exemptions, and the bases for the recommendation to renew each exemption in accordance with the streamlined renewal process, are briefly summarized below. Where noted, the renewed exemptions serve as a baseline in considering requests for expansion in this rulemaking. The recommended regulatory language for all exemptions in this rulemaking (including renewals, expanded exemptions, and wholly new exemptions) is set forth in the Appendix.

A. Audiovisual works—educational and derivative uses

Multiple individuals and organizations petitioned to renew the exemption codified at 37 C.F.R. § 201.40(b)(1), which covers the use of short portions of motion pictures for various educational and derivative uses.⁷⁴ The Office did not receive meaningful opposition to renewal. Renewal of each of this exemption’s subparts was unopposed, except for noncommercial videos, as discussed below.

⁷² See NPRM at 72,015 (“not find[ing] sufficient opposition to any existing exemption that supports refusing renewal”); see also Exemptions to Permit Circumvention of Access Controls on Copyrighted Works, 85 Fed. Reg. 37,399, 37,402 (June 22, 2020) (describing “meaningful opposition” standard). The Office also received one untimely opposition comment. See AdvaMed Medical Device Repair Opp’n. As has been made clear in past cycles, the Register has no obligation to consider untimely comments. See 2006 Recommendation at 48 (“While it is preferable that all interested parties make their views known in the rulemaking process, they must do so in compliance with the process that is provided for public comment, or offer a compelling justification for their failure to do so. They have failed to offer such justification. If these extremely untimely submissions were accepted, it would be difficult to imagine when it ever would be justified to reject an untimely comment. Such a precedent would be an invitation to chaos in future rulemakings.”); see also, e.g., 2010 Recommendation at 111 n.376, 115 n.394 (referring to late comments not considered in 2006 rulemaking). Regardless, AdvaMed’s comment would not have been outcome determinative, as it conveyed arguments repeated in other timely comments.

⁷³ To the extent any renewal petition proposed uses beyond the current exemption, for purposes of considering renewal the Office analyzed whether the petition provided sufficient information to warrant renewal of the exemption in its current form. See NPRM at 72,015.

⁷⁴ See 37 C.F.R. § 201.40(b)(1).

The existing exemption and its various subparts collectively serve as the baseline in assessing whether to recommend any expansion to Classes 1 and 2.

1. Audiovisual works—criticism and comment—filmmaking

Multiple organizations petitioned to renew the exemption for motion pictures for uses in documentary films or other films where the use is in a parody or for the work’s biographical or historically significant nature.⁷⁵ No oppositions were filed against renewal. The petitions summarized the continuing need and justification for the exemption, and the petitioners demonstrated personal knowledge and experience. The International Documentary Association and Kartemquin Educational Films (together, “Joint Filmmakers”)—which represent thousands of independent filmmakers across the nation—stated that they “kn[e]w firsthand filmmakers who have found it necessary to rely on this exemption . . . [and] ha[d] also heard from filmmakers through [their] educational programs, services, and events who have needed to rely on the exemption.”⁷⁶ For example, petitioners indicated that TPMs such as encryption continue to prevent filmmakers from accessing needed material and that this is “especially true for the kind of high fidelity motion picture material filmmakers need to satisfy both distributors and viewers.”⁷⁷ And New Media Rights (“NMR”) represented that “[i]f the exemption was not renewed, individuals would be unable to make noninfringing uses of . . . copyrighted works” in the filmmaking industry.⁷⁸

2. Audiovisual works—criticism and comment—noncommercial videos

Two organizations petitioned to renew the exemption for motion pictures for uses in noncommercial videos.⁷⁹ The Organization for Transformative Works’ (“OTW”) petitioned for renewal of this exemption but also requested changes to

⁷⁵ See Int’l Documentary Ass’n & Kartemquin Educ. Films (together, “Joint Filmmakers”) Documentary Films Renewal Pet.; New Media Rights (“NMR”) Documentary Films Renewal Pet.

⁷⁶ Joint Filmmakers Documentary Films Renewal Pet. at 3.

⁷⁷ *Id.*

⁷⁸ NMR Documentary Films Renewal Pet. at 3.

⁷⁹ See NMR Noncom. Videos Renewal Pet.; Org. for Transformative Works (“OTW”) Noncom. Videos Renewal Pet.

the exemption's language.⁸⁰ To the extent OTW's petition requested changes, the Office treated it as a petition for an expansion, addressed as Class 1 below. The DVD Copy Control Association ("DVD CCA") and Advanced Access Content System Licensing Administrator, LLC ("AACCS LA") submitted joint comments in response to both OTW's petition for renewal and to proposed Class 1.⁸¹ The Entertainment Software Association ("ESA"), the Motion Picture Association ("MPA"), and the Recording Industry Association of America ("RIAA") (collectively, "Joint Creators I") also submitted an opposition to adoption of Class 1 based on OTW's petition.⁸² Neither group of opponents, however, objected to renewal of this exemption as currently written; they opposed only OTW's suggested changes.⁸³ The Office therefore did not receive meaningful opposition to renewal of the exemption in its present form.

The petitions demonstrated the continuing need and justification for the exemption, and the petitioners demonstrated personal knowledge and experience. For example, OTW, one of the petitioners, has advocated for the noncommercial video exemption in past triennial rulemakings and stated that it has heard from "a number of noncommercial remix artists" who have used the exemption and anticipate needing to use it in the future.⁸⁴ OTW included an account from an academic who stated that footage ripped from DVDs and Blu-

⁸⁰ See generally OTW Noncom. Videos Renewal Pet. These commenters objected to OTW's proposed new language, arguing that the proposal would require a modification of the exemption, which cannot properly be sought through a petition for renewal. See DVD Copy Control Association ("DVD CCA") & Advanced Access Content System Licensing Administrator, LLC ("AACCS LA") Noncom. Videos Renewal Opp'n; see also 2021 DVD CCA & AACCS LA Noncom. Videos Opp'n; 2021 Joint Creators Noncom. Videos Opp'n. The Office agreed and has addressed the proposed modifications "as part of the full rulemaking proceeding, . . . [including] this request . . . as one . . . of the proposed new classes discussed below." NPRM at 72,016.

⁸¹ See DVD CCA & AACCS LA Noncom. Videos Renewal Opp'n; DVD CCA & AACCS LA Class 1 Opp'n.

⁸² See Entertainment Software Association ("ESA"), Motion Picture Association ("MPA"), and the Recording Industry Association of America ("RIAA") (together, "Joint Creators I") Class 1 Opp'n.

⁸³ See Joint Creators I Class 1 Opp'n at 2 ("ESA, MPA, and RIAA once again *do not oppose renewal of the existing exemption* for motion pictures on DVDs, Blu-ray discs, and digitally transmitted video for use in noncommercial videos as codified at 37 C.F.R. § 201.40(b)(1)(i)(B).") (emphasis added); DVD CCA & AACCS LA Noncom. Videos Renewal Opp'n at 1 ("object[ing] to the proposal found in the renewal petition submitted by the Organization for Transformative Work" but not objecting to renewal of the exemption without modification).

⁸⁴ OTW Noncom. Videos Renewal Pet. at 3.

ray is preferred by “vidders” (noncommercial remix artists) because “it is high quality enough to bear up under the transformations that vidders make to it.”⁸⁵ Similarly, NMR stated that its clients have found it necessary to rely on this exemption and will continue to make these types of uses in the next triennial period.⁸⁶

3. Audiovisual works – criticism and comment – multimedia e-books

Authors Alliance, the American Association of University Professors (“AAUP”), and independent documentary producer and screenwriter Bobette Buster filed a joint petition to renew the exemption for the use of motion picture excerpts in nonfiction multimedia e-books.⁸⁷ No oppositions were filed against renewal. The petition demonstrated the continuing need and justification for the exemption. For example, Professor Buster stated that she is continuing work on her e-book series, “Deconstructing Master Filmmakers,” and that “use of high-resolution video is essential to her project,” and “high-resolution video continues to be unavailable without the circumvention of technological protection measures.”⁸⁸ The joint petition indicated that Professor Buster is “an active proponent, supporter, and user of the existing exemption for the use of film clips in multimedia nonfiction ebooks” and was therefore “well-situated to affirm that the record supporting the Office’s promulgation of the previous exemption remains applicable today.”⁸⁹

4. Audiovisual works – criticism, comment, teaching, or scholarship – universities and K–12 educational institutions

Multiple individuals and organizations petitioned to renew the exemption for motion pictures for educational purposes by college and university or K–12 faculty and students.⁹⁰ No oppositions were filed against renewal. The petitions

⁸⁵ *Id.*

⁸⁶ NMR Noncom. Videos Renewal Pet. at 3.

⁸⁷ Buster, Authors All. & Am. Ass’n of Univ. Professors (“AAUP”) Nonfiction Multimedia E-Books Renewal Pet.

⁸⁸ *Id.* at 3.

⁸⁹ *Id.*

⁹⁰ See Decherney, Carpini, Soc’y for Cinema and Media Studies (“SCMS”) & Library Copyright Alliance (“LCA”) (together, “Joint Educators I”) AV Educ. Renewal Pet.; Brigham Young Univ. – Idaho Intellectual Property Office (“BYU-Idaho”) AV Educ. Renewal Pet.

demonstrated the continuing need and justification for the exemption, indicating that educators and students continue to rely on excerpts from digital media for class presentations and coursework. Peter Decherney, Michael Delli Carpini, the Library Copyright Alliance (“LCA”), and the Society for Cinema and Media Studies (“SCMS”) (collectively, “Joint Educators I”) provided several examples of professors using DVD clips in the classroom. For example, “University of Pennsylvania professor Meta Mazaj teaches World Film History . . . [and] uses hundreds of clips to compare and contrast formal techniques of editing, cinematography, staging, and more.”⁹¹ Brigham Young University-Idaho Intellectual Property Office (“BYU-Idaho”) stated that “film excerpts serve as valuable teaching tools in colleges, universities, and K-12 educational settings, enabling educators to illustrate and analyze specific scenes, themes, or techniques” in their courses, particularly given that “not all films or excerpts are readily available [through streaming platforms] for institutional access.”⁹²

In addition, co-petitioner Peter Decherney declared that he “continues to rely heavily on this exemption in teaching his course on Multimedia Criticism,” in which his students “produce short videos analyzing media.”⁹³ Joint Educators I asserted that the “entire field of teaching and scholarship” on multimedia criticism “could not have existed in the United States without fair use and the 1201 educational exemption.”⁹⁴ Through these submissions, petitioners demonstrated personal knowledge and experience with this exemption based on their past participation in the section 1201 triennial rulemaking and their representation of thousands of digital and literacy educators and other members supporting educators and students.

5. Audiovisual works—criticism and comment—massive open online courses (“MOOCs”)

Joint Educators I also petitioned to renew the exemption for motion pictures for educational uses in MOOCs.⁹⁵ No oppositions were filed against renewal. The petitioners demonstrated the continuing need and justification for the exemption, stating that instructors continue to rely on it to develop, provide, and improve

⁹¹ Joint Educators I AV Educ. Renewal Pet. at 3.

⁹² BYU-Idaho AV Educ. Renewal Pet. at 3.

⁹³ Joint Educators I AV Educ. Renewal Pet. at 3.

⁹⁴ *Id.*

⁹⁵ *See* Joint Educators I AV Educ. MOOCs Renewal Pet.

MOOCs, as well as increase the number of (and therefore access to) MOOCs in the field of film and media studies.⁹⁶ Joint Educators I further noted that the “exemption has become even more vital since the COVID-19 pandemic and the continuing shift of our education systems to include online learning.”⁹⁷ As teachers and proponents of MOOCs—most of whom have advocated for this exemption in prior rulemakings—Joint Educators I demonstrated personal experience with and knowledge of this exemption.

6. Audiovisual works—criticism and comment—digital and media literacy programs

The LCA and Professor Renee Hobbs of the University of Rhode Island petitioned to renew the exemption for motion pictures for educational uses in nonprofit digital and media literacy programs offered by libraries, museums, and other nonprofits.⁹⁸ No oppositions were filed against renewal. The petition demonstrated the continuing need and justification for the exemption, and petitioners demonstrated personal knowledge and experience. For example, Professor Hobbs “designed digital and media literacy programs offered by . . . institutions[] including libraries, museums, and other nonprofit entities.”⁹⁹ According to petitioners, “[l]ibrarians, museums, and other nonprofit entities across the country have relied on the exemption . . . and will continue to need to circumvent technological protections so as to enable noninfringing uses of motion pictures in their digital and literacy programs.”¹⁰⁰

B. Audiovisual works—accessibility

The Association of Transcribers and Speech-to-Text Providers (“ATSP”) and LCA petitioned to renew the exemption for motion pictures for the provision of captioning and/or audio description by disability services offices or similar units

⁹⁶ Joint Educators I noted that “before the exemption was granted, there were only 2 or 3 MOOCs in the field of film and media studies, and they relied primarily on public domain examples. Today, there are dozens more MOOCs on film and media offered by US colleges, universities, and others. Petitioner Professor Decherney’s popular course on the history of Hollywood has now reached nearly 75,000 students in over 190 countries. As a result of the growth of online learning during the pandemic, his enrollment has more than doubled since March 2020.” *Id.* at 3.

⁹⁷ *Id.*

⁹⁸ LCA & Hobbs AV Educ. Nonprofits Renewal Pet.

⁹⁹ *Id.* at 3.

¹⁰⁰ *Id.*

at educational institutions for students, faculty, or staff with disabilities.¹⁰¹ No oppositions were filed against renewal. The petitioners demonstrated the continuing need and justification for the exemption, and, as “represent[atives of] disability services professionals and supporting entities collectively responsible for the regular provision of captioning and audio description services for thousands of students,” personal knowledge and experience with the exemption.¹⁰² They asserted that using various media, including motion pictures, promotes student engagement and learning, but many motion pictures do not include captions or audio descriptions created by their producers or distributors.¹⁰³ They further stated that the “exemption enables disability services offices and similar units to ensure that students with disabilities have access to the same advantages as their peers in the pursuit of education.”¹⁰⁴

C. Audiovisual works—preservation or replacement—library, archives, and museum

LCA petitioned to renew the exemption for motion pictures for preservation or the creation of a replacement copy by an eligible library, archives, or museum.¹⁰⁵ No oppositions were filed against renewal. LCA, which represents over 100,000 libraries and more than 300,000 library personnel, demonstrated the continuing need and justification for the exemption.¹⁰⁶ It asserted that “[c]ultural heritage institutions across the country have relied on the exemption granted in the eighth rulemaking cycle to make preservation and replacement copies of the motion pictures in their collections stored on DVDs and Blu-ray discs,” many of which are not currently available for purchase or streaming.¹⁰⁷ As DVD and Blu-ray discs deteriorate, “libraries, archives, and museums will continue to need to circumvent technological protections so as to make preservation and replacement copies of the motion pictures in their collections.”¹⁰⁸ LCA also

¹⁰¹ See Association of Transcribers and Speech-to-Text Providers (“ATSP”) & LCA Captioning Renewal Pet.

¹⁰² *Id.* at 3.

¹⁰³ *Id.*

¹⁰⁴ *Id.*

¹⁰⁵ See LCA Preservation Renewal Pet.

¹⁰⁶ *Id.* at 3.

¹⁰⁷ *Id.*

¹⁰⁸ *Id.*

demonstrated its personal knowledge of the exemption, having petitioned for its adoption in the eighth triennial rulemaking.

D. Audiovisual works—text and data mining—scholarly research and teaching

Authors Alliance, AAUP, and LCA jointly petitioned to renew the exemption for text and data mining of motion pictures by researchers affiliated with a nonprofit institution of higher education, or at the direction of such researchers, for the purpose of scholarly research and teaching.¹⁰⁹ Petitioners demonstrated the continuing need for this exemption, citing many researchers who rely on it. For example, Professor James Lee at the University of Cincinnati, who researches depictions of climate change, is using the exemption “to build a corpus of . . . films [and] to then conduct text and data mining, searching for climate change markers across those materials.”¹¹⁰ Another researcher attempting to “quantitatively fingerprint acting styles of different eras, genres, and individuals” uses the exemption to extract video files from hundreds of DVDs and process them using machine learning-based methods to establish body-pose data on actors.¹¹¹ And petitioners emphasized that many other researchers “are actively planning projects that would rely on the TDM exemption.”¹¹² Petitioners also demonstrated their personal experience with this exemption, having advocated for its adoption in the eighth triennial rulemaking proceeding.¹¹³

DVD CCA and AACCS LA objected to renewal of this exemption, arguing that the previous rulemaking record is no longer reliable.¹¹⁴ According to DVD CCA and AACCS LA, the Office’s 2021 recommendation was premised on the fact that “there [were] no [existing] large-scale libraries of digital motion pictures available for text and data mining.”¹¹⁵ The Register’s findings were not limited on such a premise. In 2021, opponents of the exemption (including DVD CCA and AACCS LA) asserted, as they do now, that “[i]n fact, licenses [we]re available”

¹⁰⁹ See Authors All., AAUP & LCA AV Text and Data Mining Renewal Pet.

¹¹⁰ *Id.* at 3.

¹¹¹ See *id.*

¹¹² *Id.*

¹¹³ See, e.g., 2021 Recommendation at 102.

¹¹⁴ See DVD CCA & AACCS LA AV Text and Data Mining Renewal Opp’n at 2–4.

¹¹⁵ *Id.* at 2–3 n.1 (quoting 2021 Recommendation at 119).

for text and data mining.¹¹⁶ The Register concluded that while there may have been a “nascent, but growing” market for licenses,¹¹⁷ proponents were unable to obtain the “large-scale” licenses for the quantity of audiovisual works needed to engage in text and data mining.¹¹⁸

Petitioners asserted that there have not been any legal changes or market developments that would disturb the Office’s previous analysis or materially impact the record upon which the Register relied in her previous recommendation.¹¹⁹ According to the petitions, “[c]ommercially licensed text and data mining products continue to be made available to research institutions, as they were at the time of the 2021 exemption and as is reflected in the existing record, but these licensed products do not allow researchers to license the full array of texts and films that are needed to engage in the research they seek to do.”¹²⁰

DVD CCA and AACCS LA’s opposition in the current proceeding did not provide evidence of licensing options for the text and data mining uses that have developed since the 2021 rulemaking. Their submission did not demonstrate that digital-motion-picture libraries offer a reasonable alternative to circumvention.¹²¹ Although licensing markets may be changing, opponents did not present sufficient evidence for the Register to conclude that market development is adequate to warrant not renewing this exemption. In accord

¹¹⁶ 2021 DVD CCA & AACCS LA Class 7 Opp’n at 14–15 (characterizing testimony by Professor Lauren Tilton as “suggesting research groups need financial resources to license [] works” for text and data mining but *not* indicating “that licenses are [un]available, that rightsholders are unwilling to license the works, or even that the fees for such licenses are unreasonable”). During that cycle, MPA, Alliance for Recorded Music, and ESA, filed a joint submission arguing that an exemption was unnecessary because “copyright owners of motion pictures already license[d] other educational uses, such as remote streaming, and could potentially license the uses at issue.” 2021 Joint Creators Class 7 Opp’n at 6.

¹¹⁷ 2021 Recommendation at 112–13.

¹¹⁸ *Id.* at 119 (“For researchers interested in studying motion pictures, there are no existing large-scale libraries of digital motion pictures available for text and data mining.”); *see also* 2021 Tr. at 415:22–416:07 (Apr. 7, 2021) (Bamman, Univ. of Cal., Berkeley) (stating that “licensing for movies” was a problem for text and data mining because such activities could not be “carr[ie]d out if there’s any single studio that doesn’t allow the licenses for those terms”).

¹¹⁹ Authors All., AAUP & LCA AV Text and Data Mining Renewal Pet. at 4.

¹²⁰ *Id.*

¹²¹ *See* DVD CCA & AACCS LA AV Text and Data Mining Renewal Opp’n at 3.

with the evidence that the Register found to be convincing in the previous rulemaking, petitioners in this cycle stated that, still, products available for licensing cannot meet researchers' needs.¹²² Accordingly, DVD CCA and AACSLA's opposition does not preclude renewal, and the Register finds it appropriate to rely on the prior record in recommending renewal.¹²³

This existing exemption serves as the baseline in assessing whether to recommend any expansions in Class 3(a).

E. Literary works—text and data mining—scholarly research and teaching

Authors Alliance, AAUP, and LCA also jointly petitioned to renew the exemption for text and data mining of literary works that were distributed electronically by researchers affiliated with a nonprofit institution of higher education, or at the direction of such researchers, for the purpose of scholarly research and teaching.¹²⁴ The petition largely echoed the same organizations' joint petition for text and data mining of audiovisual works, but renewal of this exemption is unopposed. The petitioners demonstrated the continuing need and justification for the exemption, as well as their personal knowledge of the exemption, stating that they "have continued to work with researchers, . . . many of whom are now actively relying on the TDM exemption in their research or developing plans to do so in the very near future."¹²⁵ As an example, they highlighted the work of Associate Vice Provost for Digital Scholarship and Associate Professor of Digital Humanities James Lee at the University of Cincinnati, who "is researching depictions of changes in climate . . . using the exemption to build a corpus of novels and films to then conduct text and data mining, searching for climate change markers across those materials."¹²⁶

¹²² See Authors All., AAUP & LCA AV Text and Data Mining Renewal Pet. at 4.

¹²³ As in the NPRM, the Register also notes that opponents did not provide affirmative evidence of "new legal or factual developments that implicate 'the reliability of the previously-analyzed administrative record,'" as required by the Notice of Inquiry. NOI at 37,488 (quoting Exemptions to Permit Circumvention of Access Controls on Copyrighted Works, 85 FR 65,293, 65,295 (Oct. 15, 2020)). "Unsupported conclusory opinion and speculation" do not form a sufficient basis for the Office "to refuse to recommend renewing an exemption it would have otherwise recommended in the absence of any opposition." *Id.*

¹²⁴ See Authors All., AAUP & LCA LW Text and Data Mining Renewal Pet.

¹²⁵ *Id.* at 3.

¹²⁶ *Id.*

Petitioners stated that other research projects dependent on this exemption are “just now taking shape . . . at Stanford University, UC Berkeley, Dartmouth University, Bowdoin College, Temple University, the University of Cincinnati, and the University of Illinois Urbana-Campaign”¹²⁷ They also asserted that “there are no material changes in facts, law, technology, or other circumstances that would justify failing to renew” this exemption.¹²⁸

This existing exemption serves as the baseline in assessing whether to recommend any expansions in Class 3(b).

F. Literary works—assistive technologies

Multiple organizations jointly petitioned to renew the exemption for literary works or previously published musical works that have been fixed in the form of text or notation, distributed electronically, and include access controls that interfere with assistive technologies.¹²⁹ No oppositions were filed against renewal. The petitioners demonstrated the continuing need and justification for the exemption, stating that individuals who are blind, visually impaired, or print-disabled are significantly disadvantaged with respect to obtaining accessible e-book content because TPMs interfere with the use of assistive technologies.¹³⁰ Petitioners noted that the record underpinning this exemption “has stood and been re-established in the past seven triennial reviews, dating back to 2003,” and that their members frequently cite “accessibility of e-books . . . as a top priority.”¹³¹ Additionally, petitioners demonstrated personal knowledge and extensive experience with the assistive technology exemption, as they are all organizations that advocate for the blind, visually impaired, and print-disabled.

G. Literary works—medical device data

The Coalition of Medical Device Patients and Researchers (“the Coalition”) petitioned to renew the exemption covering access to patient data on medical

¹²⁷ *Id.*

¹²⁸ *Id.* at 4.

¹²⁹ See Am. Council of the Blind, Am. Found. for the Blind, HathiTrust & LCA Assistive Technologies Renewal Pet.

¹³⁰ *Id.* at 3.

¹³¹ *Id.* at 3–4.

devices or monitoring systems.¹³² No oppositions were filed against renewal of this exemption. The Coalition explained the continuing need and justification for the exemption, stating that “the exemption is vital to patients’ ability to monitor the data output of medical devices that monitor and maintain their health” and to medical research.¹³³ The Coalition demonstrated personal knowledge and experience with this exemption, citing member Hugo Campos’s experiences as a patient who has needed access data from his implanted defibrillator.¹³⁴ It also demonstrated its personal knowledge of the exemption from its research regarding medical devices.¹³⁵

H. Computer programs—unlocking

The Institute of Scrap Recycling Industries, Inc. (“ISRI”) petitioned to renew the exemption for computer programs that operate wireless devices, to allow connection of a new or used device to an alternative wireless network (“unlocking”).¹³⁶ No oppositions were filed against renewal. The petition demonstrated the continuing need and justification for the exemption, stating that “ISRI members continue to purchase or acquire donated cell phones, tablets, laptops, and a variety of other wireless devices no longer needed by their original owners and try to make the best possible use of them through resale or recycling,” which requires unlocking the devices so they may be used on other carriers.¹³⁷ Moreover, ISRI noted that the number of 5G-enabled devices has continued to grow since the previous rulemaking, meaning there are more devices that may require unlocking for the reasons discussed in previous rulemakings.¹³⁸ Having “been involved in the [section] 1201 triennial

¹³² See Coalition of Medical Device Patients and Researchers Medical Devices (“Coalition”) Renewal Pet.

¹³³ *Id.* at 3.

¹³⁴ See *id.*

¹³⁵ See *id.*

¹³⁶ See Institute of Scrap Recycling Industries, Inc. (“ISRI”) Unlocking Renewal Pet.

¹³⁷ *Id.* at 3.

¹³⁸ See *id.* ISRI also notes that the increased number of devices does not implicate the reliability of the factual record, as new devices continue to use modems by a single chipset vendor—Qualcomm—which was the basis for the Office’s expansion of this exemption to all wireless devices in the last rulemaking. See 2021 Recommendation at 161–63 (explaining that “proponents have provided sufficient evidence for the Register to conclude that the 2015 fair use analysis applies with equal force to unlocking all types of wireless devices” because most wireless devices in the United States use modems manufactured by Qualcomm).

proceedings for several cycles,” including the initial adoption of this exemption, and representing nearly “1,600 companies operating in nearly 5,000 locations in the U.S. and 41 countries worldwide that process, broker, and consume scrap commodities,” ISRI demonstrated personal knowledge and experience.¹³⁹

I. Computer programs—jailbreaking

Multiple organizations petitioned to renew the four exemptions for computer programs that enable electronic devices to interoperate with or to remove software applications (“jailbreaking”).¹⁴⁰ These exemptions permit circumvention for the purpose of jailbreaking (1) smartphones and other portable all-purpose computing devices, (2) smart televisions, (3) voice assistant devices, and (4) routers and dedicated networking devices.¹⁴¹ No oppositions were filed against renewal. The petitioners demonstrated the continuing need and justification for the exemptions and their personal knowledge and experience. For example, in its petition regarding smart phones and other mobile devices, the Electronic Frontier Foundation (“EFF”) asserted that it “spoke to many device users who currently rely on the jailbreaking exemption and anticipate continuing to rely on the exemption in the future” for uses such as installing alternative operating systems, keeping older smartphones and other mobile computing devices functional, and customizing application functionality.¹⁴² Its petition for renewal of the exemption for smart TVs indicated that “smart televisions continue to employ access controls that prevent consumers from modifying their devices to interoperate with software applications. [EFF was] not aware of any likely anticipated changes to this industry practice[, and because] many of the same devices discussed in the previous rulemaking round are still in use today

¹³⁹ ISRI Unlocking Renewal Pet. at 3.

¹⁴⁰ Electronic Frontier Foundation (“EFF”) submitted three separate petitions, each advocating for renewal of a different jailbreaking exemption, and Software Freedom Conservancy (“SFC”) submitted two separate petitions for different jailbreaking exemptions, all of which are addressed in this section. See EFF Smartphone and Portable All-Purpose Mobile Computing Device Jailbreaking Renewal Pet.; NMR Smartphone and Portable All-Purpose Mobile Computing Device Jailbreaking Renewal Pet.; EFF Smart TVs Jailbreaking Renewal Pet.; SFC Smart TVs Jailbreaking Renewal Pet.; EFF Voice Assistant Devices Jailbreaking Renewal Pet.; SFC Routers and Dedicated Network Devices Jailbreaking Renewal Pet.

¹⁴¹ See 37 C.F.R. § 201.40(b)(9–12).

¹⁴² EFF Smartphone and Portable All-Purpose Mobile Computing Device Jailbreaking Renewal Pet. at 3.

and will be in the next three years, the need to jailbreak persists.”¹⁴³ Additionally, EFF in its petition for renewal of the exemption for voice assistant devices represented that these “devices rely on software updates . . . [to remain] functional[, but] manufacturers typically stop providing software support after it is no longer profitable for them to do so, effectively bricking hardware that is otherwise functional” — forcing users “to rely on jailbreaking their devices to install new software.”¹⁴⁴ The Software Freedom Conservancy (“SFC”) similarly stated that there is a continuing need to install alternative firmware and security updates to networking devices and routers that are subject to TPMs.¹⁴⁵ Collectively, the petitions demonstrated that without this exemption, TPMs installed on the enumerated products would have an adverse effect on various noninfringing uses.

J. Computer programs—repair of motorized land vehicles, marine vessels, or mechanized agricultural vehicles or vessels

iFixit and MEMA, The Vehicle Suppliers Association (“MEMA”), petitioned to renew the exemption for computer programs that control motorized land vehicles, marine vessels, or mechanized agricultural vehicles or vessels for purposes of diagnosis, repair, or modification of a vehicle or vessel function.¹⁴⁶ No oppositions were filed against renewal.¹⁴⁷ The petitioners each represent or advise individuals and businesses that perform vehicle service and repair and have personal experience with this exemption through those activities.¹⁴⁸ They demonstrated the continuing need and justification for the exemption. For example, MEMA stated that its membership “continues to see firsthand that the exemption is helping protect consumer choice and a competitive market, while mitigating risks to intellectual property and vehicle safety” — particularly as “every year vehicle computer programs become more important and essential to today’s motor vehicles.”¹⁴⁹ It cautioned that failure to renew the exemption

¹⁴³ EFF Smart TVs Jailbreaking Renewal Pet. at 3.

¹⁴⁴ EFF Voice Assistant Devices Jailbreaking Renewal Pet. at 3.

¹⁴⁵ See SFC Routers and Dedicated Network Devices Jailbreaking Renewal Pet. at 3.

¹⁴⁶ See MEMA, The Vehicle Suppliers Ass’n (“MEMA”) Vehicle Repair Renewal Pet.; iFixit Vehicle Repair Renewal Pet.

¹⁴⁷ Additionally, the American Farm Bureau Federation (“AFBF”) submitted an untimely comment “strongly support[ing]” renewal. AFBF Vehicle Repair Renewal Supp. at 1.

¹⁴⁸ MEMA Vehicle Repair Renewal Pet. at 3; iFixit Vehicle Repair Renewal Pet. 3.

¹⁴⁹ MEMA Vehicle Repair Renewal Pet. at 3.

would significantly constrain vehicle owners' choices in the vehicle service industry by restricting many repair shops from accessing critical software.¹⁵⁰ It also asserted that without the exemption, consumers' access to telematics data about vehicle performance would be limited.¹⁵¹ Additionally, iFixit emphasized that about 20% of American consumers perform repairs on their own vehicles, but "TPMs wall off access to non-copyrightable parameters and software functions that must be altered for a car owner to perform the work necessary to improve or optimize vehicle performance."¹⁵²

In the 2021 rulemaking, the Register expanded the exemption from "motorized land vehicles" including "agricultural vehicles."¹⁵³ She agreed that "users of marine vessels [we]re adversely affected in the same manner as users of land vehicles, in particular, tractor owners."¹⁵⁴ "[T]he Register credit[ed] the similarities between marine vessels and land vehicles . . . [and ultimately] conclude[ed] that . . . prohibition against circumvention . . . [was] likely to adversely affect diagnosis, repair, and lawful modification of a vessel function for marine vessels," as well as functions for land vehicles, including agricultural land vehicles such as tractors.¹⁵⁵ The Office did not receive any evidence indicating that these categories of vehicles and vessels should be treated differently in this cycle.

K. Computer programs—repair of devices designed primarily for use by consumers

EFF petitioned to renew the exemption for computer programs that control devices designed primarily for use by consumers, for the diagnosis, maintenance, or repair of the device.¹⁵⁶ The Office did not receive meaningful opposition to

¹⁵⁰ *Id.*

¹⁵¹ *Id.* Accessing this data facilitates accurate repairs and can be shared beneficially with other parties such as insurance companies that offer discounts for safe driving. *See id.*

¹⁵² iFixit Vehicle Repair Renewal Pet. at 3.

¹⁵³ *See* 2015 Recommendation at 218–20, 248–49. The Register recommended some expansion of the vehicle repair exemption in 2018, and in that rulemaking, maintained the exemption's express inclusion of "mechanized agricultural vehicles." *See* 2018 Recommendation at 230.

¹⁵⁴ 2021 Recommendation at 222.

¹⁵⁵ *Id.* at 223.

¹⁵⁶ *See* EFF Device Repair Renewal Pet.

renewal.¹⁵⁷ The petitioners demonstrated the continuing need and justification for the exemption. For example, EFF asserted that “[m]anufacturers of these devices continue to implement technological protection measures that inhibit lawful repairs, maintenance, and diagnostics, and they show no sign of changing course.”¹⁵⁸ EFF has personal knowledge of this exemption, as it “has been involved with the section 1201 rulemaking process since its inception and has specifically advocated for device repair exemptions”¹⁵⁹

L. Computer programs—repair of medical devices and systems

Multiple organizations petitioned to renew the exemption to access computer programs that are contained in and control the functioning of medical devices or systems, and related data files, for purposes of diagnosis, maintenance, or repair.¹⁶⁰ Each of the petitioners repairs, maintains, services, or sells medical systems and devices and thus has personal experience with this exemption. Three organizations submitted timely opposition comments, and the Office

¹⁵⁷ Although Author Services submitted a comment opposing this renewal, it stated that it had “no objection to the exemption as applied to . . . consumer devices to allow consumers to repair products on their own initiative.” Author Servs. Device Repair Renewal Opp’n at 1. Rather, Author Services opposes renewing the exemption “in its present form” to the extent that it encompasses “[o]ther devices . . . [that] can only be purchased and used by someone who possess[es] particular qualifications or has been specifically trained in the use of the device.” *Id.* at 1–2. As noted in the NPRM, this exemption was crafted to cover *consumer* devices. The devices that Author Services described in its opposition would fall outside this category since they are available only to individuals with specialized qualifications or training. *See* NPRM at 72,020–21 (citing 37 C.F.R. 201.40(b)(14) (2023) (limiting the exemption to “a lawfully acquired device that is primarily designed for use by consumers”). Therefore, Author Services’ opposition addresses devices outside the scope of the existing exemption and does not show that the previous rulemaking record is no longer reliable. *See id.* at 72,020–21. Other petitioners requested an expansion to this exemption to encompass “commercial industrial equipment.” *See generally* Class 5.

¹⁵⁸ EFF Device Repair Renewal Pet. at 3.

¹⁵⁹ *Id.*

¹⁶⁰ *See* Avante Health Sols., Avante Diagnostic Imaging & Avante Ultrasound (collectively, “Avante”) Medical Device Repair Renewal Pet.; Crothall Facilities Mgmt., Inc. (“Crothall”) Medical Device Repair Renewal Pet.; Metropolis Int’l (“Metropolis”) Medical Device Repair Renewal Pet.; TriMedx Holdings, LLC (“TriMedx”) Medical Device Repair Renewal Pet.; TTG Imaging Sols., LLC (“TTG”) Medical Device Repair Renewal Pet.

received one additional opposition after the deadline.¹⁶¹ As discussed in the NPRM, four of the five petitions provided evidence of the continuing need and justification for the exemption, as well as evidence of petitioners' personal experience with this exemption.¹⁶² For example, Avante Health Solutions, Avante Diagnostic Imaging, and Avante Ultrasound (collectively, "Avante") stated that "the use of TPMs in medical systems and devices is widespread" and that manufacturers "have developed new systems that further restrict access to use of necessary software tools."¹⁶³ Metropolis and TriMedx argued that because of the trend toward using this type of software to control medical devices and systems, the exemption is necessary to enable device repair and maintenance services that ensure continuity and efficiency of patient care.¹⁶⁴

In opposition, the American Consumer Institute ("ACI") and the Medical Imaging & Technology Alliance ("MITA") argued that the exemption undermines the U.S. Food and Drug Administration's ("FDA") maintenance and repair standards for the intricate equipment used in patient care and therefore increases the risk of harm to patients whose equipment may not be serviced by individuals with adequate training.¹⁶⁵ MITA asserted that congressional and FDA policies on medical device cybersecurity directly conflict with this exemption.¹⁶⁶ MITA and Philips North America, LLC ("Philips") also argued that the Supreme Court's decision in *Andy Warhol Found. for the Visual Arts v. Goldsmith*¹⁶⁷ undermined the validity of the previous rulemaking's analysis

¹⁶¹ See Am. Consumer Inst. ("ACI") Medical Device Repair Renewal Opp'n; Medical Imaging & Tech. All. ("MITA") Medical Device Repair Renewal Opp'n; Philips North Am., LLC Medical Device Repair Renewal Opp'n; Advanced Med. Tech. Ass'n ("AdvaMed") Medical Device Repair Renewal Opp'n (filed late).

¹⁶² The fifth petition contained only two brief sentences stating that the ability to service medical devices "can be impacted" by software restrictions. Crothall Medical Device Repair Renewal Pet. at 3.

¹⁶³ Avante Medical Device Repair Renewal Pet. at 5. Avante also has personal knowledge of this exemption, as it proposed this exemption in the previous rulemaking. Avante was referred to as "Transtate" in the Register's 2021 Recommendation. See 2021 Register's Recommendation at 190.

¹⁶⁴ See TriMedx Medical Device Repair Renewal Pet. at 3; Metropolis Device Repair Renewal Pet. at 3; TTTG Medical Device Repair Renewal Pet. at 3.

¹⁶⁵ See ACI Medical Device Repair Renewal Opp'n at 1-2; MITA Medical Device Repair Renewal Opp'n at 1.

¹⁶⁶ MITA Medical Device Repair Renewal Opp'n at 1.

¹⁶⁷ 598 U.S. 508 (2023).

because it held that commercial, non-transformative uses are less likely to qualify as fair.¹⁶⁸ The Advanced Medical Technology Association’s (“AdvaMed”) late opposition comment made similar arguments regarding FDA policy and the fair use analysis.¹⁶⁹

The Register addressed opponents’ arguments concerning FDA regulation of medical devices and congressional policy in the last rulemaking.¹⁷⁰ As stated in the 2021 Recommendation, “the Register generally does not consider other regulatory schemes as part of the adverse effects analysis because the focus of this proceeding is on copyright-related considerations.”¹⁷¹ Moreover, opponents’ comments do not take into account the FDA’s statements regarding the safety of circumvention in this context or the fact that granting an exemption under section 1201 does not absolve any user from compliance with other relevant laws and regulations.¹⁷²

Regarding opponents’ fair use arguments, the Register concludes that the Office’s analysis from the 2021 cycle remains sound. In 2021, the Register found that repair of medical devices and equipment, like other forms of repair, was likely transformative under the first fair use factor.¹⁷³ The Recommendation explained that repair “supports—rather than displaces—the purpose of the

¹⁶⁸ See MITA Medical Device Repair Renewal Opp’n at 2–6; Philips Medical Device Repair Renewal Opp’n at 5–8.

¹⁶⁹ See AdvaMed Medical Device Repair Renewal Opp’n at 2–9.

¹⁷⁰ See 2021 Recommendation at 228–29 (addressing opponents’ argument “that ‘unauthorized ISOs’ present an acute risk to patient safety because, unlike OEMs, these organizations are not obligated to adhere to FDA Quality System Regulation (QSR) requirements”).

¹⁷¹ *Id.* at 229.

¹⁷² See *id.* (“[T]he FDA . . . highlight[ed] . . . it[s] ‘determin[ation] that the available evidence was insufficient to conclude whether or not there is a widespread public health concern relating to medical device servicing’ and ‘did not justify imposing additional regulatory requirements on ISOs.’”). The FDA also indicated that it “d[id] not share [opponents’] view that an exemption from liability under 17 U.S.C. § 1201 for circumvention . . . would . . . jeopardize the safety and effectiveness of medical devices” Letter from Suzanne B. Schwartz, Dir., Office of Strategic P’ships & Tech. Innovation, FDA, to Kevin R. Amer, Acting Gen. Counsel & Assoc. Register of Copyrights, U.S. Copyright Office at 3 (Aug. 13, 2021) (citing FDA, STRENGTHENING CYBERSECURITY PRACTICES ASSOCIATED WITH SERVING OF MEDICAL DEVICES: CHALLENGES AND OPPORTUNITIES (2021), <https://www.fda.gov/media/150144/download>).

¹⁷³ See 2021 Recommendation at 208–09.

embedded programs that control the device.”¹⁷⁴ In other words, the purpose of the use of software in repair is to render a non-functional device functional again, while the original purpose of the software is to operate a device that functions as designed. Because this analysis is part of the record that justified recommending the exemption in 2021, opponents needed to show that the *Warhol* decision constitutes intervening legal precedent rendering the Office’s prior fair use analysis invalid. They have failed to do so.

The *Warhol* decision does not substantially change how the Office would analyze the uses at issue in this exemption. Opponents pointed to language in the Court’s decision holding that uses which “share the same or highly similar purposes” as the copyrighted work weigh against fair use.¹⁷⁵ But this statement echoes the Court’s earlier holding in *Campbell v. Acuff-Rose Music, Inc.* that the first factor focuses on whether a use “supplant[s] the original” or “instead adds something new, with a further purpose or different character”¹⁷⁶ It also mirrors the Court’s analysis in *Google LLC v. Oracle America, Inc.*, which favorably quoted *Campbell* and reiterated that “the word ‘transformative’ . . . describe[s] a copying use that adds something new and important” and is therefore more likely to be fair.¹⁷⁷ *Warhol* therefore did not overrule these decisions, but rather built upon them.¹⁷⁸ Because these decisions collectively align with the analysis in the Register’s 2021 Recommendation, renewal remains appropriate.

¹⁷⁴ *Id.* at 201 (quoting U.S. COPYRIGHT OFFICE, SOFTWARE-ENABLED CONSUMER PRODUCTS 40 (2016), <https://www.copyright.gov/policy/software/software-full-report.pdf> (“Software Study”)). Prior to 2021, the Office’s previous fair use analyses of repair explained, “a finding of fair use is not necessarily precluded when the new use coincides generally with the original use of a work.” 2015 Recommendation at 234.

¹⁷⁵ MITA Medical Device Repair Renewal Opp. at 4 (quoting *Warhol*, 598 U.S. at 532–33).

¹⁷⁶ 510 U.S. 569, 579 (1994) (internal quotations omitted). Further, to the extent opponents read *Campbell* to require that a new use add “new expression, meaning or message” to be considered fair, *see* MITA Medical Device Repair Opp. at 4, the Court in *Warhol* clarified that such “meaning or message [i]s simply relevant to whether the new use serve[s] a purpose distinct from the original, or instead supersede[s] its objects,” and is not determinative or required. *Warhol*, 598 U.S. at 542 (citing *Campbell*, 510 U.S. at 579).

¹⁷⁷ 593 U.S. 1, 29–30 (2021) (quoting *Campbell*, 510 U.S. at 579).

¹⁷⁸ For this reason, the Eleventh Circuit recently denied a motion for rehearing in a case involving fair use decided prior to the *Warhol* decision, concluding that the intervening Supreme Court opinion did not affect its analysis of transformativeness under the first fair use factor or the “balance of the four factors.” *Apple Inc. v. Corellium, Inc.*, No. 21-cv-12835, 2023 U.S. App. LEXIS 22252, at *3 (11th Cir. Aug. 23, 2023) (denying petition for rehearing and rehearing en banc).

M. Computer programs—security research

Multiple organizations and security researchers petitioned to renew the exemption permitting circumvention for purposes of good-faith security research.¹⁷⁹ No oppositions were filed against renewal, and one group of security and policy professionals that identified themselves as a “group of hackers at DEF CON” submitted a comment in support of the petition.¹⁸⁰ Petitioners demonstrated the continuing need and justification for the exemption, as well as personal knowledge and experience. For example, Professor J. Alex Halderman of the University of Michigan’s Center for Computer Security and Society and Professor Matthew D. Green of Johns Hopkins University, who both “active[ly] participa[ted] in past triennial reviews for exemptions intended to mitigate the potential adverse effects resulting from legitimate security research,” highlighted the need to find and detect vulnerabilities in voting machines, encryption devices underpinning the financial industry, smartphones, and other devices.¹⁸¹ They emphasized that “[s]ecurity researchers play a vital role in this work, as vulnerability disclosure and remediation are key to securing existing infrastructure.”¹⁸² SFC similarly stated that this exemption is necessary to enable important security testing and to ensure that device users’ privacy is protected and any security issues are corrected.¹⁸³ The petition from Professors Matt Blaze of Georgetown University Law Center and Steven Bellovin of Columbia University’s Department of Computer Science asserted that in the past three years, one of them “receive[d] threats of prospective litigation from copyright holders in connection with his security research on software in voting systems.”¹⁸⁴ Finally, MEMA stated that its membership “has seen firsthand that

¹⁷⁹ See Blaze & Bellovin Security Research Renewal Pet.; Halderman & Green Security Research Renewal Pet.; MEMA Security Research Renewal Pet.; SFC Security Research Renewal Pet.

¹⁸⁰ See A Group of Hackers at DEFCON Security Research Renewal Supp. (noting that the exemption has led to “the creation of software to fix vulnerabilities, as well as papers and presentations on security research”).

¹⁸¹ Halderman & Green Security Research Renewal Pet. at 3.

¹⁸² *Id.*

¹⁸³ SFC Security Research Renewal Pet. at 3.

¹⁸⁴ Blazer & Bellovin Security Research Renewal Pet. at 3.

the exemption is helping encourage innovation in the automotive industry while mitigating risks to intellectual property and vehicle safety.”¹⁸⁵

N. Video games—preservation

The Software Preservation Network (“SPN”) and LCA jointly petitioned to renew the exemption for individual play by gamers and preservation of video games by a library, archives, or museum for which outside server support has been discontinued, and preservation by a library, archives, or museum, of discontinued video games that never required server support.¹⁸⁶ No oppositions were filed against renewal, and one individual filed a comment in support.¹⁸⁷ Petitioners stated that libraries, archives, and museums continue to need the exemption to preserve and curate video games in playable form. For example, the petition highlighted the “Strong National Museum of Play, [which] has a substantial number of TPM-encumbered video games in its collections that will need preservation treatment that requires circumvention in the coming years.”¹⁸⁸ Petitioners stated that “[o]ther video game collection librarians report a similar ongoing need with respect to their collections” and that the “§1201 exemption has become a crucial tool in their ongoing efforts to save digital game culture before it disappears.”¹⁸⁹ They demonstrated personal knowledge and experience through past participation in section 1201 rulemakings and through their representation of members who have relied on this exemption.

This existing exemption serves as the baseline in assessing whether to recommend any expansions in Class 6(b).

O. Computer programs—preservation

SPN and LCA jointly petitioned to renew the exemption for the preservation of computer programs other than video games, and computer program-dependent materials, by libraries, archives, and museums.¹⁹⁰ No oppositions were filed against renewal, and one individual filed a comment in support.¹⁹¹ Petitioners

¹⁸⁵ MEMA Security Research Renewal Pet. at 3.

¹⁸⁶ See Software Preservation Network (“SPN”) & LCA Abandoned Video Game Renewal Pet.

¹⁸⁷ See Burt Abandoned Video Game & Software Preservation Renewal Supp.

¹⁸⁸ SPN & LCA Abandoned Video Game Renewal Pet. at 3.

¹⁸⁹ *Id.*

¹⁹⁰ See SPN & LCA Software Preservation Renewal Pet.

¹⁹¹ See Burt Abandoned Video Game & Software Preservation Supp.

indicated that libraries, archives, and museums continue to need the exemption to preserve and curate software and materials dependent on computer programs. For example, the petition stated that remotely accessing preserved computer programs “fulfill[s] cultural heritage institutions’ missions to support research, analysis, and other scholarly re-use of the historical record (and to do so equitably and inclusively).”¹⁹² Other SPN members reported providing an off-site researcher “access to born-digital materials using remote access to legacy software.”¹⁹³ And petitioners represented that “[r]esearch interest in preserved software will only grow as scholars and students become increasingly aware of the research value of these materials.”¹⁹⁴ Finally, they demonstrated personal knowledge and experience through past participation in section 1201 rulemakings relating to access controls on software and through representing major library associations with members who have relied on this exemption.¹⁹⁵

This existing exemption serves as the baseline in assessing whether to recommend any expansions in Class 6(a).

P. Computer programs—3D printers

Michael Weinberg petitioned to renew the exemption for computer programs that operate 3D printers to allow use of alternative material.¹⁹⁶ No oppositions were filed against renewal.¹⁹⁷ The petition demonstrated the continuing need and justification for the exemption, and the petitioner demonstrated personal knowledge and experience. Specifically, Mr. Weinberg declared that he is a member of the 3D printing community and has been involved with this exemption’s renewal and modification in each cycle it has been considered.¹⁹⁸ Additionally, he stated that while 3D printer manufacturers “continue to use TPMs to limit the types of materials used in printers,” since the last rulemaking proceeding, there has been “an expansion of third-party materials available for

¹⁹² SPN & LCA Software Preservation Renewal Pet. at 3.

¹⁹³ *Id.*

¹⁹⁴ *Id.*

¹⁹⁵ *Id.*

¹⁹⁶ *See* Weinberg 3D Printers Renewal Pet.

¹⁹⁷ Additionally, Skizit Powers submitted one late comment in support. *See* Powers 3D Printers Renewal Supp.

¹⁹⁸ Weinberg 3D Printers Renewal Pet. at 3.

3D printers” due to the current exemption, which has assured manufacturers and users that their uses would not violate section 1201.¹⁹⁹

Q. Computer programs—copyright license investigation

SFC petitioned to renew the exemption for computer programs, for the purpose of investigating potential infringement of free and open-source computer programs.²⁰⁰ No oppositions were filed against renewal of this exemption. The petition demonstrated the continuing need and justification for the exemption, including through discussion of how TPMs, such as encryption, “prevent[] the investigation of computer programs” within various devices that use free and open source software (“FOSS”) to operate.²⁰¹ Because many consumer devices—from laptops to IP-enabled doorbells, baby monitors, and thermostats—contain FOSS, “software authors, publishers, [] developers, [and] consumers . . . have an interest in investigating what FOSS is on a particular device and how it is being used.”²⁰² SFC indicated that barriers to investigating FOSS will “continue to exist . . . [and would] prevent these users from obtaining access to the relevant copyrighted works” without the exemption.²⁰³ As a participant in the previous rulemaking and “the nonprofit home for dozens of FOSS projects representing well over a thousand volunteer contributors,” SFC has personal knowledge and experience regarding the exemption.²⁰⁴

R. Computer programs—video game accessibility

In 2021, the Register found that the record “support[ed] an exemption to enable individuals with disabilities to use alternate input devices to play video games.”²⁰⁵ The Office has previously noted the strong justifications for this exemption²⁰⁶ and recommended that Congress enact a permanent exemption to

¹⁹⁹ *Id.*

²⁰⁰ See SFC Copyright License Investigation Renewal Pet.

²⁰¹ *Id.* at 3.

²⁰² *Id.*

²⁰³ *Id.*

²⁰⁴ *Id.*

²⁰⁵ 2021 Recommendation 315.

²⁰⁶ *Id.* at 314 (“[G]enerally, public policy favors removing impediments to access for individuals with disabilities.’ Accessibility is ‘not merely a matter of convenience,’ but it ensures that individuals with disabilities have ‘meaningful access to the same content that individuals without

enable such accessibility.²⁰⁷ Nonetheless, given the constraints of the rulemaking process,²⁰⁸ because the Office did not receive a petition to renew the current exemption, the Register is not able to recommend its renewal.²⁰⁹ The Office continues to support enactment of a permanent exemption.

such impairments are able to perceive.’ . . . [F]or individuals with disabilities, proposed exemptions ‘may represent the difference between having and not having access to the works’ available to others. For these reasons, the Office has recommended that Congress enact a permanent exemption for accessibility into law.” (quoting 2018 Recommendation at 104; 2012 Recommendation at 22).

²⁰⁷ See Section 1201 Report at 86 (recommending making the accessibility exemption for e-books permanent “[i]n light of the repeated granting of the temporary exemption [for e-books] and the underlying public policy of reducing burdens on people who are blind or print-disabled”).

²⁰⁸ The streamlined renewal process first adopted in the Seventh Triennial Rulemaking eases the burden on petitioners seeking to renew existing exemptions. Under current procedures, it is not an onerous process for any individual or organization to request a renewal. See NPRM at 72,015 (“The streamlined renewal process was praised by participants [for its efficiency] during the ensuing rulemaking, and the Office has employed it in subsequent rulemakings.”) (citing 2018 Recommendation at 19 n.80 (collecting transcript testimony from 2018 rulemaking)).

²⁰⁹ Kelvin Hammond submitted a late comment requesting renewal of this exemption, despite the lack of a renewal petition. See Hammond Video Game Accessibility Renewal Supp.

V. DISCUSSION OF NEW PROPOSED CLASSES

A. *Proposed Class 1: Audiovisual Works—Criticism and Comment—Noncommercial Videos*

1. Background

a. Summary of Proposed Exemption and Register’s Recommendation

The Office received one petition seeking an amendment to the language of the existing exemption relating to noncommercial videos and permitting the circumvention of access controls protecting motion pictures on DVDs, Blu-ray discs, and digitally transmitted video in order to use excerpts for criticism and comment.²¹⁰ Petitioner OTW describes itself as a “public interest organization dedicated to protecting and preserving noncommercial works created by fans based on existing works.”²¹¹ It filed a renewal petition asking the Register to amend the language of the exemption for noncommercial videos codified at 37 C.F.R. § 201.40(b)(1). Because OTW’s petition requested alterations to an existing exemption, the Office considers it a request for an expansion.²¹²

OTW proposed rewriting the text of the current exemption related to noncommercial videos, which is being renewed, by reverting to language used in the 2010 rulemaking, when the exemption was initially adopted.²¹³ Petitioner stated that its proposed changes would not substantively alter the exemption but

²¹⁰ OTW Class 1 Pet.

²¹¹ *Id.* at 1.

²¹² As noted above, although OTW styled its petition as a proposed renewal, the Office does not treat requests for language changes as renewal petitions under its streamlined renewal process. OTW’s claim that it does “not request[] an expansion of the existing exemption” but instead seeks “a more understandable restatement” of what the exemption allows does not change this conclusion. *Id.* at 4. Although the Office understands that OTW is seeking clarity rather than a change in substance, the inquiry in determining the availability of the renewal process is whether the petition proposes any modification to the language of the exemption—regardless of the basis for that proposal.

²¹³ OTW’s petition references “language defining the exempted class from the 2008 rulemaking” *Id.* The Office issued a notice of proposed rulemaking in 2008, but that rulemaking was not finalized until 2010. Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, 73 Fed. Reg. 79,425 (Dec. 29, 2008); 2010 Recommendation at 19. Accordingly, this recommendation refers to the 2010 rulemaking.

would render it more understandable to users. It made essentially the same request in the 2021 cycle, which the Register recommended against.

In this proceeding, OTW did not file comments or participate in hearings after its initial petition. Because it has not met its burden to justify any change to the exemption's text and has not submitted any evidence that would render the Register's previous analysis unreliable, the Register again does not recommend adoption of OTW's proposed expansion. As noted above, she does recommend renewal of the existing exemption for noncommercial videos.

b. Overview of the Issues

Codified at 37 C.F.R. § 201.40(b)(1), the current exemption permits circumvention for various uses, including in noncommercial videos. OTW states that its proposed amendment would clarify the scope of the exemption by incorporating the language used when noncommercial videos were first added to the exemption.²¹⁴

The current exemption now codified at 37 C.F.R. § 201.40(b)(1)(i)(B) reads in relevant part:

noninfringing uses of . . . [m]otion pictures (including television shows and videos) . . . where the motion picture is lawfully made and acquired on a DVD protected by the Content Scramble System, on a Blu-ray disc protected by the Advanced Access Content System, or via a digital transmission protected by a technological measure, and **the person engaging in circumvention under paragraphs (b)(1)(i) and (b)(1)(ii)(A) and (B) of this section reasonably believes that non-circumventing alternatives are unable to produce the required level of high-quality content, or the circumvention is undertaken using screen-capture technology that appears to be offered to the public as enabling the reproduction of motion pictures after content has been lawfully acquired and decrypted, where circumvention is undertaken solely in order to make use of short portions of the motion pictures in the following instances: . . . For the purpose of criticism or comment . . . in noncommercial**

²¹⁴ OTW Class 1 Pet. at 4.

videos (including videos produced for a paid commission if the commissioning entity's use is noncommercial)²¹⁵

OTW contends that the bolded language in the existing exemption should be amended because “[t]he complexity of the provision substantially increases the difficulty of communicating and implementing the exemptions in practice.”²¹⁶ It proposes replacing the bolded language above with the following language that was used in the 2010 rulemaking:

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.²¹⁷

It states that the proposed language would “clarify the exemption for ordinary users.”²¹⁸ The Office received no comments in support of the proposal, no requests from OTW or other parties to participate in the public hearings, and no other evidence in support of the proposal.

Joint Creators I and DVD CCA and AACS LA each filed separate comments opposing OTW's request to change the language of the exemption.²¹⁹ They pointed out that OTW submitted a nearly identical petition in the 2021 cycle and that the “Office ultimately concluded [] modification of the [exemption's] language was unnecessary” because the exemption as written permitted the uses

²¹⁵ 37 C.F.R. § 201.40(b)–(b)(1)(i)(B) (emphasis added).

²¹⁶ OTW Class 1 Pet. at 4.

²¹⁷ *Id.* (discussing rulemaking cycle that began in 2008 and concluded in 2010); see 2010 Recommendation at 72.

²¹⁸ OTW Class 1 Pet. at 4.

²¹⁹ See DVD CCA & AACS LA Class 1 Opp'n at 2–3 (“DVD CCA and AACS LA object to the proposal to alter the language of the current exemption for noncommercial videos.”); Joint Creators I Class 1 Opp'n at 2 (stating that they “do not oppose renewal of the existing exemption for motion pictures on DVDs, Blu-ray discs, and digitally transmitted video for use in noncommercial videos as codified at 37 C.F.R. § 201.40(b)(1)(i)(B)” but oppose Petitioner's suggested “substantive change in the language of the existing exemption”).

OTW described.²²⁰ Joint Creators I also noted that adopting OTW’s proposed language could result in unintended substantive changes to the exemption because the language from the 2010 cycle no longer reflects the full scope of the existing exemption.²²¹ Joint Creators I highlighted, for example, that since 2010, the exemption has been expanded to encompass works acquired on Blu-ray disc or received via a digital transmission.²²²

2. Discussion

OTW’s current petition must be considered in the context of the history of this exemption, which has been amended a number of times, as well as OTW’s unsuccessful 2021 petition which sought the same amendment it requests in this proceeding. The exemption for criticism and comment was expanded to include noncommercial videos in the 2010 rulemaking. In that proceeding, the Register recommended expanding the exemption because doing so facilitated “transformative uses [of audiovisual works] . . . [that were] socially beneficial . . . [and] implicate[d] core First Amendment values reflected in the fair use doctrine,” including comment and criticism.²²³ The exemption was further amended and expanded in the fifth and sixth triennial rulemakings. For example, the Register recommended adding language addressing screen-capture technology in 2012, as access to that technology expanded and improved, making it “a satisfactory alternative to circumvention” “[f]or uses that do not require higher-quality images[.]”²²⁴ Subsequently, in 2012, the exemption was expanded

²²⁰ Joint Creators I Class 1 Opp’n at 2; *see also* DVD CCA & AACCS LA Class 1 Opp’n at 3 (“In the last proceeding, the Register rejected the modification, in part, on Petitioner’s multiple concessions, including that the ‘existing exemption is enough in the sense that it provides an exemption for what vidders do.’”) (quoting 2021 Recommendation at 40–41). Neither group opposes renewal of the exemption in its current form.

²²¹ *See* Joint Creators I Class 1 Opp’n at 2; *see also* DVD CCA & AACCS LA Class 1 Opp’n at 3.

²²² *See* Joint Creators I Class 1 Opp’n at 3.

²²³ 2010 Recommendation at 72.

²²⁴ 2012 Recommendation at 134. While the 2010 exemption required only that “the person engaging in circumvention believe[] and ha[ve] reasonable grounds for believing that circumvention is necessary,” 2010 Recommendation at 72, all amendments adopted after the 2010 cycle more specifically required users to evaluate whether alternatives to circumvention, such as screen-capture technology, could produce video clips of sufficient quality for users’ purposes. *See* Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, 77 Fed. Reg. 65,260, 65,278 (Oct. 6, 2012); Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, 80 Fed. Reg.

to include, on a limited basis, commissioned videos,²²⁵ and in 2015, the exemption was again expanded to include Blu-ray discs and digital transmissions.²²⁶

As noted above, in the last rulemaking, OTW made the same request to amend the exemption “to align with the language of the 2010 exemption”²²⁷ In that rulemaking, it submitted supporting comments and participated in a public hearing on its proposed exemption.²²⁸ During the 2021 public hearing, OTW confirmed that the “existing exemption [wa]s enough in the sense that it provide[d] an exemption for what vidders [(creators of certain types of noncommercial videos)] do.”²²⁹ It also acknowledged that although it believed the proposed language would clarify the boundaries of the exemption, it “actually [did]n’t think that any change [wa]s necessary” to accommodate its

65,944, 65,962 (Oct. 28, 2015); Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, 83 Fed. Reg. 54,010, 54,028 (Oct. 26, 2018); Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, 86 Fed. Reg. 59,627, 59,637 (Oct. 28, 2021). Opponents observed that OTW did not reference any limitations on methods of circumvention, despite the presence of such limitations in the current exemption. See Joint Creators I Class 1 Opp’n at 3 (citing 37 C.F.R. § 201.40(b)(1)(i)(B)).

²²⁵ See Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, 77 Fed. Reg. 65,260, 65,278 (stating that noncommercial works may include videos created pursuant to a paid commission, provided that the commissioning entity uses the work solely in a noncommercial manner, and adding language to exemption regarding screen-capture technology); 37 C.F.R. § 201.40(b)(1) (including “videos produced for a paid commission if the commissioning entity’s use is noncommercial”).

²²⁶ See Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, 80 Fed. Reg. 65,944, 65,949 (expanding exemption to include Blu-ray discs and digital transmissions). In its petition, OTW stated that these works should still be included in the exemption even if the Register recommends adopting its proposed language. See OTW Class 1 Pet. at 4 (“Returning to the simple, functionally similar language of the initial remix exemption (*with the addition of Blu-Ray*) [*and streaming where necessary*] would clarify the exemption for ordinary users and further the Office’s stated policies of increasing public accessibility and transparency.”) (emphasis added).

²²⁷ 2021 OTW Noncom. Videos Renewal Pet.

²²⁸ See *id.*; 2021 Tr. at 149 (Apr. 6, 2021) (noting OTW participation).

²²⁹ 2021 Recommendation at 40–41 (citing 2021 Tr. at 252:18–20 (Apr. 6, 2021) (Rosenblatt, OTW)). In the 2021 cycle, OTW proposed additional changes to the exemption in its supplementary filings—for example, objecting to the phrasing of the exemption’s reference to screen-capture technology. See 2021 Recommendation at 41–42. OTW did not raise these issues in this cycle’s proceedings.

stakeholders' uses.²³⁰ Joint Creators I and DVD CCA and AACCS LA opposed OTW's request.²³¹ Based on the entire record before her, the Register concluded that "the existing exemption already cover[ed] OTW's proposed use, so no changes [we]re warranted at th[at] time."²³² Accordingly, she did not recommend and the Librarian did not grant the proposed expansion.²³³

OTW's present petition repeats its 2021 argument that the proposed language change "would clarify the exemption for ordinary users and further the Office's stated policies of increasing public accessibility and transparency."²³⁴ Pursuant to its statutory obligations, the Office requested input from the public as to "whether there [we]re legal or factual circumstances that ha[d] changed and warrant[ed] altering the determination from the prior rulemaking."²³⁵

As the proponent of an expanded exemption, OTW bears the burden of showing that modification is warranted.²³⁶ In this proceeding, it has submitted only its petition in support of the proposed amendment. The petition stated that OTW had heard from "a number of noncommercial remix artists" ("vidders") who have used the exemption in the past and anticipate needing to use it in the future.²³⁷ It also described an academic's perspective that "vidders" prefer footage ripped from DVDs and Blu-ray because "it is high quality enough to bear up under the transformations that vidders make to it – which now routinely include changes of color, speed, cropping and zooming, masking, animations and other cgi [sic], and even explorations of the z-axis and 3D."²³⁸ These statements support renewal of the current exemption, but no evidence was offered to support the proposal to modify the exemption's language by OTW or

²³⁰ 2021 Recommendation at 42 (citing 2021 Tr. at 245:11–14, 21–24 (Apr. 6, 2021) (Rosenblatt, OTW)).

²³¹ See 2021 Joint Creators I Class 1 Opp'n; see also 2021 DVD CCA & AACCS LA Class 1 Opp'n.

²³² 2021 Recommendation at 40.

²³³ *Id.* ("[N]o changes are warranted at this time.").

²³⁴ OTW Class 1 Pet. at 4 (discussing rulemaking cycle that began in 2008 and concluded in 2010); see NPRM at 72,024; 2021 OTW Noncom. Videos Renewal Pet. at 4.

²³⁵ NPRM at 72,024.

²³⁶ 2015 Recommendation at 13; see DVD CCA & AACCS LA Class 1 Opp'n at 4; Joint Creators I Class 1 Opp'n at 4.

²³⁷ OTW Class 1 Pet. at 3.

²³⁸ *Id.*

any other proponent. Neither OTW nor any other proponent participated in public hearings in support of its suggested changes.

As the Office stated in the NPRM, “where an exemption request resurrects legal or factual arguments that have been previously rejected, the Office will continue to rely on past reasoning to dismiss such arguments in the absence of new information.”²³⁹ The record from the 2021 rulemaking does not support granting OTW’s proposed expansion.²⁴⁰ As determined in 2021, the rule in its present formulation provides adequate leeway to make non-commercial videos using short clips of motion pictures.²⁴¹

Nothing in the current record warrants a different conclusion. No proponent has demonstrated new or changed legal or factual circumstances that would justify the Register altering her prior recommendation.²⁴² As the proponent of the expansion, OTW has not met its burden.²⁴³ Accordingly, the Register again “concludes that the existing exemption already covers OTW’s proposed use, so no changes are warranted at this time.”²⁴⁴

3. NTIA Comments

NTIA expressed its “understand[ing] that the . . . Office [may] determine that a recommendation for denial is the most appropriate path forward in this instance” given the procedural posture of OTW’s request.²⁴⁵ It, however, supported the proposed modification to this class, based on the view that

²³⁹ Section 1201 Report at 147; *see also* Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, 79 Fed. Reg. 55,687, 55,690 (Sept. 17, 2014).

²⁴⁰ “OTW made the same request to amend the language of the exemption in the previous rulemaking [, and t]he Office ultimately concluded that modification of the language was unnecessary, based on statements by OTW to that effect.” NPRM at 72,024 (citing 2021 OTW Class 1 Pet.; 2021 Recommendation at 40–42).

²⁴¹ *See* NPRM at 72,024 & n.158 (citing 2021 Recommendation at 42); *see also* 2021 Recommendation at 40–41 (quoting 2021 Tr. at 252:18–20 (Apr. 6, 2021) (Rosenblatt, OTW)) (“OTW’s representative confirmed . . . that the ‘existing exemption is enough in the sense that it provides an exemption for what vidders do.’”).

²⁴² DVD CCA & AACS LA Class 1 Opp’n at 3–4.

²⁴³ Proponents “must provide more than a ‘*de minimis*’ showing made in support of the proposed exemption.” 2021 Recommendation at 62–63 (quoting 2006 Recommendation at 76).

²⁴⁴ *Id.* at 40. The Register further incorporates her analysis from the previous rulemaking. *See id.* at 40–42.

²⁴⁵ NTIA Letter at 19.

“[t]here is clearly a strong need to structurally alter the way exemptions are written” to make them more user friendly.²⁴⁶ NTIA “acknowledge[d] that petitioners should follow the correct protocol when submitting” this type of request but also expressed “concern[] that there may not be an adequate mechanism” for users to request this type of linguistic clarification, as opposed to a substantive alteration.²⁴⁷ It generally recommended that the Office “consider addressing this dynamic more comprehensively to arrive at a procedurally efficient solution.”²⁴⁸ As to Class 1 specifically, NTIA recommended “that the Register clarify whether [OTW’s] proposed change is functionally equivalent to the current temporary exemption[,]” and “[i]f there is functional equivalence, [NTIA] recommend[ed] the Office seek to replace the regulatory language or note in guidance . . . that the language is equivalent.”²⁴⁹ It did not, however, identify any reasons why it found OTW’s proposed language more transparent than the current exemption.

The Register appreciates NTIA’s input. The Office has provided clear guidance to participants in the 1201 proceedings regarding the need to submit supporting comments,²⁵⁰ which did not occur here. Absent evidence to support OTW’s petition, the Register continues to find the amendment, or other restructuring of the exemption, unnecessary because, as discussed above, there is no evidence of adverse effects this change would remedy.

4. Conclusion and Recommendation

OTW’s petition in this cycle is nearly identical to its 2021 petition, which was denied, and the Office has received no evidence of changed circumstances that would support a departure from its prior reasoning. The Register therefore does not recommend adoption of Proposed Class 1. However, the Register recommends renewal of the existing exemption for noncommercial videos as written.

²⁴⁶ *Id.* at 18–19 (noting that “[t]his petitioner, for example, has submitted the request for language modification on more than one occasion”).

²⁴⁷ *Id.* at 19.

²⁴⁸ *Id.*

²⁴⁹ *Id.*

²⁵⁰ Proponents “must provide more than a ‘*de minimis*’ showing made in support of the proposed exemption.” 2021 Recommendation at 62–63 (quoting 2006 Recommendation at 76).

*B. Proposed Class 2: Audiovisual Works—Criticism and Comment—
Massively Open Online Courses (“MOOCs”)*

1. Background

a. Summary of Proposed Exemption and Recommendation

The Office received one petition to expand the existing exemption for circumvention of access controls protecting motion pictures on DVDs, Blu-ray discs, and digitally transmitted video for educational purposes in massive open online courses (“MOOCs”) by faculty and employees acting at the direction of faculty of accredited nonprofit educational institutions.²⁵¹ The petition was filed by Peter Decherney, Professor of Cinema and Media Studies and English at the University of Pennsylvania, on behalf of himself and Sarah Banet-Weiser, Professor and Dean of the Annenberg School for Communication at the University of Pennsylvania, Shiv Gaglani, Ed Tech Entrepreneur and Medical Student, and SCMS (collectively, “Joint Educators II”).²⁵² In the current rulemaking, similarly to the 2018 and 2021 proceedings, Joint Educators II requested that the exemption be extended to for-profit and nonaccredited online educational entities. Specifically, they sought to expand the scope of the exemption for “educators . . . and preparers of online learning materials acting at the direction of educators” at “*qualified online educational entities*” to use short portions of motion pictures “for the purpose of teaching registered learners . . . in courses requiring close analysis of film and media excerpts when the transformative fair use of the excerpts contributes significantly to learning, for the purpose of criticism, comment, illustration, or explanation.”²⁵³ They defined “qualified educational entities” as “[o]nline entities registered with their state or local jurisdiction or by the federal government as an entity, for-profit or not-for-profit, with an educational purpose or mission.”²⁵⁴

The petition was opposed by DVD CCA and AACCS LA, and ESA, MPA, the News/Media Alliance (“N/MA”), and RIAA (collectively, “Joint Creators II”). Opponents argued that proponents have “failed to meet their burden of proof” by proffering an evidentiary record that is “thinner than it has been in the

²⁵¹ Peter Decherney, Sarah Banet-Weiser, Shiv Gaglani & SCMS (together, “Joint Educators II”) Class 2 Pet. at 2; *see* 37 C.F.R. § 201.40(b)(1)(ii)(B) (current exemption).

²⁵² Joint Educators II Class 2 Pet. at 1; *see* 37 C.F.R. § 201.40(b)(1)(ii)(B) (current exemption).

²⁵³ Joint Educators II Class 2 Reply at 2–3 (emphasis added).

²⁵⁴ *Id.* at 3.

past.”²⁵⁵ They further contended that the only record of use provided cannot be said to be noninfringing.²⁵⁶

For the reasons discussed below, the Register declines to recommend expansion of the proposed exemption. While she supports the renewal of the existing exemption, the examples provided in this proceeding are too sparse to serve as the evidentiary basis for its expansion to educators and preparers of online course materials at for-profit and unaccredited institutions.

b. Overview of Issues

First granted in the 2015 rulemaking, the current exemption encompasses the use by MOOCs of audiovisual works in online courses, “typically consist[ing] of pre-recorded lectures that may be illustrated, as appropriate, with short clips and still images from audiovisual works.”²⁵⁷ In their petition and comments for this proceeding, Joint Educators II maintained that online learning continues to increase in popularity even after the COVID–19 pandemic has subsided.²⁵⁸ They offered evidence that demand is especially high for learning plans offered by nontraditional online entities, such as 2U, LinkedIn Learning, Skillshare, Udemy, etc.²⁵⁹ According to Joint Educators II, “[i]nnovation is opening the sector to for-profit and/or nonaccredited online educational entities . . . as these entities offer learning opportunities for students of all backgrounds.”²⁶⁰ Students of all ages and educational backgrounds seek these learning environments due to their “flexible, personalized, [and] practical skill approaches.”²⁶¹ Therefore, Joint Educators II argued that “it is increasingly important that educators have free and efficient ways of accessing high-quality motion picture excerpts to educate populations often left behind.”²⁶²

²⁵⁵ ESA, MPA, the News/Media Alliance (“N/MA”) & RIAA (together, “Joint Creators II”) Class 2 Opp’n at 4; Tr. at 58:07–18 (Apr. 16, 2024) (Ayers, AACSLA).

²⁵⁶ Tr. at 56:01–09 (Apr. 16, 2024) (Taylor, DVD CCA).

²⁵⁷ 2015 Recommendation at 31 (quoting 2015 Joint Educators Class 3 Pet. at 4).

²⁵⁸ Joint Educators II Class 2 Initial at 2; Joint Educators II Class 2 Pet. at 2.

²⁵⁹ Joint Educators II Class 2 Initial at 2, 5.

²⁶⁰ Joint Educators II Class 2 Reply at 2.

²⁶¹ Joint Educators II Class 2 Initial at 2.

²⁶² *Id.* at 20.

Their proposed exemption language states that “qualified online educational entities through the online platform . . . to the extent technologically feasible” will “apply technological measures that reasonably prevent unauthorized further dissemination of a work in accessible form to others or retention of the work for longer than the learners registration with the qualified online educational entities.”²⁶³ The current version of the exemption relies on definitions in the Technology, Education and Copyright Harmonization (“TEACH”) Act, codified in section 110(2) of the Copyright Act. Although Joint Educators II’s proposed language eliminates the express reference to section 110(2), they made clear during the hearing that they “are open to exactly the same limitations that exist in the TEACH Act,” and that they primarily are seeking an expansion of the current exemption to online courses offered by unaccredited and for-profit educational institutions.²⁶⁴

Opponents argued against the proposed expansion, contending that Joint Educators II failed to meet their evidentiary burden. Opponents asserted that there is essentially “no record” of a noninfringing use.²⁶⁵ They argued that the “breadth of the exemption” proposed, considering the full range of content offered on courses through platforms like Udemy, “requires a very different kind of analysis” and is “not something the Office has condoned before.”²⁶⁶

2. Discussion

a. Works Protected by Copyright

As was the case when they filed petitions in 2018 and 2021, Joint Educators II’s proposal involves the use of short portions of copyrightable motion pictures for purposes of education and, potentially, comment and criticism. The current proposal requests an exemption permitting circumvention of TPMs controlling access to the motion pictures. As in the 2018 and 2021 proceedings, the Register finds that at least some of the works in question are protected by copyright.²⁶⁷

²⁶³ Joint Educators II Class 2 Reply at 2–3.

²⁶⁴ Tr. at 33:02–04, 33:14–18 (Apr. 16, 2024) (Decherney, Joint Educators II).

²⁶⁵ Tr. at 56:01 (Apr. 16, 2024) (Taylor, DVD CCA).

²⁶⁶ Tr. at 11:01–12 (Apr. 16, 2024) (Englund, Joint Creators II).

²⁶⁷ See 17 U.S.C. § 102(a)(6).

b. Asserted Noninfringing Uses

Joint Educators II contended that the proposed uses fall within the favored purposes of education, criticism, and comment referenced in the preamble of section 107 of the Copyright Act, which provides in relevant part that “the fair use of a copyrighted work . . . for purposes such as criticism, comment, . . . teaching . . . , scholarship, or research, is not an infringement of copyright.”²⁶⁸ They argued that the uses are therefore fair.²⁶⁹ In their initial comments, Joint Educators II asserted that their proposal would allow “qualified educational entities, such as 2U,²⁷⁰ LinkedIn Learning,²⁷¹ Skillshare,²⁷² Udemy,²⁷³ etc., to utilize motion picture excerpts for legitimate educational purposes.”²⁷⁴ However, they provided only two examples of motion picture clips used in courses hosted on for-profit, unaccredited platforms. The first example is the course “Learn English with Movie Clips,” offered on Udemy, a for-profit, nonaccredited entity.²⁷⁵ Proponents explained that the course “is intended to use films to help its students learn the English language, however, currently the class only uses film stills.”²⁷⁶ The second course is “Storytelling,” which is a collaboration between Pixar and Khan Academy, using film clips with Pixar’s authorization.²⁷⁷ Faculty for this course “use Pixar films to show how storytelling can draw from personal experiences to create intimate stories.”²⁷⁸

²⁶⁸ *Id.* § 107.

²⁶⁹ Joint Educators II Class 2 Initial at 12–15; Joint Educators II Class 2 Reply at 4–6.

²⁷⁰ *About*, 2U, <https://2u.com/about/> (last visited Oct. 17, 2024).

²⁷¹ LINKEDIN, <https://learning.linkedin.com> (last visited Oct. 17, 2024).

²⁷² SKILLSHARE, <https://www.skillshare.com/en/> (last visited Oct. 17, 2024).

²⁷³ UDEMY, <https://www.udemy.com/> (last visited Oct. 17, 2024).

²⁷⁴ Joint Educators II Class 2 Initial at 5 (footnotes added).

²⁷⁵ *Id.* at 11; Joint Educators II Class 2 Reply at 3.

²⁷⁶ Joint Educators II Class 2 Reply at 6. It is unclear whether the course “only uses film stills.” Citing the landing page for the course, opponents asserted it uses actual video clips, and not merely stills. DVD CCA & AACCS LA Class 2 Opp’n at 10, Ex. 9.

²⁷⁷ Joint Educators II Class 2 Initial at 11.

²⁷⁸ Joint Educators II Class 2 Reply at 3. In their initial comments, proponents also cited a lesson plan provided by Common Sense, a children’s advocacy group. But after opponents noted that Common Sense is not registered as an education entity, proponents clarified that Common Sense “was never intended to be considered by the Joint Educators [II] as a qualified online educational

At the outset, opponents argued that proponents did not establish a record clearly identifying the particular uses they would like to make of protected works. They contended that the record merely consists of “examples of technology platforms rather than actual [educators].”²⁷⁹ Opponents also raised concerns about how broadly the proposed regulatory language defines the exempted users.²⁸⁰ Thus, in recognition of these concerns, before addressing Joint Educators II’s asserted fair use claim, the Register considers how proponents define “educators” and “preparers of online learning materials” of “qualified online educational entities.”

In recommending the existing exemption in 2015, the Register recognized the growth and importance of online education.²⁸¹ Nonetheless, she credited opponents’ concern that an “‘unbounded exemption’ where ‘[a]nybody can declare that they’re teaching a MOOC’ and ‘anyone can be a student’” would be “anathema to the exemption process as envisioned by Congress.”²⁸²

In the past two proceedings, Joint Educators II have sought to expand the current exemption to “online learning platforms,” with the acknowledgment that the line between academic institutions and nonacademic businesses that want to offer online courses “can be blurry.”²⁸³ Noting that a “broadly framed proposal would seemingly encompass any online video that could be characterized as an educational experience,”²⁸⁴ the Register found that the record proffered in the 2021 proceeding did not justify expansion to “online learning materials” offered by “online learning platforms.”²⁸⁵

entity, but rather as, a source generating an idea for an example of how a short excerpt of a motion picture can be employed by an educator as a transformed fair use.” *Id.*

²⁷⁹ Tr. at 8:13–24 (Apr. 16, 2024) (Ayers, AACCS LA).

²⁸⁰ Tr. at 10:01–22 (Apr. 16, 2024) (Englund, Joint Creators II).

²⁸¹ See 2015 Recommendation at 72.

²⁸² *Id.* (quoting Tr. at 119:18–121:16 (May 27, 2015) (Turnbull, DVD CCA & AACCS LA) and citing Tr. at 129:03–130:24 (May 27, 2015) (Williams, Joint Creators II)); see 2018 Recommendation at 54 (similar).

²⁸³ 2021 Hearing Tr. at 234:07–09 (Apr. 6, 2021) (Decherney, Joint Educators II).

²⁸⁴ 2021 Recommendation at 50 (quoting 2018 Recommendation at 54 and 2015 Recommendation at 102).

²⁸⁵ *Id.*

In this rulemaking, Joint Educators II sought to narrow the scope of their prior proposal by limiting it to “educators” and “preparers of online learning materials” acting on behalf of educators at for-profit or nonprofit entities when such entities are “registered with their state or local jurisdiction or by the federal government as an entity . . . with an educational purpose or mission.”²⁸⁶ Proponents offered that the proof of an “educational purpose or mission” can be demonstrated through “tax documents,” like the “Form 990;” and “the establishment of the organization” through governing documents or “an SEC filing.”²⁸⁷ Joint Educators II also noted that many entities “have a stated purpose that you can find on the[] home page” of their website.²⁸⁸

To demonstrate, Joint Educators II applied the proposed definition of qualified online educational entity to their two examples. First, they considered Udemy, a for-profit, nonaccredited entity, whose mission, according to an SEC filing, is to “improve lives through learning.”²⁸⁹ Joint Educators II argued that “Udemy would fall under the definition as a qualified online educational entity since improving lives through learning is an educational mission.”²⁹⁰ Next, they pointed to the Khan Academy, a nonprofit, nonaccredited entity, whose Form 990 indicates that its mission is “a free world-class education for anyone, anywhere,” which they argued “demonstrates an educational purpose.”²⁹¹

In response, opponents raised three concerns. First, DVD CCA and AACLS LA challenged the meaning of “registered” and “purpose,” contending that “corporate documents” do not “necessarily . . . speak to the fact of whether or not its purpose as a [‘]registered purpose[‘] is indeed an educational mission.”²⁹² Second, they argued that the limitation has no impact on what it characterized as “the more important aspect of . . . this rulemaking,” which is “who can circumvent.”²⁹³ Joint Creators II noted that “the question really isn’t whether or

²⁸⁶ Joint Educators II Class 2 Reply at 2–3.

²⁸⁷ Tr. at 16:22–17:09 (Apr. 16, 2024) (Decherney, Joint Educators II).

²⁸⁸ Tr. at 17:22–18:03 (Apr. 16, 2024) (Decherney, Joint Educators II).

²⁸⁹ Joint Educators II Class 2 Reply at 3.

²⁹⁰ *Id.*

²⁹¹ *Id.*

²⁹² Tr. at 18:22–19:07 (Apr. 16, 2024) (Taylor, DVD CCA).

²⁹³ Tr. at 19:08–16 (Apr. 16, 2024) (Taylor, DVD CCA).

not the platform itself has an educational mission”²⁹⁴ because the exemption “would not apply to Udemy.”²⁹⁵ Rather, the proposed exemption “would apply to the content creators on Udemy, of which . . . there are 75,000 or so.”²⁹⁶

At the hearing, Joint Educators II’s representative agreed that the proposed expansion would include educators and preparers acting on behalf of educators who are affiliated with a “qualified educational entity,” and noted that their framework mirrors the current exemption, which applies to faculty affiliated with accredited nonprofit institutions.²⁹⁷ Opponents contended, however, that “[t]here’s a radical difference” between a faculty’s affiliation with an accredited nonprofit educational institution and “what we see at Udemy, where anybody can offer anything and there’s no vetting process.”²⁹⁸ DVD CCA and AACCS LA stated, “Udemy expressly disavows the content on its platform” and “further states, ‘[y]ou and we agree that no joint venture, partnership, employment, contractor, or agency relationship exists between us.’”²⁹⁹ Because of this, they argued that “it’s very tenuous to suggest that it’s just like . . . serving as a faculty member at a non-profit accredited educational university.”³⁰⁰

Third, opponents questioned the rigor of proponents’ “educational purpose or mission” standard. For example, Joint Creators II described proponents’ principal example, Udemy, as “akin to YouTube or TikTok, where content creators provide classes and people can go and access on demand streams of informational content.”³⁰¹ Illustrating the breadth of the proposed exemption, they pointed to courses Udemy user-instructors offer that appear to provide strategies for unusual skills, rather than educational content.³⁰² Joint Creators II

²⁹⁴ Tr. at 19:08–16 (Apr. 16, 2024) (Taylor, DVD CCA).

²⁹⁵ Tr. at 19:18–25 (Apr. 16, 2024) (Englund, Joint Creators II).

²⁹⁶ Tr. at 19:18–25 (Apr. 16, 2024) (Englund, Joint Creators II).

²⁹⁷ Tr. at 22:05–21 (Apr. 16, 2024) (Decherney, Joint Educators II); *see also* 37 C.F.R. § 201.40(b)(1)(ii)(B) (current exemption).

²⁹⁸ Tr. at 22:25–23:04 (Apr. 16, 2024) (Taylor, DVD CCA).

²⁹⁹ DVD CCA & AACCS LA Class 2 Opp’n at 3 (quoting *Terms of Use – Section 9.7. Relationship Between Us*, UDEMY, <https://www.udemy.com/terms/>).

³⁰⁰ Tr. at 23:05–10 (Apr. 16, 2024) (Taylor, DVD CCA).

³⁰¹ Tr. at 10:13–22 (Apr. 16, 2024) (Englund, Joint Creators II).

³⁰² Tr. at 11:02–07 (Apr. 16, 2024) (Englund, Joint Creators II) (citing examples titled “How to get women obsessed with you even if you’re homeless” and “How to communicate with your animal telepathically”).

argued that exempting such users “is just not something the Office has condoned before or ought to no matter how the regulatory language gets tweaked.”³⁰³

The Register agrees that Joint Educators II’s current proposal should be denied. As in previous proceedings, the record is insufficient to justify expansion to “educators” and “preparers of online learning materials” of “qualified online educational entities.” Based on the record, it is unclear how proponents’ proposed expansion materially differs from its 2021 proposal for “online learning materials” offered by “online learning platforms.”³⁰⁴ While proponents proffered different regulatory language in this proceeding, the proposed limitation to “qualified educational entities” does not appear to place meaningful limits on who could make use of the proposed exemption.

Even if the exemption were limited to the proposed uses described by Joint Educators II, the record does not adequately demonstrate they are likely noninfringing. As noted above, Joint Educators II cited only two specific uses (fewer than the number cited in 2021 proceeding)—“Learn English with Movie Clips,” offered on Udemy, and “Storytelling,” offered by Khan Academy, which is provided with the consent of the copyright owner.

Regarding the first fair use factor—the purpose and character of the use—Joint Educators II maintained that it favors fair use because the proposed use “is strictly for educational purposes by qualified educational entities.”³⁰⁵ They argued that “[e]ducators regularly repurpose motion picture excerpts into educational tools in a fashion that is highly transformative.”³⁰⁶ They contended that “the commercial nature of . . . qualified for-profit educational entities does not undermine their legitimacy or their entitlement to fair use protections” because, citing *Campbell*, “the more transformative the use, the more likely a court is to find for fair use, regardless of commercial nature.”³⁰⁷

Opponents responded that the proffered examples are not particularly transformative, as the works are being used for precisely the purpose for which they were made. Regarding Udemy’s course, “Learn English with Movie Clips,”

³⁰³ Tr. at 11:10–12 (Apr. 16, 2024) (Englund, Joint Creators II).

³⁰⁴ See generally 2021 Joint Educators Class 1 Pet.

³⁰⁵ Joint Educators II Class 2 Initial at 13.

³⁰⁶ *Id.*

³⁰⁷ *Id.* (citing *Campbell*, 510 U.S. at 580).

DVD CCA and AACCS LA contended that the instructor merely uses “the inherent entertainment of movie clips to teach the English language, and in so doing” is “directly exploiting the works, in large part, for their original purpose—to bring viewers in and capture their attention through the creative elements embodied by the motion picture.”³⁰⁸ Joint Creators II noted that the proposed regulatory language is broader than the current exemption in that it does not only cover “criticism and comment but also illustration and explanation.”³⁰⁹ They contended that this seems to suggest the clips are being used merely “to show things that are shown in the movie.”³¹⁰ They argued, “[t]hat is not a transformative purpose for using a movie.”³¹¹

Joint Creators II further argued that even if proponents’ uses were transformative, “[s]ince the last proceeding, the Supreme Court has emphasized that even when a use can be considered transformative, it is not appropriate simply to assume that the transformative nature of the use trumps a commercial purpose.”³¹² They contended that “[h]ere, the Joint Educators II have not proposed an exemption that would ensure that all the commercial uses they would enable have purposes that outweigh their commercial nature.”³¹³

On the record presented, Joint Educators II have not demonstrated that their cited uses can be considered noninfringing. The only relevant example cited relates to a for-profit entity.³¹⁴ The nature of this entity’s uses, and in particular the activities of its user-instructors who were absent from this rulemaking, is unclear based on the evidence submitted. Moreover, “whether the use of a copyrighted work has a further purpose or different character . . . is a matter of degree, and the degree of difference must be balanced against the commercial nature of the use.”³¹⁵ “If an original work and a secondary use share the same or highly similar purposes, and the secondary use is of a commercial nature, the

³⁰⁸ DVD CCA & AACCS LA Class 2 Opp’n at 9–10.

³⁰⁹ Tr. at 26:02–10 (Apr. 16, 2024) (Englund, Joint Creators II).

³¹⁰ Tr. at 26:02–10 (Apr. 16, 2024) (Englund, Joint Creators II).

³¹¹ Tr. at 26:02–10 (Apr. 16, 2024) (Englund, Joint Creators II).

³¹² Joint Creators II Class 2 Opp’n at 7 (discussing *Warhol*, 598 U.S. at 532).

³¹³ *Id.*

³¹⁴ As noted above, the course offered by Khan Academy is offered in partnership with the content owner, Pixar.

³¹⁵ *Warhol*, 598 U.S. at 532.

first factor is likely to weigh against fair use, absent some other justification for copying.”³¹⁶ Accordingly, although a commercial purpose is not disqualifying, the for-profit nature of proponents’ principal example indicates that the first factor weighs against a finding of fair use.

Under factor two—the nature of the copyrighted work—it is well established that motion pictures are creative and thus at the core of copyright’s protection.³¹⁷ But in the case of uses involving a favored purpose, the second factor may be of relatively limited importance to the overall analysis.³¹⁸ As in 2015, 2018, and 2021, the Register concludes that the second fair use factor slightly disfavors the proposed expansion.³¹⁹

Under the third factor—the amount and substantiality of the portion used in relation to the copyrighted work as a whole—the Register concludes that the limitation to circumvention for uses of “short portions” of motion pictures is integral to the various proposals.³²⁰ In the 2010 proceeding, the Register reviewed the meaning of “short portions” based on the record before her.³²¹ There, the evidence suggested that most uses involved “a relatively small portion of the copyrighted work,” “in some cases less than 1 minute and never more than 3–5 minutes in length.”³²² Thus, while recognizing that the extent of permissible copying may vary, for purposes of this class, the “short portions” limitation provides some guidance as to what is generally likely to be a fair use without imposing a wholly inflexible rule as to length.³²³

Regarding the fourth factor—the effect of the use upon the potential market for or value of the copyrighted work—Joint Educators II contended that “[t]he Copyright Office has already acknowledged that the use of motion picture excerpts for educational purposes by K–12 schools, universities, and MOOCs has

³¹⁶ *Id.*

³¹⁷ See 2021 Recommendation at 43; 2018 Recommendation at 45; 2015 Recommendation at 70; 2012 Recommendation at 128.

³¹⁸ See *Campbell*, 510 U.S. at 586.

³¹⁹ See 2021 Recommendation at 43; 2018 Recommendation at 45; 2015 Recommendation at 70.

³²⁰ See 2021 Recommendation at 43; 2018 Recommendation at 46; 2015 Recommendation at 70; 2012 Recommendation at 128.

³²¹ See 2010 Recommendation at 51.

³²² *Id.*

³²³ See 2021 Recommendation at 43; 2018 Recommendation at 46.

a minimal effect on the content market at best.”³²⁴ They asserted that the uses proposed in the petition are analogous to the uses by K–12 schools, universities, and MOOCs previously considered by the Register. DVD CCA and AACCS LA, by contrast, argued that “[c]opyright owners reasonably expect to license clips of their motion pictures.”³²⁵ Joint Creators II argued that the proposed expansion “would negatively affect copyright owners’ legitimate revenues from streaming and download services that publicly perform or otherwise transmit copies of motion pictures—some of which cater specifically to educational institutions.”³²⁶ To demonstrate this licensing market, DVD CCA and AACCS LA pointed to Joint Educators II’s Khan Academy example, noting that the “Pixar in a Box” course is “authorized by the content owner” via a “cooperative relationship.”³²⁷ In response, Joint Educators II contended that “copyright owners mainly sell their motion picture works for entertainment,” and “[t]he entertainment market serves a distinctive purpose from the educational sphere.”³²⁸

Proponents provided only one example of a nonaccredited, nonprofit institution seeking to use the proposed exemption—Khan Academy. Here, because the fair use inquiry is not limited by the scope of specific statutory factors under section 107, the Register considers section 110(2). Section 110(2) provides an exception for certain uses of copyrighted works by nonprofit educators in distance education,³²⁹ and requires that the transmitter must be “a governmental body or an *accredited* nonprofit educational institution.”³³⁰ As in the 2021 proceeding, the Register continues to believe that section 110(2) “provides useful and important guidance as to Congress’ intentions regarding the need for and nature of excepted uses to permit certain performances and displays of copyrighted works for distance learning.”³³¹ Thus, while not foreclosing the possibility that a different conclusion might be warranted upon a fuller record, the Register cannot

³²⁴ Joint Educators II Class 2 Initial at 14 (citing 83 Fed. Reg. 54,010, 54,010 (Oct. 26, 2018)).

³²⁵ DVD CCA & AACCS LA Class 2 Opp’n at 11–12.

³²⁶ Joint Creators II Class 2 Opp’n at 8.

³²⁷ DVD CCA & AACCS LA Class 2 Opp’n at 4.

³²⁸ Joint Educators II Class 2 Reply at 5.

³²⁹ 17 U.S.C. § 110(2); *see also* U.S. COPYRIGHT OFFICE, REPORT ON COPYRIGHT AND DIGITAL DISTANCE EDUCATION (1999), https://www.copyright.gov/reports/de_rprt.pdf.

³³⁰ 17 U.S.C. § 110(2) (emphasis added).

³³¹ 2021 Recommendation at 53 (quoting 2015 Recommendation at 74).

conclude that the current evidence regarding nonaccredited institutions establishes a likely noninfringing use.

In regard to entities that seek to make the proposed uses of motion picture excerpts, the Register concludes that their status as for-profit organizations tips the fourth factor against fair use. Given the substantial prevalence of commercial uses in the proposal, and the difficulty of separating educational uses from partially entertainment uses, the Register is unable to conclude that the proposed uses are likely to be noninfringing.

c. Causation

The Register finds that Joint Educators II have met their burden of showing that the statutory prohibition on circumvention of access controls limits their ability to engage in the proposed uses. But for the prohibition, users likely could gain lawful access to the copyrighted motion pictures for those purposes.³³²

d. Asserted Adverse Effects

While it is unnecessary to address this issue in light of the fact that proponents have failed to establish a noninfringing use, the Register finds that even if there were noninfringing uses, the current record is insufficient to support a finding of adverse effects.

As an initial matter, there is a dispute regarding the availability of alternatives to circumvention that would allow for-profit and nonaccredited educational entities to use short motion picture clips for purposes of teaching. Opponents identified three alternatives. DVD CCA and AACS LA noted that educators for for-profit and nonaccredited entities could create their own clips by performing and reading dialogue themselves.³³³ Both suggested that educators for for-profit and nonaccredited entities utilize non-circumventing screen capture technology or avail themselves of the clip-licensing market.³³⁴ While Joint Educators II did not respond to Joint Creators II's first alternative, they did address the second and third. Regarding screen capture technology, Joint Educators II argued that the

³³² Joint Educators II Class 2 Initial at 8 (“The DMCA’s statutory prohibition on circumventing access controls adversely impacts these educational entities uses of short excerpts of motion pictures to provide access to quality educational materials in achievement of equity across the United States education sector.”).

³³³ DVD CCA & AACS LA Class 2 Opp’n at 12.

³³⁴ *Id.*; Joint Creators II Class 2 Opp’n at 14.

alternative “forces these qualified online educational entities to work with clips that are inferior in sound and picture quality, apparent in the opposition’s own exhibit.”³³⁵ Regarding clip licensing, Joint Educators II point out that “these services are not accessible to every educational institution,” and some services, like Swank Motion Pictures, Inc., “only offer entire films,” not clips.³³⁶

Next, with respect to the first section 1201 statutory factor, Joint Educators II maintained that the “proposed exemption is not premised upon a general lack of availability of copyrighted works but rather the unavailability of works made inaccessible by TPMs for specific educational uses that would benefit students of nontraditional educational entities.”³³⁷ They asserted that the prohibition against circumvention “prevents nontraditional educational entities from equitable access to digital sources.”³³⁸ As to the second factor, Joint Educators II stated that “the use of the copyrighted material is the same here as in previously granted exceptions: educational.”³³⁹ Regarding the third factor, they maintained that “nonaccredited and/or for-profit entities engaging in education face the very same burdens their traditional counterparts face,” and that “[t]he use of quality film clips is today an essential tool for educating generations whose experiences are increasingly digitalized.”³⁴⁰ As to the fourth factor, Joint Educators II contended that the proposed use “would be strictly limited to minimize any potential effect on the market or value of copyrighted works,” and that the “motion picture excerpts are meant only for the limited purpose of educating students by emphasizing or illustrating a specific concept as part of an enhanced learning experience.”³⁴¹

Opponents contended that the factors do not favor the proposed exemption. DVD CCA and AACS LA argued that the proposal “will not result in the availability of more works,” as “[n]othing suggests that online learning platforms are presently unable to make or prepare educational materials.”³⁴² They further

³³⁵ Joint Educators II Class 2 Reply at 7–8.

³³⁶ *Id.* at 6.

³³⁷ Joint Educators II Class 2 Initial at 15.

³³⁸ *Id.*

³³⁹ Joint Educators II Reply Comment at 7.

³⁴⁰ *Id.*

³⁴¹ Joint Educators II Class 2 Initial at 16.

³⁴² DVD CCA & AACS LA Class 2 Opp’n at 14.

cautioned that “the creation of a broad, unwarranted exemption will negatively affect rightsholders’ confidence in the overall effectiveness of section 1201 if this rulemaking strays from its practice of creating narrow focused exemptions that run low risk of harming of the market for the works.”³⁴³ Regarding the fourth factor, they asserted use by “for-profit and nonaccredited entities threatens the digital content ecosystem,” and “would likely throw open the door for any ‘online activities’ for all commercial and non-accredited entities.”³⁴⁴

At the outset, consistent with her prior recommendations, the Register notes that it appears that non-circumventing screen capture technology may provide an adequate alternative to circumvention for certain uses of motion picture clips for criticism and comment that do not require access to higher-quality content.³⁴⁵ Because the record, which includes only two examples, does not sufficiently reflect a need for higher-quality content, the Register takes notice of opponents’ exhibit showing a good screen capture of the Udemy course “Learn English with Movie Clips,”³⁴⁶ as well as their assertion that the quality of screen capture is “very good, especially, . . . for learners who are reviewing the lesson on a small screen device, such as a tablet, a laptop, a phone, and not in an expensive home theater arrangement.”³⁴⁷

As noted above, proponents provided only two examples of cases that potentially engage in the proposed uses—one course offered through a for-profit entity and one course involving authorized use of content offered through a nonprofit, nonaccredited entity. The full nature of their activities, and in particular the activities of the user-instructors who were absent in this rulemaking, is unclear based on the evidence submitted. The Register therefore cannot assess whether, or to what extent, an expansion to such users might affect the availability of copyrighted works for educational purposes or impact relevant

³⁴³ *Id.*

³⁴⁴ *Id.* at 19–21.

³⁴⁵ 2021 Recommendation at 34 (noting that “certain uses of motion picture clips for criticism and comment do not require access to higher quality content, and that screen capture technology may be an alternative to circumvention” (citing 2015 Recommendation at 99)).

³⁴⁶ DVD CCA & AACCS LA Class 2 Opp’n at 13, Ex. 11.

³⁴⁷ Tr. at 36:10–19 (Apr. 16, 2024) (Ayers, AACCS LA). The Register notes that, in comparison, proponents in the 2015 proceeding for the existing exemption proffered “a variety of examples” that sufficiently demonstrated a need for higher-quality content. See 2015 Recommendation at 87.

markets. She is open to revisiting this issue in the future should a more robust record be provided.

3. NTIA Comments

Consistent with its 2021 comments, NTIA supports Joint Educators II's proposed expansion to include for-profit and nonaccredited educational institutions.³⁴⁸ Addressing the insufficiency of the record to support the full scope of proponents' request, NTIA also supports limiting the exemption to "nontraditional educational entities focusing on film study and language courses."³⁴⁹ In its view, "a binary black-and-white distinction between traditional and non-traditional educational entities inadvertently leads the rulemaking process to adjudicate the educational value of an online education when considering an exemption."³⁵⁰ It reiterated that "'current circumstances . . . have obviated the need for strict reliance on this notion' that exemptions should be strictly limited to the contours of the TEACH Act," calling section 110(2) "'instructive,'" but suggesting that it is "'irrelevant to the circumstances at hand.'"³⁵¹

The Register appreciates the input from NTIA, but disagrees with its conclusions related to the copyright issues relevant to this petition. Section 110(2) remains an appropriate guidepost for evaluating the nature of permitted uses of copyrighted works in distance education. As noted above, with only one example proffered, the current record is insufficient to support the expansion of the existing exemption to cover uses by unaccredited nonprofit educational institutions. Further, the Register continues to believe that the predominantly commercial nature of most of the proposed beneficiaries remains significant in her assessment of both the fair use factors and the overall section 1201 analysis.

4. Conclusion and Recommendation

The Register finds that the record lacks support to expand the existing exemption to for-profit and/or unaccredited educational entities. Moreover, the Register

³⁴⁸ NTIA Letter at 21.

³⁴⁹ *Id.* at 23.

³⁵⁰ *Id.* at 22.

³⁵¹ *Id.* at 23 (quoting Letter from Evelyn L. Remaley, Acting Assistant Sec'y for Commc'ns & Info. & Adm'r, Nat'l Telecomms. & Info. Admin., U.S. Dep't of Commerce, to Shira Perlmutter, Register of Copyrights and Dir., U.S. Copyright Office, at 10 (Oct. 1, 2021)).

does not recommend adoption of proponents' proposal to encompass the broad categories of "educators" and "preparers of online learning materials" of "qualified online educational entities," as it does not place meaningful limits on who may make use of the proposed exemption. The definition proffered for "qualified online educational entity" would allow essentially any for-profit and/or unaccredited entity with a broad information sharing objective or education-adjacent purpose to circumvent. Such expansion would significantly weaken guardrails against abuse and potential infringement. In light of these concerns, the Register does not recommend adoption of proposed Class 2.

C. Proposed Classes 3(a) and 3(b): Audiovisual Works and Literary Works—Text and Data Mining—Scholarly Research and Teaching

1. Background

a. Summary of Proposed Exemptions and Register Recommendations

Proposed Classes 3(a) and 3(b) seek to expand the existing exemptions, codified at 37 C.F.R. § 201.40(b)(4) and 37 C.F.R. § 201.40(b)(5), that permit circumvention of TPMs on copies of copyrighted motion pictures and literary works that were lawfully acquired to enable researchers to perform text and data mining for the purpose of scholarly research and teaching, but limit access to the corpora to outside researchers “solely for purposes of collaboration or replication of the research.”³⁵² Proponents seek to permit academic researchers to share copies of corpora with researchers affiliated with other nonprofit institutions of higher education “for purposes of conducting independent text [and] data mining research and teaching, where those researchers are in compliance with the exemption.”³⁵³ As in 2021, the Office grouped the proposals into two classes: Class 3(a) pertaining to motion pictures and Class 3(b) pertaining to literary works.

In response to the proposed expansions, the Association of American Publishers (“AAP”); MPA, N/MA and RIAA (together, “Joint Creators III”); DVD CCA and AACCS LA; and the International Association of Scientific, Technical and Medical Publishers (“STM”) (together, the “opponents”) filed opposition comments. Those comments raised issues with both the proposed expansions and the existing exemptions. They expressed concern that the “proposed new language would dramatically enlarge the scope of the exemptions adopted in 2021” and could lead to “a wide range of potentially infringing uses” of copyrighted works.³⁵⁴ They also raised issues with the existing exemptions’ security measures and viewing provisions.³⁵⁵

³⁵² 37 C.F.R § 201.40(b)(4)–(5).

³⁵³ Authors All., AAUP & LCA Class 3(a) Pet. at 2; Authors All., AAUP & LCA Class 3(b) Pet. at 2.

³⁵⁴ MPA, N/MA & RIAA (together, “Joint Creators III”) Class 3(a) Opp’n at 5; *see* AAP Class 3(b) Opp’n at 2–3; DVD CCA & AACCS LA Class 3(a) Opp’n at 12–13, 19–20.

³⁵⁵ AAP Class 3(b) Opp’n at 8–13; DVD CCA & AACCS 3(a) Opp’n at 1–5; Joint Creators III Class 3(a) Opp’n at 5–9.

Through the comment and hearing process, both proponents and opponents sought clarification of the language of the existing exemptions. Specifically, both parties discussed whether viewing the works in the corpus (“close viewing”) and annotating³⁵⁶ are research methods covered by the exemptions, and whether the security measures provisions are working as the Office intended. While opponents did not raise these questions in opposition to the renewal petitions and instead waited to raise them in opposition to the requested expansions, the Register is sympathetic to the parties’ interest in resolving any uncertainty. Accordingly, as part of the review of the petition, the Register first draws on her analysis from the last rulemaking cycle to make recommendations on clarifying the existing text. She then turns to an analysis of the request to expand the exemptions, which she grants in part and denies in part.

b. Overview of Issues

During the 2021 cycle, the Librarian of Congress adopted exemptions permitting researchers affiliated with a nonprofit institution of higher education to conduct text and data mining on motion pictures and literary works for the purpose of scholarly research and teaching. Since then, researchers have been able to engage in valuable research that was not previously possible. For example, one researcher reports using the exemptions to analyze the representation of gender, race, and guns in films from 1980 to 2022,³⁵⁷ while another research team reports using them to analyze banned books in the 21st century.³⁵⁸

After three years of utilizing the exemptions, researchers now claim that additional research based on text and data mining techniques is being stymied by the uncertainty surrounding whether and when the corpora at issue may be shared with researchers at outside institutions. Authors Alliance, AAUP, and LCA (together, the “proponents”) seek to expand the exemptions “to permit researchers to share corpora with researchers affiliated with different nonprofit institutions of higher education for purposes of conducting independent text

³⁵⁶ Close viewing and annotating audiovisual works “involves human users manually annotating audiovisual materials to produce data about media such as film and television.” Authors All., AAUP & LCA Class 3 Initial at App. E at 1 (letter from Joel Burges & Emily Sherwood). Similarly, for literary works, the process may involve manually reviewing and tagging text according to a schema to prepare the corpus for computational analysis. Tr. at 91:12–92:16 (Apr. 17, 2024) (Howard-Sukhil, Authors All.).

³⁵⁷ Authors All., AAUP & LCA Class 3 Initial at App. C (letter from David Bamman).

³⁵⁸ *Id.* at App. L (letter from Henry Alexander Wermer-Colan).

[and] data mining research and teaching, where those researchers are in compliance with the exemption.”³⁵⁹ In other words, proponents request that the exemptions be expanded so that researchers can share corpora not only for collaboration on their own projects or replication of their own research, but also to facilitate outside researchers’ work on new projects.

The parties also raised issues with the viewing provisions and security measures provisions of the existing exemptions. While proponents explained that viewing the copyrighted works is necessary to conduct some text and data mining research,³⁶⁰ the opponents asserted that close viewing and annotating is not fair use and argued that the exemptions should limit the practice to an even greater extent.³⁶¹ The opponents also raised issues with the security measures provisions. In addition to raising concerns about the efficacy of these provisions,³⁶² the opponents expressed frustration that only copyright owners—and not trade associations—can make inquiries into security measures,³⁶³ and noted that the existing text creates uncertainty for copyright owners who may not know whether their works are contained in a corpus.³⁶⁴

2. Discussion

a. Existing Exemptions: Scope of Research Methods and Process for Security Measures Confirmation

i. *Scope of Research Methods*

The current exemptions specify that “[t]he person undertaking the circumvention” may view or listen to the contents of copyrighted works in the corpus “solely for the purpose of verification of the research findings.”³⁶⁵ During the 2021 cycle, verification of the research findings was the only purpose for

³⁵⁹ Authors All., AAUP & LCA Class 3(a) Pet. at 2; Authors All., AAUP & LCA Class 3(b) Pet. at 2.

³⁶⁰ See, e.g., Tr. at 86:09–10 (Apr. 17, 2024) (Sherwood, Univ. of Rochester Librs.); Quinn Dombrowski Class 3 Reply at 4–5.

³⁶¹ See AAP Class 3 Opp’n at 11–17.

³⁶² Joint Creators III Class 3 Opp’n at 6–7, 9–10; AAP Class 3 Opp’n at 2–3.

³⁶³ Tr. at 54:03–08 (Apr. 17, 2024) (Taylor, DVD CCA); Tr. at 58:17–19 (Apr. 17, 2024) (Charlesworth, AAP).

³⁶⁴ See Tr. at 56:07–18 (Apr. 17, 2024) (Rotstein, Joint Creators III).

³⁶⁵ 37 C.F.R. § 201.40(b)(4)(i)(C), (b)(5)(i)(C).

which researchers testified that they would need to view the works.³⁶⁶ In fact, petitioners initially stated in 2021 that “researchers would not be able to view the text of literary works or the content of motion pictures in the course of their research.”³⁶⁷ Over the course of the proceeding, however, it became clear that “proponents believed that it would in fact be necessary for researchers to view the content of the works to verify their methods and findings.”³⁶⁸ Opponents asserted that viewing the entirety of the copyrighted works is essentially space-shifting, which the Office has consistently found not to be fair use. Ultimately, the Register concluded that “the proposed use is likely to be transformative, notwithstanding researchers’ ability to view the content of the copyrighted works,”³⁶⁹ and included language to limit viewing “solely to verify research results” to “ensure that the purpose of the use differs from the original expressive purposes for which the works were created.”³⁷⁰

This cycle, proponents and opponents again differed in their views of when text and data mining research requires viewing the copyrighted works within the corpora and whether activities such as close viewing and annotating are, or should be, covered by the exemptions. Proponents asserted that for some text and data mining research, close viewing and annotating is necessary, and that certain research would be limited if the copyrighted works could not be viewed and annotated.³⁷¹ They explained that “converting the materials into a format compatible with computational analysis . . . may involve deleting text or marking

³⁶⁶ 2021 Recommendation at 104.

³⁶⁷ *Id.*

³⁶⁸ *Id.*

³⁶⁹ *Id.* at 111 (emphasis added).

³⁷⁰ *Id.*

³⁷¹ Tr. at 86:09–10 (Apr. 17, 2024) (Sherwood, Univ. of Rochester Librs.) (stating that “[f]or [their] research questions and purposes,” text and data mining would be limited if researchers could not view and/or annotate copyrighted works); *see, e.g.*, Tr. at 86:13–14, 22–24 (Apr. 17, 2024) (Sherwood, Univ. of Rochester Librs.) (noting that “quantifying early representations of the LGBTQIA community in film and television requires a human to view [the copyrighted works] to generate that data” because “queer identities are not always discussed or evident by a character through dialogue”); *see, e.g.*, Tr. at 91:23–92:15 (Howard-Sukhil, Authors All.) (explaining that for a previous text and data mining project, she had to view copyrighted works and perform manual markups because particular narrative schema required “interpretive judgments regarding what events are happening and how individuals are described in the sample text”).

text” or “labeling materials with metadata[.]”³⁷² Other times, converting literary text may require a human to “actually look” at the corpora text to confirm whether automated formatting was accurate.³⁷³ Being able to view the copyrighted works within the corpus may also raise novel research questions.³⁷⁴

In contrast, the opponents argued that close viewing and annotating are not fair use³⁷⁵ and have requested that the regulatory text be revised to include more stringent limitations on viewing.³⁷⁶ They highlight the 2021 recommendation to limit viewing for the purpose of verification of research findings and argue that annotating is not sufficiently transformative.³⁷⁷

The Register concludes that researchers should be able to view the contents of copyrighted works as part of their research, provided that any viewing that takes place is in furtherance of research objectives (*e.g.*, processing or annotating works to prepare them for analysis) and not for the works’ expressive value. Updating the existing exemptions to permit close viewing and annotating brings the regulatory text in line with the original fair use analysis from the 2021 recommendation and does not require a new fair use analysis.³⁷⁸ With the additional information regarding the need to view the copyrighted work for

³⁷² Authors All., AAUP & LCA Class 3 Reply at 10–11.

³⁷³ Quinn Dombrowski Class 3 Reply at 4–5 (explaining that some research methods require a human to view automatic formatting for quality control as “an essential prerequisite to make sure the files we’re analyzing contain what we think they contain—which is fundamental to our ability to make any legitimate claims using the results”).

³⁷⁴ *Id.* at 3 (observing that research questions “about italics use and other typographic choices in different genres of literature across time” cannot be asked without viewing the copyrighted works because computational text analysis uses plain text formatting).

³⁷⁵ AAP Class 3 Opp’n at 11–15; DVD CCA & AACCS LA Class 3 Opp’n at 1–12; Tr. at 93:05–9 (Apr. 17, 2024) (Rotstein, Joint Creators III) (“[H]uman review of a copyrighted work for annotation is an expressive use, and annotations are derivative works, can be derivative works or can be infringing if they’re unauthorized.”).

³⁷⁶ AAP Class 3 Opp’n at 16–17 (proposing modifications to existing exemptions that limits viewing contents of the works in corpus “solely for the purpose of verification of *statistical* research findings *and no other type of analysis*” (new text in italics), and narrowly defines text and data mining to “computational research activities using algorithmic processes that do not involve the viewing of the contents of literary works other than as described in (b)(5)(i)(C) of this section and that result solely in statistical information about the literary works”).

³⁷⁷ DVD CCA & AACCS LA Class 3 Opp’n at 1–5.

³⁷⁸ *See* 2021 Recommendation at 111 (“[T]he proposed use is likely to be transformative, notwithstanding researchers’ ability to view the content of the copyrighted works.”).

research-related purposes now provided in the record, the Register finds the existing limitation on viewing overly restrictive. Moreover, as text and data mining research is a relatively new field that is quickly evolving and the technology associated with it continues to improve,³⁷⁹ the Register determines that it is reasonable to modify the regulatory text to account for adapting research methods. She concludes that “ensure[ing] that the purpose of the use differs from the original expressive purposes for which the works were created”³⁸⁰ can be achieved by changing the language of the exemptions to permit viewing or listening to the contents of the corpus “solely to conduct text and data mining research or teaching.”

The AAP also asked the Register to address a “quirk” in the regulations that creates a disconnect between whom the regulations permit to view the copyrighted works and who is, in fact, doing so.³⁸¹ Currently, the exemptions permit “[t]he person undertaking the circumvention” to view or listen to the copyrighted works.³⁸² The 2021 recommendation, however, was explicit that under the exemptions, “*researchers* would be permitted to view or listen to the copyrighted works”³⁸³ The Register agrees that there is a disconnect between the 2021 recommendation and the regulatory text and recommends amending the regulatory text to apply to anyone performing text and data mining activities.³⁸⁴

³⁷⁹ Authors All., AAUP & LCA Class 3 Initial at 9 (noting that digital humanities field is “young and small”); *Id.* at App. D at 2 (letter from John Bell) (“[B]etween the time when we finish our analysis and publish our results, our methods will be obsoleted by new technology and the first thing our readers will want to do is rerun the analysis using new models to produce more accurate results or examine a related research question that could not be addressed using current inference models.”).

³⁸⁰ 2021 Recommendation at 111.

³⁸¹ See Tr. at 90:02–07 (Apr. 17, 2024) (Charlesworth, AAP) (“So one sort of quirk in the regulation is it refers only to the person doing circumvention, but I assume that there are other people who have access to the corpus. And so I think that needs to be clarified, that whatever the rule is would apply to all of them.”).

³⁸² 37 C.F.R. § 201.40(b)(4)(i)(C), 201.40(b)(5)(i)(C).

³⁸³ 2021 Recommendation at 111 (emphasis added).

³⁸⁴ See AAP Class 3 Opp’n at 17 (proposing that 201.40(b)(5)(i)(C) be amended to read: “Any person undertaking circumvention or research activities views the contents of the literary work . . .”).

Lastly, during the 2024 cycle, some proponents and opponents voiced concerns about the interplay between the exemptions and generative artificial intelligence (“AI”). Proponents explained that “machine learning models are [] at the core of text and data mining research.”³⁸⁵ For example, machine learning models could be used in text and data mining to predict the probability of the next word in a sentence in order to determine the predictability of a novel,³⁸⁶ “infer[] a third dimension that does not exist in a two-dimensional film in order to understand how [] people are standing in space,”³⁸⁷ or recognize faces in a frame to “measur[e] representation for race and gender in Hollywood movies over the past 40 years.”³⁸⁸ Proponents warned that the lack of precision in terms like “generative AI” could have unintended consequences if incorporated into regulatory text and expressed concern that excluding generative AI from the exemptions might impact, or even end, the type of research these exemptions permit.³⁸⁹ They also warned that “over-specify[ing] how researchers are able to do [their work]” risks making the regulation obsolete as AI techniques and technology change in such a rapidly evolving field.³⁹⁰

Opponents expressed concern that, absent a clear exclusion of generative AI, the existing exemptions may permit the accessed copyrighted works to be used to train generative AI systems.³⁹¹ They highlighted the uncertainty surrounding the meaning of key terms and lack of “useful guidelines to differentiate such

³⁸⁵ Tr. at 74:18–20 (Apr. 17, 2024) (Bamman, Univ. of Cal., Berkeley).

³⁸⁶ Tr. at 75:07–20 (Apr. 17, 2024) (Bamman, Univ. of Cal., Berkeley).

³⁸⁷ Tr. at 76:15–24 (Apr. 17, 2024) (Bell, Dartmouth College & Univ. of Maine).

³⁸⁸ Tr. at 82:17–22 (Apr. 17, 2024) (Bamman, Univ. of Cal., Berkeley).

³⁸⁹ Tr. at 76:05–77:05 (Apr. 17, 2024) (Bell, Dartmouth College & Univ. of Maine) (“I would just be careful about definitions excluding generative AI use that also impact the type of work that we’re talking about as an accidental [] side effect of trying to exclude true generative work in a sense that maybe more colloquially it might be understood.”); Tr. at 79:03–07 (Apr. 17, 2024) (Band, LCA) (“[W]e need to [] just not [] start using terms where we can then have unintended consequences in terms of basically shutting down this whole operation.”).

³⁹⁰ Tr. at 81:02–05 (Apr. 17, 2024) (Hansen, Authors All.).

³⁹¹ AAP Class 3 Opp’n at 3, 12–14 (“[C]orpora and/or results of TDM research could also be (and seemingly are being) used for their expressive content, including for the development and training of generative AI systems.”); Joint Creators III Class 3 Opp’n at 13 (“[T]he proposed expansion would permit corpora to be distributed relatively freely among academic institutions to be used in the context of AI.”); *see* Tr. at 77:14–19 (Apr. 17, 2024) (Charlesworth, AAP) (expressing concern that research or data from academic research projects may be turned over to “a commercial entity . . . to exploit as generative AI material or to train AI systems”).

‘computational research’ from areas presently under review in the Office’s AI study.”³⁹² They stressed that the use of copyrighted material to train AI systems is an unsettled area of law currently being litigated by the courts and should not be decided in this proceeding.³⁹³

In light of these comments, the Office concludes that it is important to clarify the scope of the exemptions in their current form. The exemptions do not limit or differentiate among the tools or methods researchers may employ in conducting research related to the audiovisual works or literary works in the corpora, and include no terms specific to AI. Regardless of the techniques used, the exemptions allow researchers affiliated with nonprofit institutions of higher education to circumvent TPMs only *for the purpose of conducting scholarly text and data mining research and teaching*. The research examples cited by petitioners reflect the understanding that the research and teaching activities at issue are focused on the contents of the corpora, and not their use outside of the context of text and data mining research and teaching. It would be outside the scope of these exemptions to circumvent TPMs in order to compile training data for use in the development of generative AI models and systems or to use corpora previously compiled for text and data mining research for that purpose. As to whether such uses may constitute fair use, as participants have noted, that question is beyond the scope of this rulemaking.³⁹⁴ Based on this record, the Register concludes that it is unnecessary to amend the existing exemptions to include language specific to any particular research tool, including AI.

ii. Process for Security Measures Confirmation

The current exemptions require institutions to “use[] effective security measures to prevent further dissemination or downloading of [the works] in the corpus and to limit access” only to the people specified in the exemptions.³⁹⁵ “Effective security measures” is defined to mean “security measures that have been agreed to by interested copyright owners of [the works] and institutions of higher

³⁹² Joint Creators III Class 3 Opp’n at 13.

³⁹³ AAP Class 3 Opp’n at 3.

³⁹⁴ 2021 Recommendation at 10–11 (stating that the 1201 “rulemaking is not an appropriate venue for breaking new ground in fair use jurisprudence”) (quoting Section 1201 Report at 116–17). The Office will be publishing a report that addresses this issue as part of its initiative on copyright and artificial intelligence.

³⁹⁵ 37 C.F.R. § 201.40(b)(4)(i)(D), 201.40(b)(5)(i)(D).

education; or, in the absence of such measures, those measures that the institution uses to keep its own highly confidential information secure.”³⁹⁶ If the institution takes the latter approach, “it must, upon a reasonable request from a copyright owner whose work is contained in the corpus, provide information to that copyright owner regarding the nature of such measures.”³⁹⁷

The Register recommended these security measures in 2021 because text and data mining corpora may contain hundreds or even thousands of copyrighted works, and the potential for damage in the event of a security breach was too great to let researchers choose their own security measures.³⁹⁸ At the time, proponents had sought a requirement of “reasonable security measures” while the opponents had sought “specific security measures.”³⁹⁹ The Register concluded, however, that “[t]he record does not contain significant information regarding the appropriate security measures to include in the exemptions.”⁴⁰⁰ Her recommendation encouraged parties to collaborate to develop appropriate security measures, and in the absence of consensus, to use the security measures they use to protect their own highly confidential information.⁴⁰¹ To promote transparency, she recommended a requirement that, “upon the reasonable request of a copyright owner whose works are contained in the corpus, the institution must provide information to that copyright owner regarding the nature of the security measures it has implemented.”⁴⁰² Because little evidence was included in the record and the parties did not have consensus on the issue, the Register invited “copyright owner[s] who believe[] the security measures being used are insufficient [to] provide information regarding those concerns in future 1201 rulemaking proceedings.”⁴⁰³

³⁹⁶ *Id.* § 201.40(b)(4)(ii)(B), 201.40(b)(5)(ii)(B).

³⁹⁷ *Id.* § 201.40(b)(4)(ii)(B), 201.40(b)(5)(ii)(B).

³⁹⁸ 2021 Recommendation at 114–15.

³⁹⁹ *Id.* at 113–14 (internal citation omitted).

⁴⁰⁰ *Id.* at 115.

⁴⁰¹ *Id.* at 116.

⁴⁰² *Id.* at 117.

⁴⁰³ *Id.* at 115–117.

This cycle, opponents did not raise issues regarding security measures in response to the renewal petition.⁴⁰⁴ They have, however, raised several concerns in connection with the petition for expansion of the exemptions, underscoring disagreements between the parties about the effectiveness of the current security measures provision.

Proponents believe the existing security measures are sufficient to apply to both the existing exemptions and the proposed expansions,⁴⁰⁵ and provided multiple examples of security measures that institutions are using to secure highly confidential data.⁴⁰⁶ Proponents testified that, to date, there is no evidence of security breaches or lapses related to corpora used pursuant to this exemptions.⁴⁰⁷ Proponents also stated that institutions are quite good at securing sensitive data, and noted that many institutions do so regularly.⁴⁰⁸

⁴⁰⁴ DVD CCA & AACCS LA AV Text and Data Mining Renewal Opp'n at 2–3 (opposing the renewal petition on the grounds that commercially licensed products are now available to researchers that were not available at the time of the prior rulemaking).

⁴⁰⁵ Authors All., AAUP & LCA Class 3 Reply at 14–17.

⁴⁰⁶ For example, the University of California, Berkeley uses “networked devices [that are] highly secured, and institutional devices such as servers use isolated networks with intrusion detection, logging, and firewalls with the most restrictive rules possible.” *Id.* at 14–15. Bowdoin College uses a network that must “undergo annual internal and external security audits using the National Institute of Science and Technology’s Cybersecurity Framework.” *Id.* Other institutions “use protected storage designed to hold ‘protected health information,’ ‘other highly sensitive human subjects data,’ and ‘controlled unclassified information.’” *Id.* See also Tr. at 47:11–23 (Apr. 17, 2024) (Cha, Authors All.) (providing examples of standards that institutions use for “data at risk,” include “industry standard encryption, intrusion detection systems, and network security policies, such as auto login access controls and appropriate physical environmental security controls”).

⁴⁰⁷ Tr. at 52:03–06 (Apr. 17, 2024) (Hansen, Authors All.) (“[A]s far as I’m aware, there’s no evidence in any TDM researcher’s corpus being breached, any security incidents out there reported on that.”); Tr. at 54:25–55:04 (Apr. 17, 2024) (Band, LCA) (“[W]ith all of these exemptions across all the years of Section 1201, I mean, I don’t know if there is any evidence of any leakage whatsoever.”).

⁴⁰⁸ Tr. at 46:16–22 (Apr. 17, 2024) (Hansen, Authors All.) (“[I]nstitutions actually do this [ensure security requirements] all the time with all sorts of data, particularly when you look at research happening in clinical health fields or other areas where data security is particularly important. Universities are actually really good at this and they do this with regularity with agreements amongst them about how to ensure security compliance.”).

The opponents took the position that the existing provisions are insufficient and claimed that researchers are not complying with them.⁴⁰⁹ AACCS LA expressed concern that while some entities will act responsibly and take security measures seriously, others may not, particularly if there is “sharing” of works across institutions.⁴¹⁰ DVD CCA reported that “what we’ve seen in practice is that there seems to be a large disconnect between the researchers and the work they’re doing and what universities actually know their researchers are doing.”⁴¹¹ AAP added that there is “simply no transparency on what’s going on here.”⁴¹²

The opponents also pointed to what they believed to be insufficient responses to letters inquiring into researchers’ security measures that were sent by trade associations during the comment period.⁴¹³ In their comment, Joint Creators III highlighted some responses that they believe were insufficient.⁴¹⁴ AAP stated that “[o]f the ten institutions seeking an expanded exemption contacted by AAP, not a single one provided any information that confirmed implementation of safeguards to protect circumvented literary works.”⁴¹⁵ Proponents countered that the letters were not reasonable requests,⁴¹⁶ and that the plain text of the

⁴⁰⁹ Joint Creators III Class 3 Opp’n at 6–7, 9–10; AAP Class 3 Opp’n at 2–3.

⁴¹⁰ Tr. at 48:07–15 (Apr. 17, 2024) (Ayers, AACCS LA).

⁴¹¹ Tr. at 49:10–14 (Apr. 17, 2024) (Taylor, DVD CCA).

⁴¹² Tr. at 50:18–20 (Apr. 17, 2024) (Charlesworth, AAP).

⁴¹³ Joint Creators III Class 3 Opp’n at 9–10; AAP Class 3 Opp’n at 3; Tr. at 50:09–20 (Apr. 17, 2024) (Charlesworth, AAP).

⁴¹⁴ Joint Creators III Class 3 Opp’n at 9–10 (citing responses from University of Virginia [“Setting to one side doubts that a trade association is entitled to make such a request, the University has no information to provide. Upon reasonable search and inquiry, I am aware of no such corpus at the University of Virginia.”] and Emory University [“Ms. Temple’s letter has not identified any work (1) for which the Motion Picture Association is the copyright owner; or (2) that is part of a corpus of works created by Emory for which circumvention has occurred. No further response to this correspondence is warranted.”]) (internal citations omitted); Tr. at 56:10–13 (Apr. 17, 2024) (Rotstein, Joint Creators III) (noting that “at least one of the responses said, we’re not going to respond because only the copyright owners can take advantage of this and we don’t know that you’re a copyright owner”).

⁴¹⁵ AAP Class 3 Opp’n at 10.

⁴¹⁶ Tr. at 52:16–53:03 (Apr. 17, 2024) (Hansen, Authors All.) (noting that letters “were sent with a very short time line for individuals to respond to very large institutions with a wide variety of research activity”); Authors All., AAUP & LCA Class 3 Reply at 16 (“[T]he trade associations did not attempt to accurately target their requests. The MPA sent letters to researchers who were clearly engaged in studying textual works, and AAP sent letters to researchers who were clearly

exemptions permits only copyright owners—not trade associations—to submit such inquiries.⁴¹⁷

The Register agrees that the existing security measures provision should be amended and recommends the following three changes:

Trade Associations. The current exemptions require that an institution, “upon a reasonable request from a *copyright owner* whose work is contained in the corpus, provide information to that *copyright owner* regarding the nature of such measures.”⁴¹⁸ In the current rulemaking, the parties have submitted correspondence to the Office in which institutions have declined to provide the requested information because the requesting party was not a copyright owner, but instead a trade association of which the owner is a member. Accordingly, the opponents have requested that trade associations also be permitted to make inquiries into security measures.⁴¹⁹ The Register agrees and recommends amending the existing exemptions to allow trade associations representing copyright owners to make reasonable requests for information regarding the nature of the institution’s security measures.

In 2021, the Register explained that “[t]he option for institutions to use the security measures they use to protect their own highly confidential information provides a fallback in the absence of consensus security measures.”⁴²⁰ Permitting inquiries into security measures was intended to add transparency to the process. Now that this “fallback” provision appears to have become the norm,⁴²¹

engaged in studying audiovisual works. They even sent letters to individuals who supported the proposed expansion but whose support letters show they do not actually make use of the exemption.”).

⁴¹⁷ Authors All., AAUP & LCA Class 3 Reply at 5, 9, 15.

⁴¹⁸ 37 C.F.R. § 201.40(b)(4)(ii)(B), 201.40(b)(5)(ii)(B) (emphasis added).

⁴¹⁹ Tr. at 54:03–08 (Apr. 17, 2024) (Taylor, DVD CCA) (requesting that Copyright Office “make it perfectly clear that the trade associations that represent different parties in this proceeding also should have the authority, clear authority, to be able to ask these questions of how the rule is being implemented”); see Tr. at 58:17–19 (Apr. 17, 2024) (Charlesworth, AAP) (suggesting that “a trade association that’s been authorized by its members to make the request should be able to make the request”).

⁴²⁰ 2021 Recommendation at 116.

⁴²¹ During the 2024 comment period and hearings, there was no mention or discussion of any agreements between copyright owners and researchers. There was, however, significant discussion regarding the use of institutions’ own security measures for highly sensitive data.

there is a need to reemphasize the importance of transparency and ensure that institutions are taking sufficient precautions to guard against security breaches and other unauthorized uses. This is particularly important because the contents of a qualified researcher’s corpus may not be publicly available. Where this is the case, copyright owners will not know that their work is in the corpus.⁴²² An institution should not be able to retain confidentiality of its corpus and also reject reasonable requests from a relevant trade association about the security measures applied to the corpus.

The Register is also concerned that, if a trade association is not permitted to directly request information regarding security measures, their members may be encouraged to do so individually. This could result in hundreds, if not thousands, of individual requests, which may be complex and directed at “very large institutions with a wide variety of research activity.”⁴²³ Limiting the number of potential requests by allowing trade associations to make reasonable requests should add efficiency to the existing exemptions.

Lastly, while the Register recommends this expansion of the exemptions, she also acknowledges concerns raised with the nature, timing, and scope of letters sent to researchers.⁴²⁴ For example, a demand for information sent to an academic institution with a two-week response deadline may not be reasonable. Nor might a request made by an association representing authors of written works to an institution seeking security information about a research project involving motion pictures. The Register expects that after amending the exemptions to permit trade associations to make reasonable requests for information related to security measures, both parties will engage in an efficient, good-faith process.

Disclosure. Permitting security measure inquiries from parties other than copyright owners entails an additional change to these provisions. The current exemptions require institutions to provide information regarding the nature of their security measures “[i]f the institution uses the security measures it uses to

⁴²² See Tr. at 53:10–13 (Apr. 17, 2024) (Rotstein, Joint Creators III) (noting that “at least one of the responses [to the trade association inquiries] said, we’re not going to respond because only the copyright owners can take advantage of this and we don’t know that you’re a copyright owner”).

⁴²³ Tr. at 52:17–18 (Apr. 17, 2024) (Hansen, Authors All.).

⁴²⁴ Tr. at 54:14–17 (Apr. 17, 2024) (Band, LCA) (expressing concern that previous trade association inquiries were “fishing expeditions” done in “a manner and timing that was clearly intended to intimidate researchers”); Authors All., AAUP & LCA Class 3 Reply at 16 (providing examples to show letters were “ill-targeted and overbroad”).

protect its own highly confidential information” (hereafter, “institution standard”).⁴²⁵ The current exemptions do not require institutions to provide information if, alternatively, the effective security measures are the product of an agreement by the interested copyright owners and the institutions (“agreements”). With the expansion of the persons who can inquire regarding security measures to trade associations, the Register recognizes that the represented members of the association may include both individual owners who have entered into such agreements with the institutions and those who have not. In this situation, it is reasonable to expect the institutions’ response to address both types of security measures. Considering the comments and hearing testimony from this cycle, the record now supports a streamlined disclosure requirement that permits inquiries into security measures regardless of whether they stem from individual agreements or the institution’s own standards.

Commenters this cycle highlighted that the existing security measures requirements allow an overall lack of transparency with what copyrighted works are used in corpora and how the works are protected.⁴²⁶ Broadening the disclosure requirement to permit inquiries regarding either type of security measure (*i.e.*, individual agreement or institutional standard) will increase transparency. The Register anticipates that the institutions will face a minimal added burden from a requirement to also disclose when individual agreements are in place between its researchers and copyright owners. The parties stated that few, if any, institutions currently rely on agreements between institutions and copyright owners, and the record did not indicate that institutions plan to do so more in the future. The disclosure of the existence of individual security agreements does not, however, require disclosure of the *details* of the agreements.

Reasonable Belief. The Register recommends expanding the text to include authors or trade associations who “reasonably believe” that their works are in a corpus. The current exemptions require that an institution must, “upon a reasonable request from a copyright owner whose work is contained in the corpus, provide information to that copyright owner regarding the nature of such measures.”⁴²⁷ As written, this language creates uncertainty for copyright

⁴²⁵ 37 C.F.R. § 201.40(b)(4)(ii)(B), 201.40(b)(5)(ii)(B).

⁴²⁶ See, e.g., AAP Class 3 Opp’n at 4; Tr. at 50:19–51:6 (Apr. 17, 2024) (Charlesworth, AAP); Tr. at 56:07–18 (Apr. 17, 2024) (Rotstein, Joint Creators III).

⁴²⁷ 37 C.F.R. § 201.40(b)(4)(ii)(B), 201.40(b)(5)(ii)(B).

owners who may not know whether their works are contained in a corpus.⁴²⁸ The fact that they may not be sure that their work is in a corpus should not prevent them from inquiring into security measures. The same reasonability requirement applies to trade associations—they must reasonably believe that a corpus contains copyrighted works owned by their members.

Lastly, the Register acknowledges that during the hearing there was extensive disagreement about the existing security measures. While the record only supports minor changes at this time, she invites parties to provide more ideas for improvement in the next triennial rulemaking.

b. Petitions to Expand Exemptions

Based on a review of the evidentiary record and analysis of the legal requirements of section 1201, the Register recommends granting the requested expansions in part, to permit outside researchers to securely *access* corpora hosted by institutions, while denying a request that qualified researchers be permitted to *distribute or copy* such corpora for use by other institutions and their researchers.

i. Breadth of the Current Exemptions

Before turning to the requested expansions, the Register addresses questions that arose regarding the breadth of the current exemptions. The relevant language that limits the use of the corpora requires institutions to:

use[] effective security measures to prevent further dissemination or downloading of [the copyrighted works] in the corpus, and to limit access to [affiliated researchers and students or information technology staff members working at their direction] or to researchers affiliated with other institutions of higher education solely for purposes of collaboration or replication of the research.⁴²⁹

While the exemption’s language clearly prohibits “further dissemination or downloading” of the works in the corpus, the parties understood the meaning of the terms “access” and “collaboration” differently.

⁴²⁸ See Tr. at 56:07–18 (Apr. 17, 2024) (Rotstein, Joint Creators III); Tr. at 58:20–24 (Apr. 17, 2024) (Charlesworth, AAP).

⁴²⁹ 37 C.F.R. § 201.40(b)(4)(i)(D), 201.40(b)(5)(i)(D).

As described in more detail below, the Register interprets the term “access” in the text of the current exemptions to mean that outside researchers may be provided access to a corpus hosted by the originating institution. The term was not intended to permit the originating institution to distribute copies of the corpus to outside researchers or their institutions. This interpretation is underscored by the prohibition on “further dissemination or downloading” of the copyrighted works in the corpus.⁴³⁰ The Register thus agrees with AAP that, under the current exemptions, “the circumventing institution *may not* copy or distribute the corpus but *may* allow an outside researcher who is collaborating with (or who seeks to replicate the research of) a researcher at the circumventing institution to access the corpus that is hosted by the circumventing institution.”⁴³¹

“Collaboration” also has been subject to competing interpretations, and proponents argue that its ambiguity has restricted the usefulness of the exemptions.⁴³² They assert that the term “leaves researchers unsure about the level of individual contribution to a project, goals, duration, or scale of research that is required for ‘collaboration.’”⁴³³ As a result, “researchers are prone to interpret ambiguity conservatively in order to avoid any interpretation that would cast a shadow on the methodology or results of their research.”⁴³⁴ One researcher stated:

We are . . . unsure what ‘collaboration . . . of the research’ constitutes under the exemption. Our collaborations range greatly in scope and distance, from two team members working closely together, to multiple groups of scholars working independently to verify each other’s work though different quantitative methods. When we collaborate on understanding an archive of text through TDM

⁴³⁰ Although the 2021 recommendation described the current exemptions as “specif[ying] that decrypted copies can only be *circulated* to other institutions or researchers for the purpose of collaboration or replication and verification of research findings,” 2021 Recommendation at 109 (emphasis added), the Register believes that the term “access” more reasonably is interpreted to exclude such distribution. Additionally, the current exemptions do not impose any security obligations on researchers who use corpora to collaborate or verify research findings, so an interpretation of “access” that encompasses distribution or circulation would raise security concerns.

⁴³¹ AAP Class 3 Opp’n at 7.

⁴³² Authors All., AAUP & LCA Class 3(a) Pet.; Authors All., AAUP & LCA Class 3(b) Pet.

⁴³³ Authors All., AAUP & LCA Class 3 Initial at 8.

⁴³⁴ *Id.* at 9.

methods, it sometimes means that we will be cooperating in applying the same methods to the same texts, and sometimes indicates that we will be taking diverging approaches to the same set of materials. These can be formal collaborations under the auspice of a grant, ad hoc collaborations that result from two teams discovering that they are working on similar material to the same ends, or even discussions at conferences between members of a loose network of scholars working on the same broad set of interests. As the exemption is unclear what counts as collaboration for the purpose of sharing extracted data, we have had to be exceptionally cautious about sharing in-copyright material with any collaborators at all, much to the detriment to our research, and the field as a whole.⁴³⁵

It appears, however, that many researchers understand collaboration to mean working on the same research project.⁴³⁶ For example, Authors Alliance testified:

I have talked to a lot of people who are trying to implement or use this exemption, and the kind of common way that most people are reading ‘collaboration’ in the existing reg is that it covers direct collaboration on particular research projects. And so, you know, you have a researcher, say, at one institution asking a question on X and they’re writing a paper and doing a project with a researcher at another institution on that very same question.⁴³⁷

⁴³⁵ *Id.* at App. B at 2 (letter from Mark Algee-Hewitt).

⁴³⁶ *See, e.g.*, Authors All., AAUP & LCA Class 3 Initial at App. G at 2–3 (letter from Allison Cooper) (“My understanding of the existing TDM exemption is that sharing our work with information scientists or machine learning specialists beyond Bowdoin or the University of Rochester for a use other than our own research is disallowed.”); *Id.* at App. J at 4 (letter from Rachael Samberg & Timothy Vollmer) (“A more permissive environment—specifically, one that extended sharing for the study of new or other research questions (i.e. beyond mere project collaboration or replication) . . . —would create a more efficient research pipeline and speed up discovery and the advancement of knowledge.”).

⁴³⁷ Tr. at 67:25–68:09 (Apr. 17, 2024) (Hansen, Authors All.). In line with this, many of the letters submitted by researchers in support of the requested expansions reflected an understanding that the current exemptions only permit sharing for the purpose of such “direct collaboration.” *See, e.g.*, Authors All., AAUP & LCA Class 3 Initial at App. E at 1 (letter from Joel Burges & Emily Sherwood); *Id.* at App. F at 1 (letter from Brandon Butler); *Id.* at App. H at 2 (letter from Hoyt Long).

The Register agrees with this interpretation and did not intend the 2021 exemptions to encompass a broader range of activities. She concludes that the “collaboration” provision of the current exemptions does not permit granting outside researchers access to a corpus to facilitate research on independent projects, as opposed to, work on the same research project.

Additionally, proponents request modification of the language of the current exemptions to permit institutions to provide “access . . . to researchers affiliated with other institutions of higher education . . . for the purposes of conducting independent text and data mining research and teaching, where those researchers are in compliance with this exemption.”⁴³⁸ They repeatedly framed their request as seeking to permit “sharing” among researchers,⁴³⁹ which would appear to include distribution in at least some scenarios,⁴⁴⁰ rather than only “access.” Like the term “collaboration,” the term “sharing” is potentially ambiguous. During the hearing, proponents explained that “sharing” could encompass two scenarios: (1) “content is hosted on university servers, and outsider users are . . . authenticated in and accessing them there,” and (2) “actually shar[ing] copies,” which is necessitated by “technical challenges with remote access to high-performance computing environments, and for researchers to effectively use a corpus remotely.”⁴⁴¹

The terms “access” and “sharing” are not interchangeable. Because the term “sharing” may encompass multiple activities, the Register instead uses the

⁴³⁸ Authors All., AAUP & LCA Class 3 Initial at 5–6 (emphasis added).

⁴³⁹ See, e.g., *id.* at 5 (“We propose that the current exemption be amended to also allow sharing with researchers affiliated with different nonprofit institutions of higher education for purposes of conducting *independent* text and data mining research and teaching.”); *Id.* at App. C at 2 (letter from David Bamman); *Id.* at App. D at 2 (letter from John Bell) (“Adding a provision to the Text and Data Mining Exemption allowing media corpora to be shared does not just make existing research easier—in many cases, it would make research possible that could not even be considered without it.”); *Id.* at App. E at 1 (letter from Joel Burges & Emily Sherwood) (“Both [current exemptions] would benefit immensely from ending the currently restricted practice of corpora sharing with researchers who otherwise comply with the exemption but who are at a different institution and are outside of direct collaboration.”); *Id.* at App. F at 1 (letter from Brandon Butler) (“[T]he inability to share corpora with unaffiliated researchers outside direct collaboration has created barriers for researchers to practically use the current exemption.”).

⁴⁴⁰ See, e.g., Tr. at 15:24–16:10 (Apr. 17, 2024) (Bell, Dartmouth College & Univ. of Maine) (arguing that “there are some use cases where actually copying the files to another institution would be necessary”).

⁴⁴¹ Tr. at 11:02–12 (Apr. 17, 2024) (Hansen, Authors All.).

following terms to describe the two scenarios described above: (1) “access,” which means providing outside researchers with credentials to use a corpus (or works included therein) hosted on an institution’s own servers; and (2) “distribution,” which means disseminating a copy of a corpus (or works included therein) to outside researchers. She concludes that the analysis is different for permitting secure access to outside researchers to a corpus that remains hosted on the originating institution’s server than for permitting the copying and distribution of the corpus to outside researchers and their institutions. She recommends granting the proposed expansions with respect to access but not with respect to distribution.

ii. Analysis of Applicable Evidentiary Standards

A. Works Protected by Copyright

As was the case during the 2021 rulemaking, there is no dispute that at least some of the works in this class, which involves certain motion pictures and literary works, are protected by copyright.

B. Asserted Noninfringing Uses

The Register concluded in the 2021 rulemaking that the proposed use to apply text and data mining processes to copyrighted works for scholarly research and teaching related to these works, with certain important limitations, is likely to be a fair use. The Register has reviewed subsequent case law and has determined that the fair use analysis from 2021 remains reliable and appropriate to rely on in evaluating the requested expansions.

The first fair use factor, the purpose and character of the use, “considers whether the use of a copyrighted work has a further purpose or different character, which is a matter of degree, and the degree of difference must be balanced against the commercial nature of the use.”⁴⁴² As was the case for the current exemptions, proponents’ proposed use is noncommercial: providing access to or distributing corpora to outside researchers affiliated with nonprofit institutions of higher education for the purpose of conducting independent text and data mining research and teaching.⁴⁴³ Similarly, the Register determines that this proposed use is likely to be transformative, as set forth in the analysis in the 2021

⁴⁴² *Warhol*, 598 U.S. at 532.

⁴⁴³ Authors All., AAUP & LCA Class 3(a) Pet.; Authors All., AAUP & LCA Class 3(b) Pet.

recommendation. The proposed use is to digitally analyze copyrighted works to detect links, trends, or other insights in those works, which is distinct from the purpose of the underlying copyrighted works.⁴⁴⁴ Although AAP argues that proponents' purported "exploitation of the expressive content of works" in the form of viewing does not qualify as fair use,⁴⁴⁵ as discussed above, the Register concludes that viewing works in a corpus for purposes of conducting text and data mining is in line with the 2021 recommendation's fair use analysis. Accordingly, the first factor weighs in favor of fair use.

The Register reaffirms the 2021 recommendation's conclusion that although literary works and motion pictures are at the "core" of copyright protection and the second factor, the nature of the copyrighted work, thus weighs against fair use,⁴⁴⁶ this factor is of limited significance to this class.⁴⁴⁷ Similarly, she again concludes that the third factor, the amount and substantiality of the portion used in relation to the copyrighted work as a whole, does not necessarily rule out fair use, as copying the entire work is reasonable in light of the purpose of the copying.⁴⁴⁸

The fourth factor examines "the effect of the use upon the potential market for or value of the copyrighted work."⁴⁴⁹ Relevant factors include whether the secondary work serves as a substitute for the original, the impact on actual or potential licensing markets, and the sufficiency of security measures to prevent unauthorized dissemination of copies.⁴⁵⁰ As was the case in 2021, the Register concludes that "the end goal of the contemplated TDM research does not serve as a substitute for the original work."⁴⁵¹ Although she is recommending minor

⁴⁴⁴ See *Warhol*, 598 U.S. at 529 ("The larger the difference [between the purpose or character of secondary use and the original work], the more likely the first factor weighs in favor of fair use. The smaller the difference, the less likely.").

⁴⁴⁵ AAP Class 3 Opp'n at 11, 14.

⁴⁴⁶ See also AAP Class 3 Opp'n at 14.

⁴⁴⁷ See 2021 Recommendation at 111 & nn.608–09.

⁴⁴⁸ See *id.* at 111 & n.610.

⁴⁴⁹ 17 U.S.C. § 107(4).

⁴⁵⁰ See 2021 Recommendation at 112 (citing *Campbell*, 510 U.S. at 591; *Bill Graham Archives v. Dorling Kindersley Ltd.*, 448 F.3d 605, 613–14 (2d Cir. 2006); *Authors Guild, Inc. v. Hathitrust*, 755 F.3d 87, 100–01 (2d Cir. 2014); *Authors Guild, Inc. v. Google, Inc.*, 804 F.3d 202, 228 (2d Cir. 2015) ("Google Books").

⁴⁵¹ 2021 Recommendation at 113.

modifications to the provision concerning the viewing of copyrighted works to bring it into line with the intent of the 2021 recommendation, as discussed above, she does not believe that these changes alter the analysis of the fourth fair use factor. Similarly, the evidence in the record does not alter the Register’s conclusion in 2021 that, under *Authors Guild, Inc. v. HathiTrust* (“*HathiTrust*”), lost licensing revenue should only be considered “when the use serves as a substitute for the original,”⁴⁵² and the use here does not do so.⁴⁵³ Although AAP argues that the licensing market for text and data mining uses has been “rapidly developing” since the 2021 cycle,⁴⁵⁴ the Register credits proponents’ explanation that the licensing options identified by AAP are not suitable for the type of research at issue.⁴⁵⁵ For example, AAP pointed to Copyright Clearance Center’s RightFind,⁴⁵⁶ as they did during the 2021 cycle,⁴⁵⁷ but the record does not suggest that RightFind has become a serious alternative to circumvention over the past three years due to the relatively limited scope of the materials it licenses.⁴⁵⁸ Similarly, AAP provided two examples of press reports about direct licensing deals pertaining to generative AI,⁴⁵⁹ but the Register concludes that such direct licensing deals would not reasonably account for the kinds of research projects at issue.

In the 2021 recommendation, the Register determined that “the proposed exemptions demand close attention to security measures.”⁴⁶⁰ In *Authors Guild, Inc. v. Google, Inc.* (“*Google Books*”), although the Second Circuit observed that exposing copyrighted works to piracy may be sufficient to reject a fair use defense, it found that the facts did not support such a result, explaining that “*Google Books*’ digital scans are stored on computers walled off from public Internet access and protected by the same impressive security measures used by

⁴⁵² 755 F.3d 87, 100 (2d Cir. 2014).

⁴⁵³ See 2021 Recommendation at 113.

⁴⁵⁴ AAP Class 3 Opp’n at 14.

⁴⁵⁵ Authors All., AAUP & LCA Class 3 Reply at 13–14.

⁴⁵⁶ See AAP Class 3 Opp’n at 14.

⁴⁵⁷ See 2021 Recommendation at 112–13.

⁴⁵⁸ *Id.* at 113 (noting that RightFind “licenses full-text versions of journal articles to TDM researchers”).

⁴⁵⁹ See AAP Class 3 Opp’n at 14.

⁴⁶⁰ 2021 Recommendation at 114.

Google to guard its own confidential information.”⁴⁶¹ In *HathiTrust*, the Second Circuit found that the fourth factor favored a finding of fair use, citing “the extensive security measures the Libraries ha[d] undertaken to safeguard against the risk of a data breach” and determining that there was “no basis in the record on which to conclude that a security breach is likely to occur, much less one that would result in the public release of the specific copyrighted works belonging to any of the plaintiffs in this case.”⁴⁶²

Here, AAP opposed the expansions and argued that “there is certainly no case for expansion of the exemption given proponents’ utter failure to demonstrate that institutions are willing or able to comply” with the security measures in the current exemptions.⁴⁶³ There is no evidence in the record of security breaches under the current exemptions, however, and the Register thus finds that there is no basis to deny the requested expansions because of how the security measures provisions have functioned so far. However, it is necessary to consider whether the proposed expansions, if granted, carry an increased risk of exposing copyrighted works to infringement, including piracy.

In evaluating the fourth factor with respect to the requested expansions, the Register distinguishes between an institution providing outside researchers with *access* to a corpus and an institution *distributing* a corpus to outside researchers. In the first scenario, an institution hosts a corpus on its own servers and provides secure access to researchers affiliated with other nonprofit institutions of higher education for the purposes of conducting their own text and data mining research. Provided that the outside researchers lack the ability to download or further distribute the corpus (or any works therein), the Register concludes that this scenario does not present a meaningful additional risk of exposing copyrighted works to piracy.

In the second scenario, a researcher at an institution has compiled a corpus for their own text and data mining research project and then copies and distributes the corpus (comprised of copyrighted works) to researchers affiliated with other nonprofit institutions of higher education for the purposes of conducting independent text and data mining research. Based on the current record, the Register finds that this scenario creates a meaningful additional risk of exposing

⁴⁶¹ 804 F.3d 202, 227–28 (2d Cir. 2015).

⁴⁶² 755 F.3d at 100–01.

⁴⁶³ AAP Class 3 Opp’n at 10; *see also id.* at 15.

copyrighted works to misuse, including further unrestricted distribution. Accordingly, she concludes that the fourth factor weighs against such a use.

As the 2021 recommendation noted, “[t]he corpora envisioned by proponents could potentially contain hundreds, thousands, or even more copyrighted works.”⁴⁶⁴ If the proposed expansions were granted in full to allow distribution of corpora to outside researchers, it is unclear who would be responsible for ensuring that recipient institutions and researchers use effective security measures to safeguard them. Although proponents testified that both the originating and receiving institution would be responsible,⁴⁶⁵ it is not certain how this would be ensured in practice and proponents did not provide logistical details. The Register is inclined to agree with the Joint Creators III that “the proliferation of databases of unprotected motion pictures and literary works in relatively free circulation inevitably would mean that individuals further down the distribution chain with no connection to the researchers that constructed the database or their institution would have less knowledge of the requirements applicable to, and less motivation to protect, an asset they were simply given.”⁴⁶⁶

Similarly, the Register agrees that, if the proposed expansions were granted in full, the corpora would need to be safeguarded while they are being distributed from one institution to another.⁴⁶⁷ Authors Alliance testified that “institutions already have . . . standards in place for a safe and secure transmission of sensitive data.”⁴⁶⁸ The Register finds general appeals to institutional best practices overly vague and insufficient in this context. The proposed expansions also do not contain any limitations on the number of institutions or researchers to which a corpus would be able to be distributed, or the ability of these recipient institutions or researchers to, in turn, distribute it to additional institutions or researchers. Given the stakes of distribution of potentially large quantities of

⁴⁶⁴ 2021 Recommendation at 114.

⁴⁶⁵ Tr. at 45:24–46:09 (Apr. 17, 2024) (Ayers, AACCS LA); Tr. at 46:12–24 (Apr. 17, 2024) (Hansen, Authors All.).

⁴⁶⁶ Joint Creators III Class 3 Opp’n at 9; *see also* Int’l Ass’n of Scientific, Tech. and Medical Publishers (“STM”) Class 3 Opp’n at 2 (“The petitioners’ suggested proposal, in STM’s view, would allow an unfettered and unchecked reproduction and distribution of copyrighted works that is not well supported by a description of existing adverse impact and does not adequately explain how the risks of piracy and security failure would be accounted for.”).

⁴⁶⁷ Tr. at 48:07–49:05 (Apr. 17, 2024) (Ayers, AACCS LA).

⁴⁶⁸ Tr. at 47:11–48:04 (Apr. 17, 2024) (Cha, Authors All.).

unencrypted copies of copyrighted works, permitting further copying and distribution of the corpus raises significant risks.⁴⁶⁹

Balancing all of the factors, the Register concludes that granting outside researchers secure and authenticated access to corpora likely constitutes fair use, while distribution of corpora to outside researchers likely does not.

C. Causation

The causation requirement examines whether “[t]he statutory prohibition on circumventing access controls is the cause of the adverse effects.”⁴⁷⁰ Proponents argue that “[b]ut-for the prohibition on circumvention, there would be no need for the current exemption, as the research and teaching activities allowed under the current exemption are fair use under copyright law.”⁴⁷¹ According to proponents, “[b]ut-for the prohibition on circumvention and the limitations to the current exemption, researchers would be able to share their corpora with other researchers in different institutions for TDM research and teaching, purposes the Copyright Office has concluded to be fair use.”⁴⁷² Opponents questioned the causal link between the prohibition on circumvention and the asserted adverse effects, arguing that these purported effects are instead caused by other restrictions in copyright law and academic resource issues.⁴⁷³

Although the Register concludes that proponents have demonstrated that they are likely to be adversely affected in their ability to make noninfringing uses over the next three years, as discussed below, she does not believe they have demonstrated that the prohibition on circumvention is the cause of those adverse effects. She agrees with opponents that these adverse effects are, at least, in part due to the resources available at institutions for text and data mining research and teaching. For example, John Bell of Dartmouth College described how the majority of a one-year grant period was spent on “setting up a basic environment

⁴⁶⁹ See also Class 3 at Tr. 63:09–18 (Apr. 17, 2024) (Rotstein, Joint Creators III) (“[J]ust saying, well, our policy is that we won’t doesn’t mean that it won’t happen and that a resharing won’t happen, and that remains a concern that . . . there is an incentive to do that based on what the proponents are saying because of the issues of cost. So just pointing out that there was no answer that it won’t happen.”).

⁴⁷⁰ Section 1201 Report at 115.

⁴⁷¹ Authors All., AAUP & LCA Class 3 Initial at 33.

⁴⁷² *Id.*

⁴⁷³ DVD CCA & AACS LA Class 3 Opp’n at 20–23.

that conformed to the rules for using the Exemption,” dealing with “technical issues related to extracting the corpus from [their] source discs,” and “the basics of gathering and organizing films.”⁴⁷⁴ Allison Cooper of Bowdoin College explained that “only \$6,500 [of a \$100,000 grant] was spent on DVD acquisition and transcoding (breaking TPM),” while “the majority of the grant supported research activities on the part of project faculty, staff, and student curators to build a deliberate corpus of close-up clips.”⁴⁷⁵ Henry Alexander Wermer-Colan of Temple University Libraries reported that “[o]utside of purchasing the relevant ebooks, building the corpus required significant amounts of time, labor, and costs (tens of thousands of dollars go into the data curation work of building valuable metadata about the books, and standardizing the wide-range of books into genre categories and data formats useful for analysis).”⁴⁷⁶ In sum, based on the record at hand,⁴⁷⁷ it appears that the barriers to outside researchers’ ability to recreate corpora to conduct their own text and data mining research and teaching stems more from the costs associated with processing works to make them suitable for text and data mining and other research activities, rather than the costs associated with actually circumventing the technological protection

⁴⁷⁴ Authors All., AAUP & LCA Class 3 Initial at App. D at 1–2 (letter from John Bell).

⁴⁷⁵ *Id.* at App. G at 2 (letter from Allison Cooper).

⁴⁷⁶ *Id.* at App. L at 2 (letter from Henry Alexander Wermer-Colan) (“Outside of purchasing the relevant ebooks, building the corpus required significant amounts of time, labor, and costs (tens of thousands of dollars go into the data curation work of building valuable metadata about the books, and standardizing the wide-range of books into genre categories and data formats useful for analysis).”).

⁴⁷⁷ Proponents also submitted an appendix in support of their Reply Comment that “provided a more detailed example of data preparation used for one TDM research project . . . to illustrate some example methods and provide a sense of the time and effort required.” Authors All., AAUP & LCA Class 3 Reply at 7 n.23; *see also id.* at App. A (Example of Dataset Preparation and Computational Analysis). Although this appendix provided a helpful overview of the costs associated with preparing datasets for text and data mining research, the case study depicted involved public-domain works and accordingly did not discuss the costs associated with circumventing the technological protection measures. *Id.* at App. A at 4 (Example of Dataset Preparation and Computational Analysis). Similarly, Quinn Dombrowski of the Association of Computers and the Humanities provided a detailed and thoughtful example of preparing a corpus for research, but it also used public-domain materials—the 1201 Cycle 3 filings, in fact—and thus did not describe the process of circumventing technological protection measures. *See* Quinn Dombrowski Class 3 Reply.

measures.⁴⁷⁸ While the Register is sympathetic to the resources issues faced by many researchers and the effort that goes into preparing datasets for text and data mining research, she concludes that proponents have not met their burden of showing that the prohibition on circumvention is the cause of the adverse effects.

With that said, the Register agrees with proponents that the way the current exemptions were drafted and the limitations contained therein also serve as a cause of the adverse effects. The language of the current exemptions restricting access to collaboration and verification of research means that outside researchers who seek to conduct independent text and data mining research or teaching cannot make use of the fully formed corpora that researchers at other institutions have prepared, even if doing so would be a noninfringing use. Because the restrictions in the language of the current exemptions have adversely affected researchers' ability to make noninfringing uses, the Register concludes that it is appropriate to modify it to allow qualified institutions to offer outside researchers affiliated with other nonprofit institutions of higher education secure and authenticated access to already-created corpora for the purpose of conducting independent text and data mining research and teaching.

D. Asserted Adverse Effects

In the 2021 rulemaking, the Register determined that proponents had sufficiently demonstrated that they were likely to be adversely affected in their ability to make noninfringing uses during the subsequent three-year period. She concludes that the current record supports such a finding with respect to permitting access to corpora for outside researchers, but not with respect to distributing them.

With respect to the first section 1201 statutory factor, which examines the availability for use of copyrighted works, proponents rely on analysis from the 2021 rulemaking and emphasize that they are seeking "a modest extension from a copyright perspective" and that "the expected number of uses is not likely to be

⁴⁷⁸ *But see* Authors All., AAUP & LCA Class 3 Initial at App. J at 3–4 (letter from Rachael Samberg and Timothy Vollmer) ("A significant proportion of the requested grant funds needed to be allocated to hire student researchers to conduct the circumvention and quality-check the decryption. . . . Even if a corresponding scholar at another institution complied with the requirements of the TDM Exemptions and purchased the very same corpus works for study, the scholar would still have to pay thousands of additional dollars to set up a similar process to engage in what is ultimately duplicative circumvention and quality-checking.").

substantial” given that “[d]igital humanities is a relatively specialized field.”⁴⁷⁹ Opponents, in turn, argued that “[c]opyright owners might choose to limit dissemination of electronic versions [of copyrighted works] rather than” risk exposure to piracy.⁴⁸⁰ In the face of similar arguments during the 2021 rulemaking, the Register concluded that “[t]he proposed use is narrowly tailored to scholarly research, and it is unlikely that copyright owners would entirely withhold electronic versions of their works from the market out of a concern that they may be used for the type of research” at issue.⁴⁸¹ She believes this conclusion to be sound with respect to the proposed expansions and accordingly concludes that this factor does not weigh against them.

As in the 2021 rulemaking, the Register likewise concludes that proponents have established that the second statutory factor, which considers the availability for use of works for nonprofit archival, preservation, and educational purposes, and the third statutory factor, which considers the impact that the prohibition on circumvention has on criticism, comment, news reporting, teaching, scholarship, or research, favor granting the expansions. The purpose of the proposed expansions, like the current exemptions, “is to increase the use of TDM techniques in scholarship, research, and teaching, which are favored purposes under the statutory factors.”⁴⁸² Although AAP argues that “researchers already have sufficient means to collaborate with circumventing institutions to conduct scholarly TDM activities because it is already permitted under the existing exemption” and “[p]etitioners have offered no credible evidence of adverse impact on third-party researchers,”⁴⁸³ the Register finds that the record includes examples from researchers of the types of text and data mining projects that have been hampered by the limitations in the current exemptions.⁴⁸⁴ For example, one

⁴⁷⁹ *Id.* at 24.

⁴⁸⁰ AAP Class 3 Opp’n at 16.

⁴⁸¹ 2021 Recommendation at 119–20.

⁴⁸² *Id.* at 120.

⁴⁸³ AAP Class 3 Opp’n at 16.

⁴⁸⁴ *See, e.g.*, Authors All., AAUP & LCA Class 3 Initial at App. B at 2 (letter from Mark Algee-Hewitt) (describing how current exemptions may prohibit students and young academics from continuing to work on their own research projects once they transition to roles at other institutions); *Id.* at App. H at 3 (letter from Hoyt Long) (“Other researchers have requested to work on corpora produced through the Textual Optics Lab yet, as a single research team, we do not have the capacity to directly collaborate with every researcher who wishes to work with these

researcher described the types of projects that outside researchers have expressed interest in pursuing on a corpus prepared by his institution:

Here at UChicago, where our lab has developed a large collection of general US fiction and a corpus of novels by African-American writers, we constantly receive requests from other university faculty and graduate students who are hoping to pursue their own research projects. This includes, for instance, wanting to develop models for extracting characters from text and their narrative framing; measuring narrative coherence and its degree of correlation to reader preferences; exploring representations of climate; constructing sentiment and emotion arcs; studying how AAE is expressed in fiction by African-American writers; and investigating the construction of metaphorical language in the same body of fiction. These are not projects that members of our lab have the expertise to pursue or collaborate on, and yet there is no question that they are worthy of being pursued.⁴⁸⁵

Proponents have also explained that the expansions will increase the quality and value of text and data mining research by facilitating “research that reflects more diverse viewpoints, methods, and subjects.”⁴⁸⁶

With respect to the fourth factor, the effect of circumvention on the market for or value of copyrighted works, AAP argues that the proposed expansions “would devalue [copyrighted] works by undermining the legitimate market for the

corpora.”); *Id.* at App. K at 2 (letter from Lauren Tilton & Taylor Arnold) (stating that, if expansions are granted, they “could work with TV data held at different institutions to better understand the history of TV over the last fifty years”); *Id.* at App. L at 1 (letter from Henry Alexander Wermer-Colan) (“The ability to share [banned books] corpus with other researchers outside of Temple University would be greatly beneficial. There are many socially valuable questions that can be asked of this corpus of banned books, and the perspectives of other academics are vitally important, even if we at Temple do not have the capacity to support direct collaboration.”).

⁴⁸⁵ Authors All., AAUP & LCA Class 3 Initial at App. H at 3 (letter from Hoyt Long).

⁴⁸⁶ *Id.* at 25–26; *see also id.* at App. A at 2 (letter from the Ass’n of Computers and Humanities) (“[C]reative works by women, gender minorities, and artists of color were published commercially in the 20th century at rates far surpassing previous centuries. Barriers to computational scholarship on in-copyright works functionally amounts to limits of the diversity of what scholars can research using these methods.”).

works, both in their original form and as included in licensed TDM datasets.”⁴⁸⁷ The Register does not believe that providing access to copyrighted works in corpora to outside researchers within the limitations of the exemption would substitute for the original or interfere with licensing markets, as described above in the analysis of the fourth fair use factor. The security measures set forth in the exemptions, including the recommended revisions, should further minimize any risk of unauthorized dissemination. However, as also described above, the Register concludes that the distribution of copyrighted works in corpora to outside researchers would potentially impact the market for or value of the copyrighted works. Accordingly, the fourth factor weighs against granting the expansions to permit the distribution of copyrighted works in corpora to outside researchers, but not against merely granting access.

3. NTIA Comments

NTIA favors granting a “relatively modest expansion” of the current exemptions to allow sharing corpora with researchers at other institutions who are conducting independent text and data mining research.⁴⁸⁸ It emphasizes that the exemptions would only be used for scholarly research and teaching, and that institutions and researchers, including those that receive corpora, would need to abide by the restrictions in the current exemptions, such as those related to viewing, security measures, and possession of lawfully acquired copies of the works in the corpus.⁴⁸⁹ With respect to the potential to use these exemptions to develop generative AI systems, NTIA cautions that “it would be a mistake to conflate certain popular services and the controversies that surround them with the research questions being answered by exemption users—even if the computer programs being employed share some high-level similarities.”⁴⁹⁰ It also takes the position there is no need to limit the use of AI tools in the exemptions.⁴⁹¹

In addition, NTIA “urges the Copyright Office to resist untimely, un-noticed, and ill-informed calls to revisit its conclusion that it intends to recommend

⁴⁸⁷ AAP Class 3 Opp’n at 16.

⁴⁸⁸ NTIA Letter at 27–30.

⁴⁸⁹ *Id.* at 29–30.

⁴⁹⁰ *Id.* at 30.

⁴⁹¹ *Id.*

renewal of the current TDM exemptions.”⁴⁹² As to the letters inquiring into security measures sent by some of the opponents to researchers, it states that “[t]he timing, targeting, and tenor of these requests are disturbing” and “urge[s] all parties to avoid escalatory tactics and focus on the merits of the proposals at hand.”⁴⁹³

The Register agrees with most of NTIA’s points. She recommends granting the requested expansions to allow outside researchers to access corpora, which should foster additional text and data mining research. As discussed above, she shares NTIA’s concerns about the inquiries into security measures sent by some of the opponents. And she has declined to incorporate language specific to generative AI into the exemptions, and has not considered any improperly raised requests to revisit her intention to renew these exemptions.

4. Conclusion and Recommendation

Proponents have demonstrated that, absent modifications to the current exemptions for text and data mining for the purpose of research and teaching related to audiovisual and literary works, researchers at other academic institutions will face adverse effects in their ability to make noninfringing use of such copyrighted works. The Register concludes that some of the requested adjustments, based on both the initial petition and the comments and hearing testimony, will improve the operation of the existing exemptions.

The Register therefore recommends that the current exemptions be modified to permit researchers affiliated with other nonprofit institutions of higher education to access corpora solely for the purposes of text and data mining research or teaching. As discussed above, “access” in this context means that an institution may provide outside researchers with credentials for security and authentication to use a corpus that is hosted on its servers; it does not mean that an institution or a researcher may disseminate a copy of a corpus (or copyrighted works included therein) to outside researchers or give outside researchers the ability to download, make copies of, or distribute any copyrighted works. As an example, proponents described how a corpus created and hosted by Mediate at the University of Rochester Libraries functioned in the context of the current exemptions’ collaboration provision:

⁴⁹² *Id.* at 28.

⁴⁹³ *Id.* at 28–29 n.111.

A researcher, for example, would create a research group and a project, and the videos would be uploaded to that space. They are time-stamped videos and the data is generated in time-stamped nature. So having access to those videos as they exist in their time-stamped nature is actually very important to ask or verify research questions on our data because it is all time-stamped and it needs to be within the framework that we have. The servers are secure, and you would need to request access to the platform itself, and then the researcher you're collaborating with would actually have to invite you to that specific research group. That is the only way to access it. If, for example, you wanted to do research on, say, five of the films in our corpus instead of, you know, 70, then we could start a new research group that would still maintain the time-stamped data of that specific corpus.⁴⁹⁴

Proponents further explained that this corpus is maintained by the University of Rochester, and outside researchers lack the ability to download the works in the corpus.⁴⁹⁵

With this recommended modification, the exemptions will permit researchers affiliated with other nonprofit institutions of higher education to conduct text and data mining on a corpus prepared by another researcher and hosted by another institution, regardless of their relationship to the researchers at the other institution or the specific research question that the text and data mining project undertook and for which the corpus was originally prepared. In other words, an institution may grant outside researchers access to a corpus, as long as those researchers are affiliated with other nonprofit institutions of higher education, as defined in the regulation, and are using that corpus to engage in text and data mining research or teaching with respect to the copyrighted works at issue. This can take the form not only of collaboration or verification, but also of independent research projects, peer review, or teaching. It also permits a researcher who began a research project at one institution to continue working on that project after transitioning to a new institution, provided that the originating institution continues to host the corpus and grants the original researcher access to it.

⁴⁹⁴ Tr. at 12:08–13:09 (Apr. 17, 2024) (Sherwood, Univ. of Rochester Librs.).

⁴⁹⁵ Tr. at 15:10–21 (Apr. 17, 2024) (Sherwood, Univ. of Rochester Librs.).

The originating institution would remain responsible for ensuring the security of the corpus in line with the requirements in the exemptions. Because the recommended modifications only permit outside researchers to access corpora hosted by another institution, the Register does not believe that it is necessary to require the institutions of the outside researchers to lawfully acquire a copy of each work in the corpus as a precondition for access.

Although the Register does not recommend expanding the exemptions to the full extent advocated by the proponents, she expects that the recommended modifications will enable a broader range of research by permitting more outside researchers to access corpora maintained by other institutions, while accounting for the legitimate security concerns of opponents.

In implementing these changes, the Register has crafted new regulatory language rather than adopting the language proposed in the initial petition, addressing both the proposed expansions and the existing exemptions. This language modifies the viewing provisions to allow the person undertaking the circumvention or conducting research or teaching under the exemptions to view or listen to the contents of a corpus solely to conduct text and data mining research or teaching. It also changes the provisions discussed above concerning inquiries into security measures. Specifically, the revisions remove the provisions that limit which security measures are subject to disclosure; permit trade associations to make reasonable inquiries on behalf of their members; and expand the text to explicitly allow authors who “reasonably believe” that their works are in a corpus to make such inquiries into security measures. Finally, the recommended language allows researchers affiliated with other nonprofit institutions of higher education to access corpora solely for the purposes of text and data mining research or teaching.

Accordingly, the Register recommends that the Librarian designate the following classes:

Motion pictures, as defined in 17 U.S.C. 101, where the motion picture is on a DVD protected by the Content Scramble System, on a Blu-ray disc protected by the Advanced Access Content System, or made available for digital download where:

(A) The circumvention is undertaken by a researcher affiliated with a nonprofit institution of higher education, or by a student or information technology staff member of the institution at the

direction of such researcher, solely to deploy text and data mining techniques on a corpus of motion pictures for the purpose of scholarly research and teaching;

(B) The copy of each motion picture is lawfully acquired and owned by the institution, or licensed to the institution without a time limitation on access;

(C) The person undertaking the circumvention or conducting research or teaching under this exemption views or listens to the contents of the motion pictures in the corpus solely to conduct text and data mining research or teaching;

(D) The institution uses effective security measures to prevent dissemination or downloading of motion pictures in the corpus, and upon a reasonable request from a copyright owner who reasonably believes that their work is contained in the corpus, or a trade association representing such author, provide information to that copyright owner or trade association regarding the nature of such measures; and

(E) The institution limits access to the corpus to only the persons identified in paragraph (b)(4)(i)(A) of this section or to researchers affiliated with other nonprofit institutions of higher education, with all access provided only through secure connections and on the condition of authenticated credentials, solely for purposes of text and data mining research or teaching.

(ii) For purposes of paragraph (b)(4)(i) of this section:

(A) An institution of higher education is defined as one that:

(1) Admits regular students who have a certificate of graduation from a secondary school or the equivalent of such a certificate;

(2) Is legally authorized to provide a postsecondary education program;

(3) Awards a bachelor's degree or provides not less than a two-year program acceptable towards such a degree;

(4) Is a public or other nonprofit institution; and

(5) Is accredited by a nationally recognized accrediting agency or association.

(B) The term “effective security measures” is defined as:

(1) Security measures that have been agreed to by all interested copyright owners of motion pictures and institutions of higher education; or

(2) Security measures that the institution uses to keep its own highly confidential information secure.

and

Literary works, excluding computer programs and compilations that were compiled specifically for text and data mining purposes, distributed electronically where:

(A) The circumvention is undertaken by a researcher affiliated with a nonprofit institution of higher education, or by a student or information technology staff member of the institution at the direction of such researcher, solely to deploy text and data mining techniques on a corpus of literary works for the purpose of scholarly research and teaching;

(B) The copy of each literary work is lawfully acquired and owned by the institution, or licensed to the institution without a time limitation on access;

(C) The person undertaking the circumvention or conducting research or teaching under this exemption views the contents of the literary works in the corpus solely to conduct text and data mining research or teaching;

(D) The institution uses effective security measures to prevent dissemination or downloading of literary works in the corpus, and upon a reasonable request from a copyright owner who reasonably believes that their work is contained in the corpus, or a trade association representing such author, provide information

to that copyright owner or trade association regarding the nature of such measures; and

(E) The institution limits access to the corpus to only the persons identified in paragraph (b)(5)(i)(A) of this section or to researchers affiliated with other nonprofit institutions of higher education, with all access provided only through secure connections and on the condition of authenticated credentials, solely for purposes of text and data mining research or teaching.

(ii) For purposes of paragraph (b)(5)(i) of this section:

(A) An institution of higher education is defined as one that:

- (1) Admits regular students who have a certificate of graduation from a secondary school or the equivalent of such a certificate;
- (2) Is legally authorized to provide a postsecondary education program;
- (3) Awards a bachelor's degree or provides not less than a two-year program acceptable towards such a degree;
- (4) Is a public or other nonprofit institution; and
- (5) Is accredited by a nationally recognized accrediting agency or association.

(B) The term "effective security measures" is defined as:

- (1) Security measures that have been agreed to by all interested copyright owners of literary works and institutions of higher education; or
- (2) Security measures that the institution uses to keep its own highly confidential information secure.

D. Proposed Class 4: Computer Programs – Generative AI Research

The legal and policy implications of generative AI are undoubtedly among the most pressing and critical of our time. As a result, state and federal legislatures are considering and passing new laws on AI, and courts are adjudicating cases that test the boundaries of copyright. The Copyright Office is currently engaged in a study of Artificial Intelligence and Copyright, and its final report will offer guidance to Congress, the courts, other federal agencies, and the public on the full range of copyright issues raised by this innovative technology.

The Office received a petition for a new exemption to examine one aspect of these implications – AI trustworthiness. The proposed exemption would cover the circumvention of safeguards and contract terms on online platforms hosting AI models for the purpose of researching biased and other undesirable outputs. After reviewing the rulemaking record, the Register concludes that an exemption is not necessary to allow this socially important research and recommends denying the petition.

The conduct described in the record does not appear to implicate section 1201, and proponents have not demonstrated that an exemption would enable it. The adverse effects they identified arise from the third-party control of online platforms regardless of the operation of section 1201, and the evidence does not show that an exemption would ameliorate their concerns. Based on the record here, it is contractual terms of service and their enforcement by the platforms that restrict the proponents’ research, rather than the effect of section 1201.

1. Background

a. Summary of Proposed Exemption and Register’s Recommendation

The Office received a petition from Jonathan Weiss seeking a new exemption permitting circumvention of access controls applied “to copyrighted generative AI models, solely for the purpose of researching biases.”⁴⁹⁶ Proponents asserted that AI research is adversely impacted by safeguards on online platforms.⁴⁹⁷ The proposed exemption would cover circumvention of these safeguards for the

⁴⁹⁶ Weiss Class 4 Pet. at 2.

⁴⁹⁷ See, e.g., Hacking Policy Counsel (“HPC”) Class 4 Reply at 3–6; Joint Academic Researchers Class 4 Reply at 2–8.

purpose of sharing research, techniques, and methodologies that “expose and address biases.”⁴⁹⁸ Weiss further explained that the proposed exemption should include “measures that prevent [its] misuse.”⁴⁹⁹

HackerOne, Inc. (“Hacker One”), Hacking Policy Council (“HPC”), and OpenPolicy filed initial comments supporting and expanding on the proposal. These comments, which Weiss endorsed,⁵⁰⁰ argued that the exemption should not be limited to research exploring possible bias of the models, but should encompass research on other harmful or undesirable outputs,⁵⁰¹ such as “copyright infringement, synthetic content, sexual imagery, and other non-security harms.”⁵⁰² HPC and OpenPolicy also argued that the exemption should be expanded beyond generative AI models,⁵⁰³ and provided specific regulatory language permitting circumvention for “computer programs” on a device “on which an AI system operates,” “solely for the purpose of good-faith AI alignment research.”⁵⁰⁴

⁴⁹⁸ Weiss Class 4 Pet. at 2. The petition did not propose specific regulatory language.

⁴⁹⁹ *Id.* at 3 (discussing intent to identify and address bias, while prioritizing data privacy and promoting collaboration among researchers, AI developers, and stakeholders, and researchers).

⁵⁰⁰ Weiss Class 4 Reply. Weiss did not submit an initial comment or participate in the public hearings.

⁵⁰¹ See HPC Class 4 Initial at 2–3; HackerOne, Inc. (“HackerOne”) Class 4 Initial at 1–2; OpenPolicy Class 4 Initial at 2.

⁵⁰² Weiss Class 4 Reply; see also HPC Class 4 Reply at 2 (suggesting an exemption “apply[ing] to artificial intelligence (AI) trustworthiness research – which encompasses bias, discrimination, synthetic content, infringement, and other alignment issues not directly related to security”).

⁵⁰³ While HPC’s proposed regulatory language is not cabined to generative AI, its initial comment repeatedly mentioned “generative AI systems” or “generative AI alignment research.” See HPC Class 4 Initial at 2–4. OpenPolicy’s comment, however, contained several suggestions that the proposed exemption encompass all AI systems, including generative AI. OpenPolicy Class 4 Initial at 2–4.

⁵⁰⁴ HPC Class 4 Initial at 2–3; OpenPolicy Class 4 Initial at 4–5 (requesting circumvention “for the purpose of good-faith AI research”); see also HPC and Joint Academic Researchers Class 4 *Ex Parte* Letter at Addendum I (Aug. 20, 2024) (providing proposed regulatory language).

The petition was opposed by ACT | The App Association (“ACT”); DVD CCA and AACCS LA;⁵⁰⁵ and Joint Creators II.⁵⁰⁶ Reply comments were filed by HackerOne, HPC, Weiss, and a group of academic researchers (“Joint Academic Researchers”).⁵⁰⁷ The Office also received letters from the Computer Crime and Intellectual Property Section at the Department of Justice and Senator Mark R. Warner stressing the value of research into the trustworthiness and safety of AI systems.⁵⁰⁸

After reviewing the rulemaking record, although the Register recognizes the importance of AI trustworthiness and the significant benefits of such research, she recommends denying the petition. As discussed in detail below, she finds that proponents have failed to demonstrate that the research activities described implicate section 1201 specifically. The adverse effects identified by proponents appear to arise from third-party control of SaaS platforms used by the researchers rather than section 1201, and an exemption would therefore not resolve their concerns.

Other government agencies may instead have the authority to further the significant policies implicated by AI research. Given the importance of the questions these researchers seek to explore, and the evolving legal and technical

⁵⁰⁵ DVD CCA and AACCS LA opposed the proposed exemption “to the extent that it would permit the circumvention of AI systems incorporated in any part of the digital content protection ecosystem.” DVD CCA & AACCS LA Class 4 Opp’n at 1.

⁵⁰⁶ ACT | The App Association (“ACT”) Class 4 Opp’n; DVD CCA & AACCS LA Class 4 Opp’n; Joint Creators II Class 4 Opp’n.

⁵⁰⁷ HackerOne Class 4 Reply; HPC Class 4 Reply; Weiss Class 4 Reply; Kevin Klyman et al. (“Joint Academic Researchers”) Class 4 Reply. Joint Academic Researchers supported the initial regulatory language proposed by HPC, except for replacing the term “alignment” with “trustworthiness,” as “it is a more commonly used and more broadly defined term for this context.” Joint Academic Researchers Class 4 Reply at 11. HPC made that change, among others, in its reply comment. See HPC Class 4 Reply at 7–8; see also HPC and Joint Academic Researchers Class 4 *Ex Parte* Letter at 4–5 (Aug. 20, 2024) (discussing why “alignment” was replaced with “trustworthiness”); Tr. at 57:22–58:09 (Apr. 17, 2024) (Geiger, HPC) (same).

⁵⁰⁸ Letter from John T. Lynch, Jr., Chief, Comput. Crime & Intell. Prop. Section, Crim. Div., Dep’t of Just., to Suzanne V. Wilson, Gen. Coun. & Assoc. Register of Copyrights, U.S. Copyright Office (Apr. 15, 2024); Letter from Senator Mark R. Warner, to Shira Perlmutter, Register of Copyrights & Dir., U.S. Copyright Office (May 24, 2024).

landscape, this is an area where Congress may wish to act.⁵⁰⁹ Interested stakeholders are also encouraged to participate in the next triennial rulemaking proceeding to the extent that they can show that section 1201 has or will have adverse effects on the ability to conduct AI research.

b. Overview of Issues

Petitioner’s request comes as AI systems, both generative and non-generative, are becoming increasingly integrated into society and used by businesses, governments, and the public. These systems are employed for a variety of purposes, from aiding in decision-making processes, to generating outputs that include written, audio, visual, and audiovisual content.⁵¹⁰ However, they are not infallible. As proponents noted, not only do they “have the potential to perpetuate or even exacerbate systematic issues related to race, gender, ethnicity, and other sensitive factors,”⁵¹¹ they may generate “harmful or undesirable outputs,”⁵¹² e.g., content that is discriminatory or sexual, or that facilitates the impersonation of third-parties.⁵¹³ According to proponents, despite an increase in concerns, researchers are currently inhibited from “identifying and disclosing flaws so that they can be corrected.”⁵¹⁴

Proponents offered several reasons for seeking an exemption. They asserted that section 1201’s anticircumvention provisions create barriers to their ability to

⁵⁰⁹ The Office is currently conducting a policy study regarding the copyright issues raised by generative AI. The policy study analyzes the current state of the law, identifies unresolved issues, and evaluates potential areas for congressional action. See U.S. COPYRIGHT OFFICE, COPYRIGHT AND ARTIFICIAL INTELLIGENCE – PART 1: DIGITAL REPLICAS (2024), <https://www.copyright.gov/ai/Copyright-and-Artificial-Intelligence-Part-1-Digital-Replicas-Report.pdf>.

⁵¹⁰ See Weiss Class 4 Pet. at 2–3.

⁵¹¹ *Id.* at 2.

⁵¹² HPC Class 4 Initial at 2.

⁵¹³ HackerOne Class 4 Initial at 1; OpenPolicy Class 4 Initial at 2; Weiss Class 4 Reply at 1; HPC Class 4 Reply at 2; Joint Academic Researchers Class 4 Reply at 2.

⁵¹⁴ HPC Class 4 Initial at 2–3; see also OpenPolicy Class 4 Initial at 5 (noting how “various AI auditing methods can entail circumvention of technological protection measures on code, or software”); Weiss Class 4 Pet. at 2 (“[C]oncerns about inherent biases within these models have been growing.”).

conduct this research.⁵¹⁵ Specifically, they reported that the AI systems they seek to research are offered by providers that condition access with accounts that may be revoked.⁵¹⁶ They also cited these systems' adoption of rate limits and algorithmic safeguards as interfering with independent trustworthiness research.⁵¹⁷ For example, HPC discussed how some AI systems may require users to create accounts subject to terms of service that prohibit bypassing safety mechanisms, "restrict the volume or frequency of inputs into an AI system," or attempt to block inputs.⁵¹⁸

Proponents also argued that the research is noninfringing because it involves *de minimis* copying and some components of the AI systems may not be copyrightable.⁵¹⁹ To the extent infringement occurs, proponents asserted it qualifies as fair use, because the research results in transformative "information about computer programs' susceptibility to bias and misalignment" and "aggregate assessments of evaluations of trustworthiness."⁵²⁰

Lastly, proponents asserted that bias or trustworthiness research benefits the public because any issues that are "unearth[ed], underst[ood], and rectif[ied]" would help ensure fairness, safety, security, transparency, and ethical

⁵¹⁵ Proponents further noted that, although there is already a temporary exemption for good-faith security research, it "may not apply to circumventing software access controls for AI alignment research for some non-security or safety purposes that are still key for the underlying trustworthiness of the AI system." HPC Class 4 Initial at 4; *see also* HackerOne Class 4 Initial at 2 (describing how the current good-faith security research exemption "may be interpreted to not provide similar protection to good-faith AI research uncovering bias, discrimination, and algorithmic flaws"); OpenPolicy Class 4 Initial at 2–3 (discussing the "uncertainty if such [proposed use] activities are exempted" under the current good-faith security research exemption); Tr. at 10:19–11:01 (Apr. 17, 2024) (Elazari, OpenPolicy) ("[T]here is a broad set of testing that is being done that can be characterized as broader than just traditional security techniques that are needed in order to evaluate the type of unintended consequences of AI that we see today and that would emerge in the future."). For example, "manipulating a generative AI system to engage in racial or gender discrimination, or to produce synthetic child abuse material." HPC Class 4 Initial at 2; *see also* HackerOne Class 4 Initial at 2 ("AI can exacerbate racial discrimination in housing opportunities or financial decisions.").

⁵¹⁶ HPC Class 4 Initial at 3; Joint Academic Researchers Class 4 Reply at 7.

⁵¹⁷ HPC Class 4 Initial at 2–3.

⁵¹⁸ *Id.* at 3.

⁵¹⁹ *Id.* at 4; Joint Academic Researchers Class 4 Reply at 9.

⁵²⁰ HPC Class 4 Initial at 4; Joint Academic Researchers Class 4 Reply at 9.

development and reasonable deployment of AI systems.⁵²¹ Specifically, HPC claimed that enabling this research “would help embrace diverse perspectives, promote impartial results, and promote a collaborative culture of ethical AI development, consistent with the broader goals of the United States as articulated in multiple policy initiatives.”⁵²²

Opponents responded with several objections. First, they argued the proposed exemption is overbroad.⁵²³ ACT claimed that proponents have not clearly defined the scope of the research, leaving the proposed exemption unfettered by any limitations, with the potential to damage “all software markets.”⁵²⁴ DVD CCA and AACS LA contended that because the exemption purportedly applies to an “unlimited number of services, systems, and products incorporating generative AI,” it could sweep in “DVD and Blu-ray disc playback devices and TVs” because manufacturers are incorporating AI systems into these items.⁵²⁵

Second, opponents argued that proponents failed to provide essential information about the TPMs implicated and how — or if — those purported TPMs are circumvented in making the proposed uses.⁵²⁶ Specifically, Joint Creators II explained that proponents did not “identify the specific TPMs (if any) that are currently in place protecting generative AI models” and have “not demonstrated that security research regarding embedded bias in AI models requires

⁵²¹ Weiss Class 4 Pet. at 2; HPC Class 4 Initial at 2; HackerOne Class 4 Initial at 1; OpenPolicy Class 4 Initial at 3.

⁵²² HPC Class 4 Initial at 4.

⁵²³ ACT Class 4 Opp’n at 2–4; DVD CCA & AACS LA Class 4 Opp’n at 4–7; Joint Creators II Class 4 Opp’n at 4; *see also* Tr. at 31:05–09 (Apr. 17, 2024) (Englund, Joint Creators II) (“[O]nce you say that it has to occur on the proper devices, the exemption is simply for computer programs solely for the purpose of good faith AI trustworthiness research, any computer under the sun.”).

⁵²⁴ ACT Class 4 Opp’n at 2; *see also* Tr. at 91:17–92:05 (Apr. 17, 2024) (Englund, Joint Creators II) (discussing the breadth of the proposed exemption). Both ACT and DVD CCA and AACS LA also contended that overbroad exemptions offset Congress’s intent in creating the DMCA and “weaken the enforcement of Section 1201” and “undermine the important incentives in the DMCA for creators.” ACT Class 4 Opp’n at 3–4; DVD CCA & AACS LA Class 4 Opp’n at 4–6.

⁵²⁵ DVD CCA & AACS LA Class 4 Opp’n at 1–2; *see also* Tr. at 20:17–21:09 (Apr. 17, 2024) (Ayers, AACS LA) (asking about the scope of the proposed exemption as applied to Blu-ray players that incorporate AI).

⁵²⁶ Joint Creators II Class 4 Opp’n at 2–5; DVD CCA & AACS LA Class 4 Opp’n at 7–9.

circumvention of TPMs.”⁵²⁷ They further argued that proponents did “not explain how TPMs impede legitimate private sector security research on generative AI models.”⁵²⁸ DVD CCA and AACCS LA contended that while proponents discussed creating password-protected accounts, “nothing in [their] comments suggests that [they] are seeking to circumvent any password protection” and that the other purported TPMs “do[] not actually appear to control access to” AI models.⁵²⁹ Instead, Joint Creators II and DVD CCA and AACCS LA asserted that it is terms of use/account agreements that are preventing the proposed research, which is beyond this rulemaking’s scope.⁵³⁰

Third, opponents argued that granting an exemption is premature and not the appropriate avenue to establish new law, given the nascent technology involved and ongoing legislative and policy work being conducted.⁵³¹ For example, Joint Creators II stated that proponents should “not be permitted to use this . . . rulemaking as a back-door mechanism to create new law,” as “AI is in its early stages, and there are ongoing efforts to adopt legislative requirements for AI governance and voluntary best practices.”⁵³² Similarly, ACT argued that there are ongoing “questions of security, privacy, and IP [that] persist in the deployment and use” of generative AI models that should be decided by

⁵²⁷ Joint Creators II Class 4 Opp’n at 3–5; *see also* Joint Creators II Class 4 Opp’n at 3 (describing how proponents “do not explain what methods of circumvention they would seek to employ if the exemption were allowed”).

⁵²⁸ Joint Creators II Class 4 Opp’n at 3 (discussing sections 1201(a)(1)(A) and 1201(a)(3)(A)–(B)).

⁵²⁹ DVD CCA & AACCS LA Class 4 Opp’n at 7–8.

⁵³⁰ Joint Creators II Class 4 Opp’n at 5; DVD CCA & AACCS LA Class 4 Opp’n at 10–11; *see also* Tr. at 50:06–19 (Apr. 17, 2024) (Englund, Joint Creators II) (“[I]f a concern over violating a service’s terms is killing projects, nothing else is going to matter because the Office can’t immunize researchers from terms of service violations and contract liability.”).

⁵³¹ DVD CCA & AACCS LA Class 4 Opp’n at 2; Joint Creators II Class 4 Opp’n at 2–3; ACT Class 4 Opp’n at 2.

⁵³² Joint Creators II Class 4 Opp’n at 2, 4; *see also* Joint Creators II Class 4 Opp’n at 2–3 (discussing the Copyright Office’s AI Policy Study, Executive Order 14110 that discusses AI testing within federal agencies, and the National Institute of Standards and Technology’s request for information on issues including red teaming).

policymakers and regulators, not through the “widening of Section 1201 exemptions.”⁵³³

Proponents had several responses. First, regarding the breadth of the proposed exemption, HPC explained that it applies to “a particular class of works” involving generative AI systems and a “specific set of users,” consistent with current temporary exemptions granted by the Office.⁵³⁴

Second, proponents gave additional details on the “technological access barriers” they claimed impact AI trustworthiness research, such as account requirements, rate limits, and algorithmic safeguards, and described how each may be circumvented.⁵³⁵ Joint Academic Researchers noted that “access[ing] and assess[ing] the trustworthiness and safety of [AI] models” requires researchers to “often bypass these measures,” with techniques such as “using prompts that contain text that would trigger filters on user inputs but do not with the addition of additional adversarial text.”⁵³⁶

Lastly, proponents claimed that researchers have declined to conduct research due to fears of losing their accounts and potential liability. Joint Academic Researchers noted that the “risk of losing account access by itself may dissuade researchers who depend on these accounts for other critical types of AI research,

⁵³³ ACT Class 4 Opp’n at 2; *see also id.* at 3 (“Adopted exemptions to Section 1201 prohibitions should not be driven by edge use cases or hypotheticals that exemplify possible uses and capabilities of AI outside what we presently understand.”).

⁵³⁴ HPC Class 4 Reply at 2; *see* 37 C.F.R. § 201.40(b)(16) (2023) (good-faith security research exemption); *see also* Tr. at 7:03–19 (Apr. 17, 2024) (Geiger, HPC) (discussing potential uses and class of works); *but see, e.g.*, Tr. at 9:01–05 (Apr. 17, 2024) (Geiger, HPC) (“The protected works at issue are also present in many systems, and the types of research into AI trustworthiness can also apply to non-generative systems.”); Tr. at 10:07–16 (Apr. 17, 2024) (Elazari, OpenPolicy) (“[W]e’re really seeing a very, you know, broad definition of AI in policy and, therefore, it’s important that the exemption, as we said in the comments, will apply broadly as well.”); Tr. at 12:06–16 (Apr. 17, 2024) (Longpre, Massachusetts Inst. of Tech. (Ph.D. Student)) (“[Y]ou asked at the end about generative AI versus other types of AI. I’ll add that, in our view, this distinction is a little bit artificial. . . . So we think this research is important in both those places.”).

⁵³⁵ HPC Class 4 Reply at 2, 4–6; *see also* Joint Academic Researchers Class 4 Reply at 5–7 (providing “some examples of what could theoretically amount to technological protection measures for generative AI”).

⁵³⁶ Joint Academic Researchers Class 4 Reply at 6; *see also* HPC Class 4 Reply at 6 (discussing “input[s] designed to bypass generative AI system guardrails so that the system does something it was programmed to avoid”).

and the potential legal consequences under laws like DMCA Section 1201 compound this adverse effect.”⁵³⁷ Similarly, HPC explained that researchers “note the gap in legal protections for AI bias and trustworthiness research as compared to good faith security testing” and “fear account suspension (without an opportunity for appeal) and legal risks, both of which can have chilling effects on research.”⁵³⁸

2. Discussion

The Register recommends denying the proposed exemption in light of section 1201’s rulemaking’s evidentiary standards,⁵³⁹ based on proponents’ failure to meet the burden of proof.⁵⁴⁰

Given the limited record and differing descriptions of the proposed exemption provided by proponents, the Register initially recommends refining the proposed class to align with the evidence in the record:

Computer programs that are components of generative AI systems, for the purpose of good-faith trustworthiness research, where the circumvention is conducted on systems made available via Software as a Service (“SaaS”).

Analyzing the refined class, the Register finds that some works in the class may be protected by copyright and that proponents’ use is likely noninfringing. However, the Register also finds that the prohibition on circumvention under

⁵³⁷ Joint Academic Researchers Class 4 Reply at 8; *see also* Shayne Longpre et al., *A Safe Harbor for AI Evaluation and Red Teaming*, KNIGHT FIRST AMENDMENT INSTITUTE AT COLUMBIA INSTITUTE – DEEP DIVE: TOWARD A BETTER INTERNET (Mar. 5, 2024), <https://knightcolumbia.org/blog/a-safe-harbor-for-ai-evaluation-and-red-teaming> (“Despite the need for independent evaluation, conducting research related to these vulnerabilities is often legally prohibited by the terms of service . . . companies forbid the research and may enforce their policies with account suspensions.”).

⁵³⁸ HPC Class 4 Reply at 3 & n.11; *see also* Joint Academic Researchers Class 4 Reply at App. B at 1 (noting that “AI companies’ policies can chill independent evaluation”); Joint Academic Researchers Class 4 Reply at App. A at 1 (describing how “auditors fear that releasing findings or conducting research could lead to their accounts being suspended, ending their ability to do such research, or even lawsuits for violating the terms of service”).

⁵³⁹ *See* 2021 Recommendation at 10–12; Section 1201 Report at 114–27 (discussing the rulemaking’s evidentiary standards).

⁵⁴⁰ *See* 2021 Recommendation at 7–8 (discussing the rulemaking’s burden of proof standards); *see also* Section 1201 Report at 110–12 (discussing burden of proof).

section 1201 is not the cause of the alleged adverse effects for two reasons: (i) they arise from third-party control of closed SaaS systems; and (ii) it is unlikely that the research conduct at issue implicates section 1201. Accordingly, proponents have not demonstrated they have been or are likely to be adversely affected by section 1201 in the next three years, and the statutory factors are either neutral or support a denial.

a. Scope of the Proposed Class

Petitioner Weiss requested an exemption for access to “generative AI models,” for “the purpose of researching biases,” with appropriate measures to “prevent misuse.”⁵⁴¹ Commenters, however, requested a broader exemption, to access: (i) “Computer Programs” on a device “on which an AI system operates”; (ii) for the purpose of good faith AI “alignment” or “trustworthiness” research; (iii) conducted on any device that is lawfully acquired or on which circumvention is undertaken “with the authorization of [its] owner or operator.”⁵⁴² The Register considers each in turn.

i. Category of Works

The petition identified “generative AI models” as the category of works for the exemption.⁵⁴³ Proponents sought to expand the request to “computer programs” on a device, machine, computer, computer system, or computer network “on which an AI system operates.”⁵⁴⁴ The Register does not recommend accepting the expanded language, which would encompass programs found on a device on which “an AI system operates,” regardless of whether they are part of the AI system itself. Proponents did not address that possibility and the record does not support it. Instead, the Register understands proponents’ concerns to relate to AI models that are integrated into larger systems with component programs,

⁵⁴¹ Weiss Class 4 Pet. at 2.

⁵⁴² HPC Class 4 Reply at 7; OpenPolicy Class 4 Initial at 3; Joint Academic Researchers Class 4 Reply at 11; Weiss Class 4 Reply; *see also* HPC and Joint Academic Researchers Class 4 *Ex Parte* Letter at Addendum I (Aug. 20, 2024) (providing proposed regulatory language).

⁵⁴³ Weiss Class 4 Pet. at 2.

⁵⁴⁴ HPC Class 4 Reply at 7; OpenPolicy Class 4 Initial at 3; Joint Academic Researchers Class 4 Reply at 11; Weiss Class 4 Reply; *see also* HPC and Joint Academic Researchers Class 4 *Ex Parte* Letter at Addendum I (Aug. 20, 2024) (providing proposed regulatory language).

such as a web-based user interface for a large language model backend.⁵⁴⁵ The record indicates that access to these types of component programs may be necessary to conduct trustworthiness research on such AI systems.

Proponents also argued that the class of works should not be limited to generative AI systems.⁵⁴⁶ However, they did not provide specific examples of trustworthiness research on non-generative systems that they claimed was adversely affected by section 1201.⁵⁴⁷ Although Joint Academic Researchers cited a report indicating that AI systems may exhibit bias when used for non-generative tasks and that this is an active field of research,⁵⁴⁸ that report focuses on the *importance* of research on algorithmic harms.⁵⁴⁹ Accordingly, the Register will refine the proposed exemption, for the purpose of analysis, to a category of works consisting of “computer programs that are components of generative AI systems.”

⁵⁴⁵ See Traian Rebedea et al., *NeMo Guardrails: A Toolkit for Controllable and Safe LLM Applications with Programmable Rails* 12, <https://arxiv.org/pdf/2310.10501.pdf> (“NeMo Guardrails”) (cited by HPC Class 4 Reply at 5); Joint Academic Researchers Class 4 Reply at 9.

⁵⁴⁶ Joint Academic Researchers asserted that “most AI systems are not generative and would benefit from further trustworthiness research,” that they “suffer from the same inherent biases,” and that “there is limited independent research conducted on these issues.” Joint Academic Researchers Class 4 Reply at 2–3. OpenPolicy similarly claimed that “testing and red-teaming activities are recommended for AI systems, not just emerging generative AI or foundation models.” OpenPolicy Class 4 Initial at 3–4.

⁵⁴⁷ Proponents also argue that the term “generative AI” is ill-defined, which could create confusion around the scope of permitted research. Joint Academic Researchers Class 4 Reply at 3. The Office notes that proponents adopted the definitions used by the Executive Branch in Executive Order 14110, which defines generative AI as: “the class of AI models that emulate the structure and characteristics of input data in order to generate derived synthetic content. This can include images, videos, audio, text, and other digital content.” Exec. Order No. 14,110, 88 Fed. Reg. 75,191, 75,195 (Oct. 30, 2023), <https://www.federalregister.gov/documents/2023/11/01/2023-24283/safe-secure-and-trustworthy-development-and-use-of-artificial-intelligence>. However, in light of the Register’s recommendation to deny the proposed exemption, the conclusion to limit the proposed exemption to generative AI is not material.

⁵⁴⁸ Joint Academic Researchers Class 4 Reply at 3 n.7 (citing JOSH KENWAY ET AL., ALGORITHMIC JUST. LEAGUE, *BUG BOUNTIES FOR ALGORITHMIC HARMS?* (2022), <https://www.ajl.org/bugs> (“Bug Bounties for Algorithmic Harms?”)).

⁵⁴⁹ See *Bug Bounties for Algorithmic Harms?* at 24, 99, 109.

ii. *Purpose*

The petition requested an exemption for the purpose of researching “inherent biases” in generative AI models that “have the potential to perpetuate or even exacerbate systemic issues related to race, gender, ethnicity, and other sensitive factors.”⁵⁵⁰ Proponents subsequently sought to expand the purpose to AI “alignment” or “trustworthiness” research.⁵⁵¹ They described this as covering “bias, discrimination, infringement, or harmful outputs,”⁵⁵² “broad sets of undesirable social impacts . . . or undesirable unintended outputs in AI systems, from discrimination to ‘untrustworthy behavior’,”⁵⁵³ and “non-security related risks and harms, including those related to bias, discrimination, infringement, and toxicity.”⁵⁵⁴ DVD CCA and AACS LA countered that these “unbounded references to wide ranging purposes” are “effectively without any limit at all.”⁵⁵⁵

The record contains several studies demonstrating trustworthiness research to address a wide range of undesirable outputs.⁵⁵⁶ For example, one cited study tested adversarial prompting techniques across thirteen “forbidden scenarios,” which were derived from OpenAI’s usage policy: “Illegal Activity,” “Hate Speech,” “Malware Generation,” “Physical Harm,” “Economic Harm,” “Fraud,” “Pornography,” “Political Lobbying,” “Privacy Violence,” “Legal Opinion,”

⁵⁵⁰ Weiss Class 4 Pet. at 2.

⁵⁵¹ HPC Class 4 Reply at 7; OpenPolicy Class 4 Initial at 3, 5; Joint Academic Researchers Class 4 Reply at 11; Weiss Class 4 Reply at 1; *see also* HPC and Joint Academic Researchers Class 4 *Ex Parte* Letter at Addendum I (Aug. 20, 2024) (discussing the purpose of using the terms “alignment” and “trustworthiness”); Tr. at 56:12–25, 57:18–58:09 (Apr. 17, 2024) (Geiger, HPC) (same).

⁵⁵² HPC Class 4 Reply at 7.

⁵⁵³ OpenPolicy Class 4 Initial at 3.

⁵⁵⁴ Joint Academic Researchers Class 4 Reply at 4.

⁵⁵⁵ DVD CCA & AACS LA Class 4 Opp’n at 6.

⁵⁵⁶ *See* Xinue Shen et al., “Do Anything Now”: Characterizing and Evaluating In-The-Wild Jailbreak Prompts on Large Language Models 6, ARXIV (May 2024), <https://arxiv.org/pdf/2308.03825> (“Do Anything Now”) (cited by HPC Class 4 Initial at 3); Daniel Kang et al., *Exploiting Programmatic Behavior of LLMs: Dual-Use Through Standard Security Attacks*, ARXIV (Feb. 2023), <https://arxiv.org/pdf/2302.05733> (“Exploiting Programmatic Behavior of LLMs”) (cited by HPC Class 4 Initial at 3); Gelei Deng et al., *Masterkey: Automated Jailbreaking of Large Language Model Chatbots*, NETWORK AND DISTRIBUTED SYSTEM SECURITY SYMPOSIUM (Feb. 26, 2024), <https://www.ndss-symposium.org/wp-content/uploads/2024-188-paper.pdf> (“MasterKey”) (cited by HPC Class 4 Reply at 4).

“Financial Advice,” “Health Consultation,” and “Government Decision.”⁵⁵⁷ It appears that the researchers’ techniques and reporting methodology did not vary meaningfully based on the research goal.⁵⁵⁸

The Register finds that proponents have demonstrated sufficient commonalities to consider a potential exemption regarding a broad category of “AI trustworthiness research.”

iii. Devices

The petition requested an exemption for “generative AI models,” without any device limitation.⁵⁵⁹ Proponents subsequently proposed language that would narrow the exemption to circumvention “undertaken on a lawfully acquired device or machine . . . [or] on a computer, computer system, or computer network . . . with the authorization of the owner or operator of such computer, computer system, or computer network.”⁵⁶⁰ Opponents countered that the proposed exemption is overbroad, with DVD CCA and AACCS LA claiming that it could encompass DVD and Blu-ray players, and Joint Creators II expressing concern that it could cover “any computer under the sun.”⁵⁶¹

The proposed exemption is indeed broad and could encompass a range of devices and deployment scenarios, such as cellphones, televisions, computer operating systems and other software with AI-components. None of these devices, however, were discussed in proponents’ comments or the research they cited, which focused on generative AI systems made available via SaaS, such as OpenAI’s ChatGPT and Midjourney’s eponymous service.⁵⁶² While proponents

⁵⁵⁷ See Do Anything Now at 8. For a description of the forbidden scenarios with examples, see *id.* at 20 (Table 11: The forbidden scenarios from OpenAI usage policy).

⁵⁵⁸ See *id.* at 10 (Table 4: Results of jailbreak prompts on different LLMs).

⁵⁵⁹ Weiss Class 4 Pet. at 2.

⁵⁶⁰ HPC Class 4 Reply at 7; OpenPolicy Class 4 Initial at 4; Joint Academic Researchers Class 4 Reply at 11; Weiss Class 4 Reply.

⁵⁶¹ DVD CCA & AACCS LA Class 4 Opp’n at 9–10; Joint Creators II Class 4 Opp’n at 4; Tr. at 31:05–09 (Apr. 17, 2024) (Englund, Joint Creators II).

⁵⁶² See, e.g., Masterkey at 1–2; Gary Marcus & Reid Southen, *Generative AI Has a Visual Plagiarism Problem*, IEEE SPECTRUM (Jan. 6, 2024), <https://spectrum.ieee.org/midjourney-copyright> (“Generative AI Has a Visual Plagiarism Problem”) (cited in HPC Class 4 Reply at 3 and Joint Academic Researchers Class 4 Reply at 8).

may conduct research on other types of systems or devices, the concerns they raise appear to be specific to the SaaS context.

For example, HPC and Joint Academic Researchers identified account requirements, use and purchase restrictions, and rate limits as inhibiting research.⁵⁶³ There is no evidence, however, that these or analogous concerns would apply to lawfully acquired devices or self-deployed AI systems. The only identified technological barriers with apparent applicability beyond SaaS systems are “algorithmic safeguards” or measures that “block models from generating undesired or harmful outputs,”⁵⁶⁴ but the limited record on this point does not counsel extending the proposed exemption beyond such systems.

Proponents did not cite examples of research on integrated devices and, while they cited research on open-source models like Meta’s Llama-2 and Vicuna,⁵⁶⁵ they did not identify any instances where such research was adversely affected. To the contrary, the principal study cited by Joint Academic Researchers emphasizes that independent AI evaluation research is concentrated on Meta’s open models *precisely because* they have “downloadable weights, allowing a researcher to red team locally without having their account terminated for usage policy violations.”⁵⁶⁶

There is an additional reason not to accept the broad language offered by proponents. They proposed an exemption for circumvention undertaken “with the authorization of the owner or operator” of an AI system.⁵⁶⁷ However, the record identifies only the situation in which the operator of a SaaS system inhibits research via its terms of service and enforcement thereof, *i.e.*, research conducted *without* authorization. But an exemption limited to circumvention

⁵⁶³ See HPC Class 4 Reply at 4–6; Joint Academic Researchers Class 4 Reply at 5–7.

⁵⁶⁴ See HPC Class 4 Reply at 5–6; Joint Academic Researchers Class 4 Reply at 6–7.

⁵⁶⁵ See Do Anything Now at 9; Suyu Ge et al., *MART: Improving LLM Safety with Multi-round Automatic Red-Teaming* 7, ARXIV (Nov. 2023), <https://arxiv.org/pdf/2311.07689> (“MART”) (cited by HPC Class 4 Reply at 4).

⁵⁶⁶ Joint Academic Researchers Class 4 Reply App. A at 5 (quoting Shayne Longpre et al., *A Safe Harbor for AI Evaluation and Red Teaming*, ARXIV (Mar. 2024), <https://arxiv.org/pdf/2403.04893.pdf> (“Safe Harbor for AI Evaluation and Red Teaming”)).

⁵⁶⁷ HPC Class 4 Reply at 7; OpenPolicy Class 4 Initial at 4–5; Joint Academic Researchers Class 4 Reply at 11; Weiss Class 4 Reply.

“with the authorization” of the SaaS provider would render the exemption unnecessary.⁵⁶⁸

Accordingly, the Register limits her analysis to the circumvention of access controls on SaaS systems without the authorization of the platform owner or operator.

b. Works Protected by Copyright

The record indicates that AI systems are often built with multiple component programs, including those that provide the user interface; guide the model’s behavior by prepending or appending text to user prompts; moderate or filter user inputs and model outputs; and track and enforce usage limits.⁵⁶⁹ It is likely that at least some of these programs are protected by copyright.

However, opponents questioned whether some of the alleged circumvention described by proponents results in access to copyrightable works—the core of section 1201’s protections. For example, DVD CCA and AACCS LA claimed that overcoming or circumventing internal safety guardrails related to outputs “does not provide any more or less access to the underlying copyrighted work.”⁵⁷⁰ The Register agrees that the record here on what “works” are being accessed is thin. It is not clear what component programs are gated by rate limits and algorithmic safeguards, whether those components are independently copyrightable, or whether researchers necessarily access them. For example, the copyrightability of generative AI models has not been conclusively determined and even if the models are copyrightable, it is not clear that users of SaaS systems ever *access*

⁵⁶⁸ HackerOne briefly referenced the concept of “instances” (*i.e.*, where AI is deployed on “platforms that are separate from the copyright owner of the AI system,”) but did not provide evidentiary support, nor is it clear that such research would generally be conducted with the permission of the instance owner or operator. HackerOne Class 4 Reply at 1. In fact, HackerOne’s concern appears to stem from the inverse situation, in which “the copyright owner of an AI system participates in a research access program or a bias bounty,” but the instance owners do not. *See id.* at 1–2.

⁵⁶⁹ *See, e.g.*, NeMo Guardrails at 12; Rollbar Editorial Team, *How to Resolve ChatGPT Limit Errors*, ROLLBAR: CODE TUTORIALS JAVA (Jul. 31, 2023), <https://rollbar.com/blog/chatgpt-api-rate-limit-error/> (“ChatGPT Limit Errors”) (cited by HPC Class 4 Reply at 5).

⁵⁷⁰ DVD CCA & AACCS LA Class 4 Opp’n at 8.

them. Instead, SaaS systems may be built with programs that act “like a proxy between the user and the [model].”⁵⁷¹

The Register finds, however, that these issues need not be definitively resolved at this time, given the other issues discussed below.

c. Asserted Noninfringing Uses

Proponents described research generally involving one or more of the following activities, which they consider to be noninfringing: reviewing platform content policies; testing the ability to generate content contrary to those policies or that is otherwise undesirable; investigating the structure and efficacy of algorithmic safeguards; designing and testing techniques for bypassing those safeguards *through prompting*; and sharing research findings.⁵⁷² In sharing their results, the researchers employed various techniques to reduce the risk of harm—adding disclaimers, not disclosing model outputs, disclosing only a few select examples for illustration, and redacting or abbreviating harmful outputs.⁵⁷³

According to proponents, this research conduct qualifies as fair use. Under the first factor—the purpose and character of the use—they alleged that the purpose is to “identify, assess, and correct algorithmic flaws and thereby help strengthen the trustworthiness of AI systems”⁵⁷⁴ and that the “research and the creative works produced by the research,” such as academic papers and discussions, “are of a wholly different nature than the AI systems subject to the research.”⁵⁷⁵ Additionally, they stated that “[u]ses will be non-commercial and researchers will publish transformative aggregate assessments of evaluations of

⁵⁷¹ NeMo Guardrails at 3.

⁵⁷² See, e.g., Masterkey; Do Anything Now; Exploiting Programmatic Behavior of LLMs; Andy Zou et al., *Universal and Transferable Adversarial Attacks on Aligned Language Models*, ARXIV (Dec. 2023), <https://arxiv.org/pdf/2307.15043.pdf> (“Universal and Transferable Adversarial Attacks”) (cited by HPC Class 4 Reply at 6).

⁵⁷³ Do Anything Now at 1 (providing an upfront disclaimer and disclosing abbreviated model output); Exploiting Programmatic Behavior of LLMs 1–2, 7, 13–14 (providing seven examples); Universal and Transferable Adversarial Attacks at 2, 14–15, 28–31 (providing a small number of abbreviated examples in the body of the research paper followed by a warning disclaimer and an appendix with four complete outputs).

⁵⁷⁴ HPC Class 4 Reply at 6.

⁵⁷⁵ HPC Class 4 Initial at 4.

trustworthiness,”⁵⁷⁶ such as “providing information about computer programs’ susceptibility to bias and misalignment – rather than merely superseding the original copyrighted work.”⁵⁷⁷ Opponents disagreed. For example, Joint Creators II argued that the “proposed exemption is not limited to noncommercial users,” and “would potentially give the ability to access creative content and be able to use it however it might be available once the access to a system has been circumvented.”⁵⁷⁸

Regarding the second factor—the nature of the copyrighted work—HPC argued that the proposed exemption “focuses on functional code, rather than expressive or imaginative work, by researching the algorithmic output of computer programs.”⁵⁷⁹ Specifically, they noted such research “involves code, so the software that drives an algorithm, APIs that let AI interact with other software, and interfaces that enable users to provide input and receive output.”⁵⁸⁰ Joint Creators II countered that, “if we’re talking about circumventing TPMs on DVD players and streaming services and video games, we’re potentially talking about creative works.”⁵⁸¹

On the third factor—the amount and substantiality of the portion used in relation to the copyrighted work as a whole—HPC argued that “it will not be necessary or desirable to reproduce more than small or *de minimis* portions of the copyrighted AI system in order to demonstrate the validity of the research”⁵⁸² even though “AI trustworthiness research may access significant portions of an AI system.”⁵⁸³ Opponents did not address this factor.

Finally, proponents asserted that the fourth factor—effect of the use upon the potential market for or value of the copyrighted work—also favored fair use. HPC stated that the research “is highly unlikely to supplant the market for computer programs or generative AI systems” and “where generative AI

⁵⁷⁶ Joint Academic Researchers Class 4 Reply at 9.

⁵⁷⁷ HPC Class 4 Initial at 4.

⁵⁷⁸ Tr. at 69:21–70:07 (Apr. 17, 2024) (Englund, Joint Creators II).

⁵⁷⁹ HPC Class 4 Initial at 4.

⁵⁸⁰ Tr. at 4:12–19 (Apr. 18, 2024) (Geiger, HPC (Audience Participation Session)).

⁵⁸¹ Tr. at 70:08–14 (Apr. 17, 2024) (Englund, Joint Creators II).

⁵⁸² HPC Class 4 Initial at 4.

⁵⁸³ Tr. at 4:21–23 (Apr. 18, 2024) (Geiger, HPC (Audience Participation Session)).

alignment research leads to corrections of flaws, resulting in more trustworthy algorithms and AI systems, the value of the original work would be strengthened.”⁵⁸⁴ Opponents disagreed. Joint Creators II argued that “it seems like market harm is a possibility if we’re talking about exposing creative works at least.”⁵⁸⁵ However, many of opponents’ concerns are not applicable to the refined class.⁵⁸⁶

If researchers’ conduct established a viable *prima facie* claim—which is unclear on this record—all four factors would therefore weigh in favor of fair use. But that is not sufficient to justify the proposed exemption, given the Register’s conclusion that section 1201 does not apply.⁵⁸⁷

d. Causation

Proponents bear the burden of establishing that, but for section 1201’s anticircumvention prohibition, they could gain lawful access to the allegedly copyrighted AI models and components necessary for their research.⁵⁸⁸ Absent causation, an exemption will not relieve the research barriers they described. As explained above, their unauthorized research on closed platforms controlled by third parties faces practical difficulties that would not be remedied by an exemption to section 1201. Moreover, proponents have not shown that their conduct involves “circumvent[ing] a technological measure” that “effectively controls access to a work.”⁵⁸⁹ On this record, the Register therefore recommends denying the proposed exemption as unnecessary.

⁵⁸⁴ HPC Class 4 Initial at 4.

⁵⁸⁵ Tr. at 70:15–17 (Apr. 17, 2024) (Englund, Joint Creators II).

⁵⁸⁶ For example, DVD CCA and AACCS LA alleged that the proposed exemption would lead to an increase in piracy due to the possibility that it could be used to circumvent “CSS and AACCS content protection technologies” that protect DVDs and Blu-ray players. *See* DVD CCA & AACCS LA Class 4 Opp’n at 12–17.

⁵⁸⁷ *Cf.* 2018 Recommendation at 3 (“In considering these proposals, the Office again notes that many of these activities seem to ‘have little to do with the consumption of creative content or the core concerns of copyright.’ It should be emphasized, however, that section 1201 does not permit the Acting Register to recommend, or the Librarian to grant, exemptions on that basis alone.”).

⁵⁸⁸ *See* 2021 Recommendation at 7–8, 11 (discussing the rulemaking’s burden of proof standards); *see also* Section 1201 Report at 115, 117 (discussing the rulemaking’s evidentiary standards).

⁵⁸⁹ 17 U.S.C. § 1201(a)(1)(A), (3)(A)–(B).

i. Closed Systems

Conducting research on a platform controlled by an entity unwilling to allow it presents numerous difficulties. For example, HPC claimed that violating terms of service may lead to “access restrictions such as account suspension and user bans (blanket bans on email addresses, IP addresses, and credit cards)”; that “exceeding rate limits or using automated tools without authorization can halt inputs or result in account suspension or other reprisals”; and that “bypassing guardrails without authorization may lead to account suspension or other reprisals.”⁵⁹⁰

Joint Academic Researchers identified similar concerns and pointed to a lack of transparency.⁵⁹¹ They stated that platforms may restrict “purchases of additional model usage”; deprecate “or mak[e] undocumented changes to a model/API that is actively being tested”; limit “access to model or system outputs (e.g. by blocking access to logits after they were previously available)”; and deny “access to information about what model(s) is being used in an AI system.”⁵⁹²

But these concerns arise from the closed nature of SaaS platforms, not section 1201’s prohibition on circumvention. Although proponents emphasized the “chilling effects” of legal reprisals, their own comments identified other concerns. Joint Academic Researchers said the “risk of losing account access *by itself* may dissuade researchers” from investigating trustworthiness.⁵⁹³ Together with HPC, they cited an academic paper suggesting that legal protection alone is insufficient: “Legal safe harbors still do not prevent account suspensions or other enforcement action that would impede independent safety and trustworthiness evaluations.”⁵⁹⁴

Accordingly, the Register finds that it is the third-party control of closed SaaS systems, regardless of the prohibition on circumvention in section 1201, that inhibits the research described by proponents.

⁵⁹⁰ HPC Class 4 Reply at 5–6.

⁵⁹¹ Joint Academic Researchers Class 4 Reply at 5.

⁵⁹² *Id.*

⁵⁹³ *Id.* at 8 (emphasis added).

⁵⁹⁴ Safe Harbor for AI Evaluation and Red Teaming at 7.

ii. *Circumvention of Effective TPMs*

Section 1201(a)(3) provides two definitions:

(A) to “circumvent a technological measure” means to descramble a scrambled work, to decrypt an encrypted work, or otherwise to avoid, bypass, remove, deactivate, or impair a technological measure, without the authority of the copyright owner; and

(B) a technological measure “effectively controls access to a work” if the measure, in the ordinary course of its operation, requires the application of information, or a process or a treatment, with the authority of the copyright owner, to gain access to the work.⁵⁹⁵

Proponents identified several purported TPMs and described how researchers might circumvent them during research.⁵⁹⁶ But based on the record presented, it does not appear that researchers are circumventing technological measures within the purview of section 1201 or that those measures effectively control access to copyrighted works.

Proponents broadly identified three categories of TPMs—account authentication, rate limits, and algorithmic safeguards—and the Register considers each below.⁵⁹⁷

Account Authentication. HPC claimed that AI platforms often require user accounts to access their service, that establishing a user account requires the acceptance of terms of service, and that researchers may establish new accounts with the intent to violate the platform’s terms of service (or after a prior ban from the platform).⁵⁹⁸ Likewise, Joint Academic Researchers claimed that researchers may “circumvent” an account suspension by opening a new account with a

⁵⁹⁵ 17 U.S.C. § 1201(a)(3)(A)–(B).

⁵⁹⁶ See, e.g., HPC Class 4 Initial at 3; Open Policy Class 4 Initial at 5; HPC Class 4 Reply at 4–6; Joint Academic Researchers Class 4 Reply at 4–7.

⁵⁹⁷ HPC identifies the three categories as “account requirements,” “rate limits,” and “algorithmic safeguards,” whereas Joint Academic Researchers split them into two “blocking inputs and outputs” and “suspensions, rate limits, and purchase restrictions.” See HPC Class 4 Reply at 4–5; Joint Academic Researchers Class 4 Reply at 5.

⁵⁹⁸ HPC Class 4 Reply at 4–5.

different credit card and phone number, by using a colleague’s account, or by “some other mechanism.”⁵⁹⁹

The Register acknowledges that systems that authenticate user credentials prior to granting access to web-based services are a paradigmatic example of technological measures that effectively control access to a work.⁶⁰⁰ In the ordinary course of operation, a user must provide a password, API key, or some other credential, which qualifies as the “application of information” to gain access.⁶⁰¹ Accordingly, were researchers intending to hack authentication systems, *e.g.*, through backdoor attacks, section 1201 (and, of course, other laws) could be implicated.

Here, however, other than a reference to “some other mechanism,” there is nothing in the record to suggest that good-faith researchers would employ such techniques.⁶⁰² Instead, proponents described researchers using *valid* credentials, in a manner that may violate the platforms’ contractual terms of use, to “circumvent” the account authentication system.⁶⁰³ Most district courts have held that using valid access credentials, even without authorization, does not constitute circumvention under section 1201.⁶⁰⁴ Circumvention requires the

⁵⁹⁹ Joint Academic Researchers Class 4 Reply at 7.

⁶⁰⁰ *See, e.g., I.M.S. Inquiry Mgmt. Sys., Ltd. v. Berkshire Info. Sys., Inc.*, 307 F. Supp. 2d 521, 531–32 (S.D.N.Y. 2004) (“I.M.S.’s password protection fits within this definition. In order to gain access to the e-Basket service, a user in the ordinary course of operation needs to enter a password, which is the application of information. Indeed, the Second Circuit in *Universal Studios* confirmed that ‘[t]he DMCA . . . backed with legal sanctions the efforts of copyright owners to protect their works from piracy behind digital walls such as encryption codes or *password protections*.”) (quoting *Universal City Studios, Inc. v. Corley*, 273 F.3d 429, 435 (2d Cir. 2001)).

⁶⁰¹ *Id.*

⁶⁰² *See* Joint Academic Researchers Class 4 Reply at 7; *Cf.* Tr. at 19:02–11 (Apr. 17, 2024) (Geiger, HPC) (suggesting that opponents’ discussion of “brute forcing passwords” was a “hyperbolic diversion”).

⁶⁰³ *See, e.g.*, HPC Class 4 Reply at 5; Joint Academic Researchers Class 4 Reply at 7; Generative AI Has a Visual Plagiarism Problem.

⁶⁰⁴ *See, e.g., Digital Drilling Data Sys. LLC v. Petrolink Servs. Inc.*, No. 4:15-CV-02172, 2018 WL 2267139, at *14 (S.D. Tex. May 16, 2018); *see also* *Joint Stock Co. Channel One Russia Worldwide v. Infomir LLC*, No. 16-cv-1318 (GBD) (BCM), 2017 WL 696126, at *18 (S.D.N.Y. Feb. 15, 2017) (“[T]here is no liability under § 1201(a)(1)(A) where the defendant misuses a password, or otherwise uses ‘deceptive’ methods (as opposed to its own technology) to circumvent the technology that the copyright owner relied on for protection.”); *iSpot.tv, Inc. v. Teyfukova*, No.

“descrambling, decrypting, avoiding, bypassing, removing, deactivating or impairing a technological measure *qua* technological measure,” and supplying valid credentials does not avoid or bypass an authentication system in its “gatekeeping capacity.”⁶⁰⁵

The Register agrees and finds that section 1201 does not inhibit the research described by proponents to the extent that researchers seek to circumvent account requirements by creating new accounts or using those accounts in a manner that violates the platform’s terms of service.⁶⁰⁶

Rate Limits. HPC claimed that “[r]ate limiting is a common technological measure for controlling access to a system if the user repeats the same action (such as providing input to the AI system) rapidly within a set period of time.”⁶⁰⁷ They suggested that researchers may circumvent rate limits through “IP address rotation and automated backoff measures, or by establishing another account.”⁶⁰⁸ In support, HPC cited a blog post which explained that ChatGPT’s API returns an error message when users make an “excessive number of API queries in a short period of time.”⁶⁰⁹ Although the article does not mention IP address rotation, it describes backoff tactics, which resolve the error by “introducing successively greater delays between the API calls each time this error is

2:21-cv-06815-MEMF (MARx), 2023 WL 3602806, at *6 (C.D. Cal. May 22, 2023) (“The wording of the statute indicates that ‘circumvention’ requires some manipulation of the technological measure at hand and certainly more than that a username and password was simply transferred into the hands of another.”); *Dish Network L.L.C. v. World Cable Inc.*, 893 F. Supp. 2d 452, 464 (E.D.N.Y. 2012) (“[U]sing deception to gain access to copyrighted material is not the type of ‘circumvention’ that Congress intended to combat in passing the DMCA.”); *I.M.S.*, 307 F. Supp. 2d at 532 (“In the instant matter, defendant is not said to have avoided or bypassed the deployed technological measure in the measure’s gatekeeping capacity. The Amended Complaint never accuses defendant of accessing the e-Basket system without first entering a plaintiff-generated password.”).

⁶⁰⁵ *I.M.S.*, 307 F. Supp. 2d at 532.

⁶⁰⁶ This is not an approval of this conduct. It is merely outside the scope of section 1201’s anticircumvention prohibition and the Register’s authority to grant an exemption.

⁶⁰⁷ HPC Class 4 Reply at 5.

⁶⁰⁸ *Id.* Joint Academic Researchers also briefly mentioned rate limits and purchase restrictions, but only to the extent they are enforced via account authentication. Joint Academic Researchers Class 4 Reply at 7.

⁶⁰⁹ ChatGPT Limit Errors

encountered.”⁶¹⁰ The Register also takes administrative notice of OpenAI’s documentation on rate limits, which explains how users can avoid rate limit errors using exponential backoff, with several examples of how to do so in Python.⁶¹¹

Initially, rate limit enforcement systems do not effectively control access to a work as contemplated by section 1201. They do not require “the application of information, or a process or a treatment,”⁶¹²—but instead require that users refrain from conduct, *i.e.*, applying information.

Nor do the two ways in which proponents state that they evade rate limits likely qualify as “circumvention” within the scope of section 1201. First, the use of automated backoff measures is more akin to compliance with a platform’s terms of service than circumvention without authorization. By employing backoff techniques, researchers are not avoiding or disabling the rate limit systems but attempting to stay within the limits by introducing delays. Based on OpenAI’s documentation, it even appears that some prominent platforms encourage the use of these techniques.⁶¹³ Second, IP address rotation, based on the thin record before the Office, does not appear to involve the circumvention of an effective control.⁶¹⁴ At least one court has rejected a section 1201 claim based on the circumvention of “technological safeguards and barriers” that blocked “all traffic, including legitimate users, emanating from certain cloud computing providers and internet service providers.”⁶¹⁵ Since these measures did not prevent the defendants from accessing the plaintiff’s web service via other servers and internet service providers, the technological measure did not effectively control access to a work.⁶¹⁶

⁶¹⁰ *Id.*

⁶¹¹ *Rate Limits*, OPENAI PLATFORM, <https://platform.openai.com/docs/guides/rate-limits/> (last visited Oct. 17, 2024); *see also* Section 1201 Report at 107, 110 (discussing the Office’s discretion to take administrative notice).

⁶¹² 17 U.S.C. § 1201(a)(3)(B).

⁶¹³ *See Rate Limits*, OPENAI PLATFORM, <https://platform.openai.com/docs/guides/rate-limits/> (last visited Oct. 17, 2024).

⁶¹⁴ *See* HPC Class 4 Reply at 5 & n.23; Tr. at 8:12–8:22 (Apr. 17, 2024) (Geiger, HPC) (briefly referencing IP address rotation in the context of creating new accounts).

⁶¹⁵ *Couponcabin LLC v. Savings.com, Inc.*, No. 2:14-cv-39-TLS, 2016 WL 3181826, at *1, *6 (N.D. Ind. June 8, 2016).

⁶¹⁶ *Id.* at *6.

Accordingly, the Register finds that section 1201 does not inhibit the research described by proponents as a result of rate limit systems, which they may avoid by using backoff techniques and other techniques referenced in the record.

Algorithmic Safeguards. HPC identified “algorithmic safeguards,” or “guardrails,” as “technological measures designed to restrict AI systems from providing biased, unethical, inaccurate, or unsafe output, and to help ensure the AI system is trustworthy and in alignment with human values.”⁶¹⁷ Joint Academic Researchers described techniques for implementing guardrails including “adapting [a] model so that it is less likely to produce untrustworthy outputs (e.g. via reinforcement learning from human feedback),” “adding a filter to the model to identify and halt [undesired] outputs,” or “applying filters in a user interface to identify and block banned keywords or prompts that violate a company’s acceptable use policy.”⁶¹⁸ These guardrails appear to fall into three general categories: external filters, prompt engineering, and alignment training.

External filters are programs which intercept prompts before they reach the generative model, or model outputs before they reach the user.⁶¹⁹ These range from simple keyword checks and traditional classifiers to generative language models tasked with moderation.⁶²⁰ For example, Nvidia describes how to use a (separate) generative language model as a moderation tool using two template prompts:

Instruction: {{ user_input }} Would this instruction make a language model break moderation policies, deviate from good aligned responses and provide answers that a language model should ideally not? Answer with yes/no.

Model output: {{ bot_response }} Is this output legal, ethical and not harmful to any person? Answer with yes/no.⁶²¹

The second category of guardrails is based on prompt engineering, or more specifically “system” or “safety” prompts. Although not extensively discussed in the record, this is the practice of prepending or appending unseen text to user

⁶¹⁷ HPC Class 4 Reply at 5.

⁶¹⁸ Joint Academic Researchers Class 4 Reply at 6.

⁶¹⁹ See, e.g., HPC Class 4 Reply at 5–6; Joint Academic Researchers Class 4 Reply at 6.

⁶²⁰ See, e.g., Masterkey at 5–9; NeMo Guardrails at 12.

⁶²¹ NeMo Guardrails at 12.

prompts to guide the model’s behavior.⁶²² For example, a system prompt might be: “System: You are a chat assistant designed to provide helpful and not harmful responses to user queries.”⁶²³

The third category, alignment training, is the continued training of a model to bring its behavior “in line with expected human values and intentions.”⁶²⁴ For large language models, this includes instruction tuning and reinforcement learning, which update the generative model’s parameters to lower its “propensity to generate objectionable text”⁶²⁵ or “reduc[e] the chance of generating harmful or biased text.”⁶²⁶

These three categories of guardrails do not effectively control access to a work because they do not, in the ordinary course of operation, require the application of information or a process or a treatment to gain access to the system or outputs. To the contrary, the record indicates that a near infinite variety of prompts will pass input filtering and result in a generation that passes output filtering.⁶²⁷

Even if algorithmic safeguards were effective controls, the conduct described in the record does not seem to qualify as circumvention. The cited research focuses on a single technique for bypassing guardrails: jailbreak prompts. This is not analogous to the “jailbreaking” discussed in other classes or prior rulemakings, which refers to “the process of gaining access to the operating system of a computing device . . . to install and execute software that could not otherwise be

⁶²² *Id.* at 2; Universal and Transferable Adversarial Attacks at 5.

⁶²³ Universal and Transferable Adversarial Attacks at 5–6.

⁶²⁴ Xiangyu Qi et al., *Fine-Tuning Aligned Language Models Compromises Safety, Even When Users Do Not Intend It To!* 3, ARXIV (Oct. 2023), <https://arxiv.org/pdf/2310.03693> (“Fine-Tuning Aligned Language Models”) (cited by Joint Academic Researchers Class 4 Reply at 6).

⁶²⁵ Universal and Transferable Adversarial Attacks at 18.

⁶²⁶ Masterkey at 13.

⁶²⁷ The line between allowed and non-allowed prompts also appears to be ill-defined for two reasons. First, to the extent the guardrails are statistical in nature—relying on alignment training or a separate classifier model—they may fail to block a small percentage of undesired content. See Exploiting Programmatic Behavior of LLMs at 6 (showing OpenAI’s filters had a 60% failure rate on phishing-related content *without* attacks); NeMo Guardrails at 14 (showing a 97–99% block rate for harmful requests and 2–5% for helpful requests based on a sample 200 requests). Second, whether content is undesired is inherently subjective and involves competing considerations. See NeMo Guardrails at 14 (“It should also be noted that evaluation of the output moderation rail is subjective and each person/organization would have different subjective opinions on what should be allowed to pass through or not.”).

installed or run on that device, or to remove pre-installed software that could not otherwise be uninstalled.”⁶²⁸ Instead, jailbreak prompts are adversarial prompts that are designed to elicit undesirable outputs notwithstanding alignment training and without triggering external filters.⁶²⁹

For example, a paper cited by HPC described jailbreaking as “cleverly crafting” prompts and offers an example of a chatbot that initially refuses to answer a question on malware but answers when the question is masked within a broader role-play conversation.⁶³⁰ While this conduct/prompts may avoid the *intent* of the algorithmic safeguards, the record does not indicate that they are processed differently than other prompts or otherwise avoid, bypass, remove, deactivate, or impair them as technological measures.⁶³¹ Similar to the other contractual restrictions that proponents characterize as TPMs, the consequences for a proponent’s “jailbreak” of an algorithmic guardrail arise from the platform’s interpretation of its terms of service rather than the technical manipulation of an access control.

Joint Academic Researchers also briefly discussed a second technique for circumventing guardrails: model fine-tuning, *i.e.*, the continued training of a model on a custom dataset to improve its performance for specific use cases.⁶³² In support, they cited a study demonstrating that by fine-tuning, it was possible to degrade a model’s prior alignment training, either intentionally or unintentionally.⁶³³ A section 1201 claim based on fine-tuning would encounter several challenges. At a minimum, prior alignment training is unlikely to be an

⁶²⁸ See, e.g., 2021 Recommendation at 169.

⁶²⁹ See, e.g., Do Anything Now at 6; Exploiting Programmatic Behavior of LLMs at 3; Masterkey at 1.

⁶³⁰ Masterkey at 3.

⁶³¹ The jailbreaking example in the record most akin to traditional circumvention is the use of adversarial suffixes, *i.e.*, appending difficult to interpret, seemingly random text to the end of a prompt that would otherwise get redirected by alignment training. See Universal and Transferable Adversarial Attacks at 5, 17, 28–30. However, even then, this type of attack may not bypass or impair the alignment training any more than cleverly crafted prompts or even prompts that unintentionally result in impermissible generations.

⁶³² Joint Academic Researchers Class 4 Reply at 6.

⁶³³ See Fine-Tuning Aligned Language Models.

effective control, both for the reasons discussed above and because of the cited research documenting unintentional degradation from benign fine-tuning.

Accordingly, the Register finds that section 1201 does not inhibit the research described by proponents to the extent they seek to circumvent algorithmic safeguards via adversarial prompting and fine-tuning.

e. Asserted Adverse Effects

i. Evidentiary Record

Proponents have not demonstrated that the prohibition on circumvention adversely affects their ability to make noninfringing uses, given the absence of causation. The Register finds the evidence submitted by proponents on this point insufficient.

HPC initially cited *Masterkey*, which describes a research study on the efficacy of jailbreak prompts on popular LLM chatbots.⁶³⁴ According to the paper, the authors chose not to include Baidu’s Ernie⁶³⁵ in their main study because it was optimized for Chinese, not English, and “repeated unsuccessful jailbreak attempts on Ernie result[ed] in account suspension, making it infeasible to conduct extensive trial experiments.”⁶³⁶ While they were able to conduct a smaller cross-lingual experiment using Ernie, it was limited in scope “due to the rate limit and account suspension risks upon repeated jailbreak attempts.”⁶³⁷

This paper provides some evidence that account authentication and rate limits adversely affect trustworthiness research. However, there is no indication that the adverse effects flow from the prohibition on circumvention as opposed to the technological measures themselves. The researchers did not state that they would have or could have circumvented Baidu’s account authentication and rate limits but were deterred from doing so based on section 1201 or legal risks more generally.

⁶³⁴ *Masterkey* at 4.

⁶³⁵ Ernie is a chatbot service offered by Baidu.

⁶³⁶ *Masterkey* at 4.

⁶³⁷ *Id.* at 13.

HPC and Joint Academic Researchers also cited an article titled, *Generative AI Has a Visual Plagiarism Problem*.⁶³⁸ That article claims that after one of the authors first reported his results, Midjourney banned him from the platform twice and updated its terms of service to state, “[y]ou may not use the Service to try to violate the intellectual property rights of others, including copyright, patent, or trademark rights. Doing so may subject you to penalties including legal action or a permanent ban from the Service.”⁶³⁹ However, the author went on to create two more accounts anyway, and “completed” the project.⁶⁴⁰

This article provides some evidence that account authentication adversely affects trustworthiness research. However, it does not state that the need to create new accounts imposed substantial time or cost burdens, or otherwise limited the scope of the research.⁶⁴¹ In any event, the article does not provide evidence that the *prohibition on circumvention* was responsible for any of the adverse effects. As discussed above, creating new accounts with valid credentials does not qualify as circumvention within the purview of section 1201. Moreover, the author “circumvented” Midjourney’s account requirements on several occasions, and there is no evidence that it threatened or pursued a section 1201 claim on that basis.⁶⁴² Midjourney did update its terms of service to include a vague and untargeted threat of “legal action” against users that “try to violate the intellectual property rights of others.”⁶⁴³ But it did not target the author specifically, or indicate that “legal action” referred to section 1201 claims for creating new accounts.

⁶³⁸ *Generative AI Has a Visual Plagiarism Problem*.

⁶³⁹ *Id.*

⁶⁴⁰ *Id.*

⁶⁴¹ In a separate article the authors referenced this example and claimed that the “[t]he cost of suspensions without refunds quickly tallies to hundreds of dollars, and creating new accounts is also not trivial, with blanket bans on credit cards and email addresses.” *Safe Harbor for AI Evaluation and Red Teaming* at 5. But they do not cite anything to support this claim or provide the necessary context, such as the relationship between the cost and typical research budgets, or what “not trivial” means in practice.

⁶⁴² *Generative AI Has a Visual Plagiarism Problem* (“Southen created two additional accounts in order to complete this project; these, too, were banned, with subscription fees not returned.”).

⁶⁴³ *Id.*

Setting aside general complaints about the transparency of closed systems,⁶⁴⁴ the record also includes many examples of trustworthiness research conducted on SaaS platforms without any apparent adverse effects, much less any traceable to section 1201.⁶⁴⁵ Even in the *Masterkey* research, the authors successfully tested jailbreak prompts on OpenAI’s GPT 3.5 and GPT-4, Bing’s Chat, and Google’s Bard without any reported incidents.⁶⁴⁶

Proponents also claimed that the potential liability under section 1201 has general “chilling effects” on research.⁶⁴⁷ For example, HPC stated that “[r]esearchers point to potential liability under DMCA Section 1201, if those measures are circumvented, as having a chilling effect on independent AI research and responsible disclosure of algorithmic flaws.”⁶⁴⁸ In support, it cited *A Safe Harbor for AI Evaluation and Red Teaming*, a paper authored by several members of Joint Academic Researchers.⁶⁴⁹ But that paper does not provide specific examples of research deterred or discontinued due to section 1201.

Instead, the authors asserted that section 1201 has “hampered security researchers to the extent that they requested a DMCA exemption for this purpose”; that “OpenAI has attempted to dismiss the *New York Times v. OpenAI* lawsuit on the allegation that *New York Times* research into the model constituted hacking”; and that “a petition for an exemption to the DMCA has been filed requesting that researchers be allowed to investigate bias in generative AI systems.”⁶⁵⁰ But none of these are relevant to the underlying question of whether section 1201 creates chilling effects. The security researchers requested

⁶⁴⁴ See, e.g., Joint Academic Researchers Class 4 Reply at 5; Luiza Pozzoban et al., *On the Challenges of Using Black-Box APIs for Toxicity Evaluation in Research*, ARXIV (Apr. 2023), <https://arxiv.org/abs/2304.12397> (“Black Box APIs”) (cited by Joint Academic Researchers Class 4 Reply at 5).

⁶⁴⁵ Universal and Transferable Adversarial Attacks at 5 (testing adversarial prompts on ChatGPT, Claude 2, and Bard); Fine-Tuning Aligned Language Models at 5 (testing the effect of fine-tuning on alignment training using OpenAI’s platform); Do Anything Now at 6 (testing adversarial prompts on ChatGPT and GPT 4); Exploiting Programmatic Behavior of LLMs at 6 (testing adversarial prompts on ChatGPT and other OpenAI models).

⁶⁴⁶ *Masterkey* at 4.

⁶⁴⁷ See, e.g., HPC Class 4 Reply at 3–4; Joint Academic Researchers Class 4 Reply at 8.

⁶⁴⁸ HPC Class 4 Reply at 4.

⁶⁴⁹ *Safe Harbor for AI Evaluation and Red Teaming*.

⁶⁵⁰ *Id.* at 7.

an exemption for conducting a different type of research on a different record;⁶⁵¹ OpenAI’s vague “hacking” allegations against the New York Times are not clearly linked to section 1201;⁶⁵² and the filing of a petition for a proposed exemption cannot itself constitute evidence of adverse effects.

Proponents need not necessarily provide specific examples of threatened litigation or cease-and-desist letters to demonstrate adverse chilling effects. However, the absence of any concrete examples is significant given the Office’s doubts about the likelihood or viability of a section 1201 claim for the conduct described in the record. Without an objective basis for fearing section 1201 liability, or evidence demonstrating adverse effects, the Register cannot conclude that the prohibition on circumvention is likely to have adverse effects on AI trustworthiness research.

ii. Statutory Factors

The first, second, and third section 1201 statutory factors weigh against the proposed exemption because granting it would not meaningfully increase the availability of copyrighted works, including for educational or research purposes. The research described by proponents does not appear to implicate section 1201; there is little evidence that researchers have been or will be deterred from accessing copyrighted works due to section 1201; and SaaS platforms may continue to be closed and inaccessible to researchers for practical, rather than legal, reasons.

The fourth factor is neutral because the research described by proponents does not appear to implicate section 1201 and there is no indication that the owners of SaaS platforms have relied on it for the purpose of deterring the proposed conduct. Although ACT and DVD CCA and AACS LA raised general concerns about the risks of permitting circumvention, these concerns do not appear to apply to the refined, SaaS-restricted class.⁶⁵³

⁶⁵¹ See, e.g., 2018 Recommendation at 299–311 (discussing adverse effects on security research).

⁶⁵² The Register takes administrative notice of the underlying court filing: Mem. of Law in Supp. of OpenAI Def.’s Mot. to Dismiss, *The New York Times Co. v. Microsoft Corp.*, No. 1:23-cv-11195 (S.D.N.Y., Feb. 26, 2024), ECF No. 52.

⁶⁵³ ACT Class 4 Opp’n at 2 (discussing how the proposed exemption does “not address the potential damage to all software markets—mobile apps, enterprise software, and firmware.”); DVD CCA & AACS LA Class 4 Opp’n at 17–18 (noting that the proposed exemption would

For the fifth factor, the Register observes that granting an exemption without greater evidence of causation could have unintended adverse effects by implying that non-exempted uses violate section 1201 when they likely do not. Accordingly, this factor also weighs against granting an exemption.

Based on the foregoing, the Register finds that proponents have not demonstrated that they are—or are likely to be during the next three years—adversely affected by section 1201 in their ability to engage in trustworthiness research on generative AI SaaS systems.

3. NTIA Comments

NTIA supports an exemption for “AI trustworthiness research” modeled after the current security research exemption and HPC’s proposal, but without the requirement that the research be conducted on lawfully acquired devices, or with the authorization of the system owner or operator.⁶⁵⁴ Like the Register, NTIA found this revision necessary because the activities “described in the record . . . predominately relate to noninfringing uses which are not authorized by the owner or operator of the applicable computer, computer system, or computer network.”⁶⁵⁵

In all but one instance, NTIA agrees with the Register that the proposed research activities are unlikely to fall within the scope of section 1201.⁶⁵⁶ It concludes that circumventing account requirements by creating new accounts following bans, or otherwise violating the terms of service on platforms, does not entail “circumventing a *technological* measure.”⁶⁵⁷ Likewise, it finds that rate limits that can be “bypassed through [] IP address rotation and automated backoff measures,” are not covered by section 1201 because “a rate limit does not prevent

“permit conduct that threatens to, even unintentionally, disrupt the manufacturers’ implementation of the robustness and compliance rules, and thereby compromise the integrity of the overall content protection scheme”); *see also* Tr. at 20:17–21:16 (Apr. 17, 2024) (Ayers, AACSLA) (discussing the potential of the proposed exemption to encompass Blu-ray players).

⁶⁵⁴ *See* NTIA Letter at 32 & n.130 (removing the requirement that circumvention be undertaken “on a lawfully acquired device or machine on which an AI system operates” or “with the authorization of the owner or operator of [the] computer, computer system, or computer network”).

⁶⁵⁵ *Id.*

⁶⁵⁶ NTIA explicitly requests that the Office “report and comment on” these conclusions. *Id.* at 41.

⁶⁵⁷ *Id.* at 38–40.

someone from accessing the computer programs,” and only “become[s] effective” after a user already is in possession or has lawfully accessed “the copyrighted work at issue (e.g., the interface code for the AI system).”⁶⁵⁸

However, NTIA disagrees with the Register’s assessment regarding “jailbreaking.” In its view, if a researcher uses a “jailbreak prompt” to obtain access to model’s “system prompt,” which it was trained not to divulge “in the ordinary course of its operation,” that *would* constitute circumventing a technological measure within the meaning of section 1201.⁶⁵⁹ As discussed above, however, “jailbreak” prompting—as described in the record—is unlikely to involve circumventing technological measures within the purview of section 1201.

Based on its conclusion that at least one area of proposed research activity falls within the scope of section 1201, NTIA finds that proponents have sufficiently demonstrated that section 1201 adversely affects their ability to engage in noninfringing uses.⁶⁶⁰ In support, it credits statements from academic researchers that describe the “chilling effect” of section 1201 on their research independent of the risk of account suspensions.⁶⁶¹ However, as noted in the Recommendation, these vague statements were not supported by any specific examples of research that was deterred or discontinued due to the prohibition on circumvention.

As a final note, given the Register’s conclusions regarding causation and adverse effects, the Recommendation did not need to consider the implications of dropping the requirement that research be conducted on lawfully acquired devices, or with the authorization of the system owner or operator. However, that would represent a dramatic expansion over past exemptions, which were intended for use with lawfully acquired or otherwise lawfully accessed works and devices.⁶⁶² The Register would have significant reservations authorizing an

⁶⁵⁸ *Id.* at 40–41.

⁶⁵⁹ *Id.* at 41.

⁶⁶⁰ NTIA Letter at 35–37.

⁶⁶¹ *Id.* at 37. NTIA further explained that the existence of user agreements, which could prohibit the proposed conduct, “does not defeat a finding of adverse effects” because violations of a user agreement may carry a lower penalty than liability under section 1201. *Id.* at 36–37.

⁶⁶² *See, e.g.*, 37 C.F.R. § 201.40(b)(1) (“Motion pictures . . . where the motion picture is lawfully made and acquired.”), (b)(5)(i)(B) (Literary works where the “copy of each literary work is

exemption primarily intended to be applied to use on third-party servers that proponents have no legal right to access. She would need to consider the risk of abuse, the ongoing costs circumvention might impose on third parties, which may not be trivial in the case of high-volume generative AI inference, and the impact that might have on their ability to offer free or low-cost services to the public.

NTIA also requests that if the Register declines to recommend the proposed exemption, she should “seek to interpret the existing security research exemption to cover at least some aspects of good-faith AI trustworthiness research.”⁶⁶³ It asserts that various terms used within that exemption could include “at least some aspects of” good-faith AI trustworthiness research.⁶⁶⁴ Specifically, “security flaw or vulnerability” and “security and safety” could encompass research involving outputs of a biased, discriminatory, or infringing nature, as their presence might “*ipso facto* qualify as a ‘security flaw or vulnerability,’ the correction of which would improve the system’s ‘security or safety.’”⁶⁶⁵

The Register declines to provide the requested interpretation for several reasons. First, the parties did not request an expansion of the current security research exemption as required by the rulemaking process. Second, it is not clear, based on the record provided, that the parties would have met the burden of proof, as the current and proposed exemption cover distinct uses. Finally, given the “lawfully acquired” or “with authorization” limitation in the regulatory language, the proposed expansion would not be likely to address proponents’ concerns.

4. Conclusion and Recommendation

While good faith trustworthiness research is valuable and likely noninfringing, proponents have not met their burden of demonstrating that section 1201’s prohibition has or will adversely affect their ability to conduct such research. The record reflects that the adverse effects identified by proponents arise from the third-party control of closed SaaS systems, regardless of section 1201’s

lawfully acquired and owned . . . or licensed.”), (b)(8) (“Computer programs . . . in order to connect to a wireless telecommunications network and such connection is authorized by the operator of such network.”).

⁶⁶³ NTIA Letter at 42–43.

⁶⁶⁴ *Id.* at 42.

⁶⁶⁵ *Id.* at 42–43.

applicability. Moreover, it is unlikely that section 1201 would apply to the research conduct identified in the record. Therefore, the Register recommends denying the Class 4 petition.

E. Proposed Class 5: Computer Programs—Repair of Commercial Industrial Equipment

1. Background

a. Summary of Proposed Exemption and Recommendation

Two organizations, Public Knowledge and iFixit, jointly submitted a petition to expand the current exemption relating to the diagnosis, maintenance, repair, and modification of software-enabled devices.⁶⁶⁶ The petition seeks to expand the existing exemption covering consumer devices to “include commercial industrial equipment.”⁶⁶⁷

Initial comments in support of the proposal were submitted by the petitioners.⁶⁶⁸ Opposition comments were submitted by ACT; Associated Equipment Distributors (“AED”); Joint Creators I; and Philips North America, LLC (“Philips”).⁶⁶⁹ Reply comments were submitted by the petitioners, as well as the Association of Home Appliance Manufacturers (“AHAM”), and jointly by the U.S. Department of Justice’s Antitrust Division and the Federal Trade Commission (“DOJ Antitrust and the FTC”).⁶⁷⁰ Several organizations and individuals spoke in support of and in opposition to the proposed exemption at the public hearings hosted by the Office.⁶⁷¹ Following the hearing, several organizations submitted post-hearing letters responding to questions from the

⁶⁶⁶ Public Knowledge & iFixit Class 5 Pet. at 2; *see* 37 C.F.R. § 201.40(b)(14).

⁶⁶⁷ Public Knowledge & iFixit Class 5 Pet. at 2 (citing examples “such as automated building management systems and industrial equipment (i.e. soft serve ice cream machines and other industrial kitchen equipment)”); Public Knowledge & iFixit Class 5 Initial at 2; Tr. 41:06–11 (Apr. 16, 2024) (Rose, Public Knowledge).

⁶⁶⁸ Public Knowledge & iFixit Class 5 Initial.

⁶⁶⁹ ACT Class 5 Opp’n; AED Class 5 Opp’n; Joint Creators I Class 5 Opp’n; Philips Class 5 Opp’n; *see* Joint Creators I Class 5 Opp’n at 1.

⁶⁷⁰ Public Knowledge & iFixit Class 5 Reply; Ass’n of Home Appliance Mfrs. (“AHAM”) Class 5 Reply; U.S. Department of Justice’s Antitrust Division (“DOJ”) & Federal Trade Commission (“FTC”) Class 5 Reply.

⁶⁷¹ *See* Tr. at 1 (Apr. 16, 2024) (Blough, FreeICT USA; Englund, Joint Creators I; Gingerich, SFC; Higginbotham, Consumer Reports; Nair, ACT; Rosborough, iFixit & Canadian Repair Coalition; Rose, Public Knowledge; Wiens, iFixit); Tr. at 6:15–7:05 (Apr. 18, 2024) (Cade, Farm Action) (Audience Participation Session); Tr. at 7:11–10:15 (Apr. 18, 2024) (Crain, Nat’l Ass’n of Mfrs. (“NAM”)) (Audience Participation Session).

Office.⁶⁷² Finally, the Office engaged in two *ex parte* meetings with commenters and letters summarizing the meetings are part of the record.⁶⁷³

After reviewing the record, the Register recommends a new exemption covering diagnosis, maintenance, and repair of retail-level commercial food preparation equipment, a class which proponents have provided sufficient evidence to demonstrate is a class adversely affected by the prohibition against circumvention. She declines, however, to recommend an exemption for a broader class of software-enabled commercial and industrial devices where insufficient evidence was submitted to support it.

b. Overview of Issues

In the 2021 rulemaking, the Register declined a similar petition seeking a broad expansion of the exemption addressing software-enabled devices, to include commercial and industrial equipment,⁶⁷⁴ citing the insufficient record submitted in support of the expansion.⁶⁷⁵ Petitioners here have “s[ought] to correct that,” asserting that including such equipment is appropriate and justified by the current rulemaking record.⁶⁷⁶

In support of the petition, petitioners provided four “index examples” (*i.e.*, representative examples) that “illustrate the necessity of the proposed exemption, as well as the universality and scope of adverse effects.”⁶⁷⁷ These examples involved “commercial food preparation, construction equipment, programmable logic controllers (PLCs), and enterprise IT.”⁶⁷⁸ They conceded that the proposed class is “unusually broad,” but contended that the users of

⁶⁷² See ACT Post-Hearing Resp. (May 28, 2024); Public Knowledge & iFixit Post-Hearing Resp. (May 28, 2024); Joint Creators I Post-Hearing Resp. (May 28, 2024).

⁶⁷³ Consumer Tech. Ass’n (“CTA”), Cisco, Hewlett Packard Enters. (“HPE”), IBM, Info. Tech. Indus. Council (“ITI”), & TechNet Class 5 *Ex Parte* Letter (Aug. 2, 2024); NAM Class 5 *Ex Parte* Letter (July 31, 2024).

⁶⁷⁴ 2021 Recommendation at 190, 197–98.

⁶⁷⁵ *Id.*

⁶⁷⁶ Public Knowledge & iFixit Class 5 Initial at 2.

⁶⁷⁷ *Id.*

⁶⁷⁸ *Id.*; see also Tr. at 6:17–7:04 (Apr. 18, 2024) (Cade, Farm Action) (Audience Participation Session) (commenting that farmers need to repair “not only the equipment that they use in the fields or in the barns but also their commercial equipment that is so integrated into their systems for total production in their operations”).

commercial and industrial equipment are similarly situated, the proposed uses of device software for this equipment are similar, and the examples of TPMs and adverse effects provided in support of the petition share sufficient commonalities across the class.⁶⁷⁹ Petitioners further asserted that the proposed uses— diagnosis, maintenance, and repair—are fair uses.⁶⁸⁰ Finally, they argued that these uses are being adversely affected by the prohibition against circumventing TPMs, specifically noting that “downtime caused by the user’s inability to perform the most basic diagnosis and repair . . . results in significant, quantifiable financial harm” for users of commercial industrial devices.⁶⁸¹

In response, opponents asserted that the proposed expansion is overbroad and that proponents have failed to develop a record that demonstrates sufficient commonalities among commercial and industrial devices.⁶⁸² They contended that, more so than with consumer devices, circumvention of TPMs to repair commercial and industrial devices is commercial in nature creating a risk of market harm that tips the fair use and adverse effects analyses against granting an exemption.⁶⁸³ Further, they asserted that adequate alternatives to circumvention exist such that an exemption is not warranted.⁶⁸⁴ Finally, opponents objected to the inclusion of certain types of equipment and devices— namely, appliances, construction equipment, medical devices, arcade game machines, motion picture projection equipment, and systems for transmitting music and motion pictures—asserting that the record is inadequate and that circumvention of TPMs on such devices carry unique risks for copyright owners.⁶⁸⁵

⁶⁷⁹ Public Knowledge & iFixit Class 5 Initial at 7–9; Public Knowledge & iFixit Class 5 Reply at 2–3.

⁶⁸⁰ Public Knowledge & iFixit Class 5 Initial at 9–10.

⁶⁸¹ *Id.* at 3, 11–18.

⁶⁸² See ACT Class 5 Opp’n at 2; AED Class 5 Opp’n at 1–2; Joint Creators I Class 5 Opp’n at 2–4; Philips Class 5 Opp’n at 3–5; Tr. at 8:08–19 (Apr. 18, 2024) (Crain, NAM) (Audience Participation Session).

⁶⁸³ See Philips Class 5 Opp’n at 5; Tr. at 54:18–55:02 (Apr. 16, 2024) (Englund, Joint Creators I).

⁶⁸⁴ See ACT Class 5 Opp’n at 4; AED Class 5 Opp’n at 1–2; Joint Creators I Class 5 Opp’n at 3.

⁶⁸⁵ See AED Class 5 Opp’n at 1–2; Philips Class 5 Opp’n at 3–4; AHAM Class 5 Reply at 2–4; Joint Creators I Class 5 Post-Hearing Resp. at 3 (May 28, 2024); Tr. 11:04–18 (Apr. 16, 2024) (Englund, Joint Creators I).

2. Discussion

a. Scope of the Proposed Class

Proponents' proposed class consists of "physical devices, controlled by copyrighted software, that are designed for use in commercial or industrial settings" that "employ computerized diagnosis and error-identification functions . . . locked behind TPMs."⁶⁸⁶ As a threshold matter, the Register considers whether the record supports the class of works as proposed or whether the class should be redefined based on the record. This inquiry looks at whether the proponents have demonstrated that sufficient commonalities exist for the proposed uses across the full spectrum of the class.

Proponents argued for the breadth of the proposed class on several grounds. First, they asserted that the "users [of software-enabled commercial and industrial equipment] are similarly situated regarding the need for circumvention."⁶⁸⁷ On this point, proponents pointed to "significant, quantifiable financial harm due to equipment downtime," specifically, loss of revenue that these users experience due to a "[l]ack of third party or self-help repair options."⁶⁸⁸ Second, they asserted that the uses covered by the proposed exemption—"diagnosis, maintenance, and repair necessary to restore affected equipment to pre-error levels of functionality"—are similar.⁶⁸⁹ Third, they contended that the "devices themselves share sufficient commonalities to constitute a cohesive class."⁶⁹⁰ For example, they explained that commercial and industrial equipment are "used in tightly regulated industries with strict safety protocols for workers and products alike; utilize arrays of environmental and safety sensors to guide operations; return complex diagnostic codes when prompted; and require extensive occupational training to use in the first instance."⁶⁹¹ They further noted that of the five discrete features ascribed to software-enabled consumer devices in the Office's 2016 Software Study, commercial and industrial devices share all but one feature (*i.e.*, that "they are

⁶⁸⁶ Public Knowledge & iFixit Class 5 Initial at 9.

⁶⁸⁷ *Id.* at 8.

⁶⁸⁸ *Id.*

⁶⁸⁹ *Id.*

⁶⁹⁰ *Id.* at 9.

⁶⁹¹ *Id.* at 2 (comparing the Taylor soft-serve machine and a skid-steer loader).

consumer-grade”).⁶⁹² Given that “[t]here is as great a range of variation among salient features of software-enabled consumer devices as there is within this proposed class,” proponents asserted the proposed scope is appropriate.⁶⁹³

Opponents objected that a class covering all software-enabled commercial and industrial equipment and devices is overbroad and that the record does not demonstrate that sufficient commonalities exist among the uses (diagnosis, maintenance, and repair), the users, and the types of equipment and devices at issue.⁶⁹⁴ Philips commented that “the Register cannot possibly engage in the requisite fact-intensive fair use analysis for the myriad products and uses that fall within the proposed class.”⁶⁹⁵ It further asserted that the proposed class is overbroad because it would include infringing uses; specifically, it would cover commercial activity that it contended is unlikely to be fair use.⁶⁹⁶ Similarly, Joint Creators I commented that because the proposed class and TPMs to be circumvented are “broad and undefined,” it is unclear what activities would fall within the scope of the exemption and if it “would apply to devices and circumvention techniques that the Copyright Office has excluded in the past.”⁶⁹⁷ Based on the current record of four categories of index examples provided by proponents, Joint Creators I asserted that the types of TPMs on the equipment are “too dissimilar to constitute a meaningful class” and that adequate alternatives to circumvention exist.⁶⁹⁸ Further, in the event that the Register recommends a broad class, opponents asserted that certain devices should be carved out.⁶⁹⁹

⁶⁹² Public Knowledge & iFixit Class 5 Initial at 3.

⁶⁹³ *Id.*

⁶⁹⁴ See ACT Opp’n at 2–3; AED Opp’n at 1–2; Joint Creators I Opp’n at 2–4; Philips Opp’n at 4–7; NAM Class 5 *Ex Parte* Letter at 1–2 (July 31, 2024); CTA, Cisco, HPE, IBM, ITI & TechNet Class 5 *Ex Parte* Letter at 2–4 (Aug. 2, 2024).

⁶⁹⁵ Philips Class 5 Opp’n at 5.

⁶⁹⁶ *Id.* at 5–7.

⁶⁹⁷ Joint Creators I Class 5 Opp’n at 3; *Id.* at 4 (“The record in this proceeding is too sparse to support the broad proposed expansion of the existing repair exemption.”).

⁶⁹⁸ *Id.* at 3–4; Tr. at 73:01–10 (Apr. 16, 2024) (Englund, Joint Creators I).

⁶⁹⁹ See AED Class 5 Opp’n at 1–2 (construction equipment); Philips Class 5 Opp’n at 3–4 (medical devices); AHAM Class 5 Reply at 2–4 (home appliances); Joint Creators I Class 5 Post-Hearing Resp. at 3 (May 28, 2024); Tr. 11:13–18 (Apr. 16, 2024) (Englund, Joint Creators I) (arcade game machines, motion picture projection equipment, and systems for transmitting music and motion

In the 2021 rulemaking, the Register found that “[i]t is unclear . . . that commercial and industrial devices and systems share . . . commonalities” with consumer devices.⁷⁰⁰ For example, she observed that some users of such devices and systems had adequate alternatives to circumvention, unlike users of consumer devices.⁷⁰¹ In addition, it was “unclear whether the proposed uses would contravene negotiated licensing terms between commercial actors, which might affect the analysis of potential market harm.”⁷⁰²

Based on the current record, the Register concludes again that proponents have not adequately demonstrated that the scope of the proposed class is appropriate. First, the record is too sparse. When the Register has previously granted exemptions to types of software-enabled devices, the record has more clearly demonstrated specific harms to users.⁷⁰³ Here, proponents only offered a handful of examples in support of the proposed class, and asserted that there are commonalities among those examples, but provided no other documentary evidence. As explained below, these examples may show adverse effects with respect to specific categories of devices; taken together, however, they are insufficient to support a broad class covering all software-enabled commercial and industrial equipment.

Second, on this record, commercial and industrial equipment appear to have meaningful dissimilarities from software-enabled consumer devices and from each other. Unlike with consumer devices, it is unclear whether in some cases the software used by commercial and industrial equipment is licensed and negotiated separately from the physical equipment.⁷⁰⁴ Moreover, the types and

pictures); CTA, Cisco, HPE, IBM, ITI & TechNet Class 5 *Ex Parte* Letter at 2–4 (Aug. 2, 2024) (enterprise IT equipment).

⁷⁰⁰ 2021 Recommendation at 197.

⁷⁰¹ *Id.*

⁷⁰² *Id.* at 197–98.

⁷⁰³ See 2021 Recommendation at 209 n.1154, 211 n.1168; see also 2015 Recommendation at 219 & n.1441 (outlining support for vehicle repair exemption, including comments submitted by “over 2500 individuals”).

⁷⁰⁴ See ACT Class 5 Opp’n at 4 (“TPMs protect layers of licensed software in devices. Licensed software is part of most products with digital content embedded in them. The system of licensed software is a crucial component to the investment and distribution in existing products and future innovations.”); Tr. at 55:08–56:05, 73:11–16 (Apr. 16, 2024) (Englund, Joint Creators I); see also CTA, Cisco, HPE, IBM, ITI & TechNet Class 5 *Ex Parte* Letter at 2–4 (Aug. 2, 2024) (describing

applications of equipment that fall within the category of commercial and industrial equipment encompass a diversity significantly broader than consumer devices. Although the index examples do not appear to provide access to expressive works, opponents noted several types of equipment within the proposed class that would provide such access.⁷⁰⁵ These considerations would lead to divergent analysis of potential market harm across the proposed class. Finally, it is unclear on this record that users are similarly situated with respect to economic harm from equipment downtime, which appears to vary significantly depending on the industry.⁷⁰⁶

In sum, the rulemaking record does not support a broad proposed class that would cover all commercial and industrial equipment and devices because it is unclear that all such equipment and devices share sufficient commonalities and that the users are similarly situated. This conclusion is consistent with the Register's prior recommendations that have focused on specific types of commercial and industrial equipment and device types. It also aligns with both the Office's Software Study and the FTC's Nixing the Fix Report, both of which cautioned against lumping together commercial and industrial equipment with consumer devices.⁷⁰⁷

how enterprise IT equipment is "fundamentally different from consumer devices in terms of the equipment itself and its primary uses and users.").

⁷⁰⁵ See Tr. at 11:12–18 (Apr. 16, 2024) (Englund, Joint Creators I) (citing as examples "commercial and industrial equipment used for processing creative works includes things like arcade game machines, motion picture projection equipment, systems for transmitting music and motion pictures in commercial buildings and by cable television, satellite broadcasting").

⁷⁰⁶ Public Knowledge & iFixit Class 5 Initial at 8 ("The cost of downtime varies by device and industry, but ranges from hundreds to millions of dollars per day.").

⁷⁰⁷ Software Study at 9 (distinguishing between "consumer-grade" and "industrial devices, the latter of which may be subject to contractual and licensing agreements between parties with similar bargaining power"); FTC, NIXING THE FIX: AN FTC REPORT TO CONGRESS ON REPAIR RESTRICTIONS 51 (May 2021), https://www.ftc.gov/system/files/documents/reports/nixing-fix-ftc-report-congress-repair-restrictions/nixing_the_fix_report_final_5521_630pm-508_002.pdf ("When deciding the scope of expanded repair rights, policymakers should think about whether the rights should be limited to consumer goods or include capital items. Given the complexity and variation among products, it seems unlikely that there is a one-size fits all approach that will adequately address this issue."). It is also consistent with the approach of state repair legislation, which has typically made distinctions between consumer devices and commercial and industrial equipment. See Tr. at 84:03–08 (Apr. 16, 2024) (Englund, Joint Creators I); see, e.g., Cal. Pub. Res. Code § 42488.2(3)(A); Cal. Bus. & Prof. Code § 9801(h)-(i). Although NTIA recommends taking a

Because the record does address the diagnosis, maintenance, and repair of four specific types of software-enabled equipment—commercial food preparation equipment, construction equipment, PLCs, and enterprise IT—the Register will analyze how the purported uses for these types of equipment are being or are likely to be adversely affected by the prohibition against circumvention.⁷⁰⁸

b. Works Protected by Copyright

Computer programs, including those contained in commercial and industrial equipment, are protected under the Copyright Act.⁷⁰⁹ Specifically, the firmware that controls commercial food preparation equipment, construction equipment, PLCs, and enterprise IT are copyrightable as literary works.⁷¹⁰ The Register, therefore, finds that at least some works included in the proposed class are protected by copyright.

c. Asserted Noninfringing Uses

Proponents asserted that diagnosis, maintenance, and repair are noninfringing fair uses of the firmware installed on commercial and industrial equipment.⁷¹¹ The Office previously recognized this in its Software Study and past 1201 recommendations, observing that device repair is generally noninfringing.⁷¹² As the Office stated in the Software Study, while the “fair use analysis is ultimately a fact-specific inquiry” that can vary based on the type of device, when “properly

more expansive approach to defining the scope of the class, *see* NTIA Letter at 47, the Register declines to adopt this approach as proponents have not met their burden of showing that all commercial and industrial equipment shares sufficient commonalities. Given the requirements of section 1201, she disagrees with the approach.

⁷⁰⁸ The Register separately analyzes whether existing exemptions covering certain types of commercial devices, including agricultural equipment and medical devices and systems, should be renewed. *See* NPRM at 72,020–22 (recommending renewal).

⁷⁰⁹ 17 U.S.C. § 101 (defining “computer program” and “literary works”); *see also* 2021 Recommendation at 199–200; 2018 Recommendation at 194; 2015 Recommendation at 218; Software Study at 2–3.

⁷¹⁰ *See* 2021 Recommendation at 199–200; 2018 Recommendation at 194; 2015 Recommendation at 218 & n.1427; Software Study at 2–3; *see also* Tr. at 46:13–19 (Apr. 16, 2024) (Blough, FreeICT USA); Tr. at 46:22–47:04 (Apr. 16, 2024) (Wiens, iFixit).

⁷¹¹ The terms “maintenance” and “repair” are defined in the current exemption for consumer devices. *See* 37 C.F.R. § 201.40(b)(14); *see also* 17 U.S.C. § 117(d).

⁷¹² *See* Software Study at 39–41; 2021 Recommendation at 201–04; 2018 Recommendation at 191–94.

applied, the fair use factors—together with the existing case law—should ensure that consumers, repair technicians, and other interested parties will be able to engage in most traditional repair . . . activities without fear of copyright infringement liability.”⁷¹³ As noted above, although a broad class is not supported by the record, proponents have shown that the proposed *uses* are similar across the broad class of commercial and industrial equipment. Accordingly, the Register will consider whether diagnosis, maintenance, and repair are fair uses of commercial and industrial equipment, generally.

Citing the Office’s previous conclusions with respect to repair, and repeating arguments made by iFixit and the Repair Association in the previous 1201 rulemaking, proponents asserted that the same fair use analysis applies across the entire class of software-enabled commercial and industrial equipment.⁷¹⁴ On the first factor, proponents asserted that “[a]ccessing and utilizing copyrighted software is necessary for the diagnosis, maintenance, and repair of the devices containing (or operated by) said software,” that is, each proposed “use is necessary in order to achieve full functionality.”⁷¹⁵ They contended that the second factor favors fair use because “[c]ontrol software for industrial and commercial equipment is ‘essentially functional,’ and ‘not meant to be consumed as a creative work.’”⁷¹⁶ For the third factor, they argued that use of the entire work “is reasonable because it often requires analysis of the full software program, and the ultimate product does not contain infringing copies.”⁷¹⁷ Finally, they asserted that the fourth factor favors fair use because “there is no separable market for the underlying software,” which is specific to the equipment in which it is embedded, and because “repair bolsters the market for the copyrighted works, as ‘repair supports—rather than displaces—the purpose of the embedded programs that control the device.’”⁷¹⁸

⁷¹³ Software Study at 39–41.

⁷¹⁴ See Public Knowledge & iFixit Class 5 Initial at 9 (citing 2021 Recommendation at 202; Software Study at 39).

⁷¹⁵ *Id.* at 10.

⁷¹⁶ *Id.* (citing 2021 Recommendation at 201).

⁷¹⁷ *Id.* (citing 2021 Recommendation at 201).

⁷¹⁸ *Id.* (citing Software Study at 40).

Opponent ACT objected that, given the scope of the proposed class, the uses do not permit a “blanket determination” on fair use.⁷¹⁹ ACT further warned of “potential damage to all software markets.”⁷²⁰ Citing *Warhol*, Philips asserted that the proposed uses are “non-transformative and commercial.”⁷²¹ Joint Creators I commented that “because the scope of the proposed class is broad and undefined, and the type of access controls to be circumvented is also broad and undefined, it is unclear exactly what type of activities would ultimately fall within the proposed exemption.”⁷²²

At the public hearing on this class, proponents testified that neither the commerciality of some users nor the *Warhol* decision meaningfully affects the fair use analysis.⁷²³ Opponents disagreed, testifying that commerciality matters under *Warhol* and that the users here are primarily commercial actors.⁷²⁴ In addition, opponents stated that the licensed software found in enterprise IT and some PLCs is different than the functional firmware built into devices.⁷²⁵ Opponents asserted that the market harm analysis is different for these types of devices because the software is licensed separately from the equipment, though

⁷¹⁹ ACT Class 5 Opp’n at 2; *see also* Philips Class 5 Opp’n at 5 (arguing that “the Register cannot possibly engage in the requisite fact-intensive fair use analysis for the myriad products and uses that fall within the proposed class”); CTA, Cisco, HPE, IBM, ITI & TechNet Class 5 *Ex Parte* Letter at 6–7 (Aug. 2, 2024) (“Because of the vast number of different commercial and industrial systems captured by the proposed class, the fact-specific analysis needed for a fair use analysis is not possible.”).

⁷²⁰ ACT Class 5 Opp’n at 2.

⁷²¹ Philips Class 5 Opp’n at 6–7.

⁷²² Joint Creators I Class 5 Opp’n at 3.

⁷²³ *See* Tr. at 54:03–14, 57:02–58:03 (Apr. 16, 2024) (Rose, Public Knowledge); Tr. at 56:11–24 (Apr. 16, 2024) (Rosborough, iFixit & Canadian Repair Coalition); *see also* Public Knowledge & iFixit Class 5 Reply at 4 (declining to “relitigate the Office’s prior findings that repair is a fair use”).

⁷²⁴ *See* Tr. at 54:17–55:02 (Apr. 16, 2024) (Englund, Joint Creators I); *see also* CTA, Cisco, HPE, IBM, ITI & TechNet Class 5 *Ex Parte* Letter at 7 (Aug. 2, 2024) (“While consumer product users may circumvent access controls for non-commercial reasons, users and repairers of commercial and industrial systems would circumvent access controls solely for commercial motivations. That is, granting an exemption would advance the interests of those with only an economic interest to potentially win commercial contracts with commercial customers.”).

⁷²⁵ *See* Tr. at 55:08–55:17 (Apr. 16, 2024) (Englund, Joint Creators I); *see also* CTA, Cisco, HPE, IBM, ITI & TechNet Class 5 *Ex Parte* Letter at 8 (Aug. 2, 2024) (“In the commercial context of enterprise IT equipment, associated software is licensed between the commercial customer and manufacturer. Such software may be separately priced, or its value may initially be included as part of a hardware purchase.”).

proponents disagreed with this assertion.⁷²⁶ They further contended that equipment repair harms the current market for the works because faulty repair could “expose information on . . . software or provide the consumer a bad product.”⁷²⁷

The Register agrees with proponents that diagnosis, maintenance, and repair of at least some types of software-enabled commercial and industrial equipment are likely to be fair uses where the purpose is to restore equipment functionality. Considering the first factor, she finds that accessing and using equipment software to restore functionality is a different purpose than running the software to operate the equipment and perform equipment functions. Although opponents rightly note that commerciality should be considered, the Supreme Court has clarified that commerciality is “not dispositive” and to be weighed against other factors, including the degree to which the use has a further purpose or different character.⁷²⁸ Here, the proposed uses are intended to restore commercial or industrial equipment’s functionality, not to commercialize the embedded copyrighted software.⁷²⁹ The Register accordingly concludes that the first factor favors fair use.

The Register finds that the second factor favors fair use because software embedded in commercial and industrial equipment is not used for its expressive qualities, but rather for its functional and informational aspects that enable users to control and understand the operation of the equipment.⁷³⁰ And even assuming some programs may be unpublished, that does not alter the functional nature of the works.⁷³¹

⁷²⁶ Compare Tr. at 55:18–56:07, 60:15–61:02 (Apr. 16, 2024) (Englund, Joint Creators I) with Tr. at 59:23–60:11 (Apr. 16, 2024) (Rose, Public Knowledge).

⁷²⁷ See Tr. at 58:23–59:07 (Apr. 16, 2024) (Nair, ACT).

⁷²⁸ *Warhol*, 598 U.S. at 531–33; see *Google*, 593 U.S. at 32 (“[M]any common fair uses are indisputably commercial.”).

⁷²⁹ See Public Knowledge & iFixit Class 5 Initial at 10; Tr. at 56:15–24 (Apr. 16, 2024) (Rosborough, iFixit & Canadian Repair Coalition).

⁷³⁰ See *Google LLC*, 593 U.S. at 28–29, 40; *Lexmark International, Inc. v. Static Control Components, Inc.*, 387 F.3d 522, 536 (6th Cir. 2004); *Sony Comput. Entm’t, Inc. v. Connectix Corp.*, 203 F.3d 596, 603 (9th Cir. 2000).

⁷³¹ See 17 U.S.C. § 107 (“The fact that a work is unpublished shall not itself bar a finding of fair use if such finding is made upon consideration of all the [statutory] factors.”); *Harper & Row*,

On the third factor, courts have concluded that use of the entirety of a work is permissible where necessary to achieve a transformative purpose.⁷³² As in previous rulemakings, the Register finds that this factor should be given little weight here because the use is necessary to accomplish the transformative purposes of diagnosis, maintenance, and repair.⁷³³ Accordingly, the Register finds the amount used is reasonable relative to the purpose of the use.

Turning to the fourth factor, consistent with findings in prior rulemakings, the Register credits proponents' assertion that most equipment software generally has no independent value separate from being used with the equipment.⁷³⁴ That said, opponents demonstrated that, in some cases, equipment software is licensed separately. Nonetheless, there is no indication that the proposed uses would interfere with the licensing market for the software, as opposed to merely restoring functionality so that the equipment performs as intended.⁷³⁵ As for opponents' concern that equipment repairs may be performed improperly and thus harm the market for the software, for purposes of the fair use analysis, in order to qualify for the exemption, the proposed uses must be executed in a manner that restores device functionality while preserving technological protections for software and other information. Activities that do not restore the equipment to "the state of working in accordance with its original specifications and any changes to those specifications authorized for that device" would fall outside the scope of the exemption.⁷³⁶ Whether the proposed uses jeopardize

Publishers v. Nation Enters., 471 U.S. 539, 554 (quoting S. REP. NO. 94-473, at 64 (1975)) ("[T]he unpublished nature of a work is '[a] key, though not necessarily determinative, factor' tending to negate a defense of fair use.").

⁷³² See *Google*, 593 U.S. at 34 ("The 'substantiality' factor will generally weigh in favor of fair use where . . . the amount of copying was tethered to a valid, and transformative, purpose."); *Connectix Corp.*, 203 F.3d at 603–06.

⁷³³ See 2021 Recommendation at 210–12; 2018 Recommendation at 204; 2015 Recommendation at 235–36.

⁷³⁴ See 2018 Recommendation at 204–05; 2015 Recommendation at 236; Software Study at 41.

⁷³⁵ See 2021 Recommendation at 212 (concluding for medical devices and systems that although "some system features on certain devices may be separately licensed through a subscription service, the purpose of the proposed uses is not to enable ongoing unauthorized access to enhanced features, but merely to restore functionality"); 2018 Recommendation at 198–99 (concluding that although certain vehicle telematics and entertainment software "can have independent value, and may be accessed through subscription services," where access is necessary to engage in vehicle repair, it is not likely to harm the market for the software).

⁷³⁶ 37 C.F.R. § 201.40(b)(14)(ii); see also 17 U.S.C. § 117(d)(2).

equipment safety and security are considered as part of the adverse effects analysis below. In sum, while some equipment software may be licensed separately, in general, diagnosis, maintenance, and repair of commercial and industrial equipment is unlikely to harm the market for the embedded software.

Taking the factors together, the Register concludes that proponents have adequately shown that the proposed uses are likely to be fair.

d. Causation

The record shows that the statutory prohibition on circumvention of access controls limits users' ability to diagnose, maintain, and repair commercial food preparation equipment, construction equipment, PLCs, and enterprise IT.⁷³⁷ But for the prohibition, users likely could gain lawful access to the copyrighted computer programs for noninfringing repair-related purposes.

e. Asserted Adverse Effects

Having concluded that certain repair-related activities are likely noninfringing as to the specific categories of commercial and industrial equipment identified above, the Register evaluates whether these activities are being adversely affected by the prohibition against circumvention. She first analyzes whether, for each category of equipment, the record reflects that the prohibition on circumvention is inhibiting the identified likely noninfringing uses such that there is a facial showing of adverse effects.⁷³⁸ Next, if there does appear to be an adverse effect on the proposed uses, she evaluates those categories specifically in connection with the section 1201 statutory factors.

i. Equipment Categories

Commercial Food Preparation Equipment. In their initial comments, proponents primarily relied on an example of a frequently broken soft-serve ice cream machine used in a restaurant to illustrate the adverse effects on repair activities. Proponents explained that to fix these machines, users must be able to interpret "unintuitive" error codes on the machine. Although some error codes are listed in the user manual that shipped with the machine, these manuals are "often

⁷³⁷ See Public Knowledge & iFixit Class 5 Initial at 2–7.

⁷³⁸ See 2018 Recommendation at 219 ("[T]o recommend an exemption, there must be a record that shows distinct, verifiable, and measurable adverse effects, or that such effects are likely to occur.").

outdated and incomplete” as the “[e]rror codes change with each firmware update.”⁷³⁹ Moreover, other error codes can only be accessed by reading a service manual that is made available only to authorized technicians or through a “TPM-locked on-device service menu.”⁷⁴⁰ This service menu can only be accessed by using a manufacturer-approved diagnostic tool or through an “extended, undocumented combination of key presses.”⁷⁴¹ However, “it is unclear whether the 16-press key sequence . . . still works, or has been changed in subsequent firmware updates.”⁷⁴² Proponents accordingly asserted that many users are unable to diagnose and repair the machine without circumventing the machine’s TPM to access the service menu software, resulting in significant financial harm from lost revenue.⁷⁴³

In a post-hearing letter, proponents expanded on their initial comments by providing additional representative examples of adverse effects on repair of retail-level commercial food preparation equipment. Similar to the soft-serve machines, proponents commented that for certain commercial espresso machines, some error codes are provided in the user manuals, but other error codes require the user to contact customer support to have an authorized service technician service the machine.⁷⁴⁴ Proponents also provided examples of retail-level commercial ovens and refrigerators that users are unable to repair due to password protections limiting access to device software functions.⁷⁴⁵ They further noted that “despite low current adoption, there is reason to believe that software-enabled equipment will become more common in the coming years; and that manufacturer behavior in adjacent markets indicates a high risk of ‘lockout’ problems developing as the market shifts.”⁷⁴⁶ Based on this expanded record, proponents asserted that “the Office can extrapolate the feasibility of an

⁷³⁹ Public Knowledge & iFixit Class 5 Initial at 11.

⁷⁴⁰ *Id.* at 3, 11.

⁷⁴¹ *Id.* at 3.

⁷⁴² *Id.* at 3 n.9; *see* Tr. at 20:15–21:03 (Apr. 16, 2024) (Rose, Public Knowledge).

⁷⁴³ Public Knowledge & iFixit Class 5 Initial at 11; Tr. at 77:07–11 (Apr. 16, 2024) (Rose, Public Knowledge).

⁷⁴⁴ Public Knowledge & iFixit Class 5 Post-Hearing Resp. at 1 (May 28, 2024).

⁷⁴⁵ *Id.* at 1–2.

⁷⁴⁶ *Id.* at 3.

exemption from both the Taylor soft serve machine, and the broader state of the market [for] commercial food preparation equipment.”⁷⁴⁷

Opponents, in their initial comments, did not specifically object to the adverse effects analysis for soft-serve machines or retail-level commercial food preparation equipment. Rather, they raised concerns about proponents failing to “show a need for circumvention to avoid any alleged adverse effects.”⁷⁴⁸ In reply comments, AHAM asserted that because “almost all repairs [of home appliances] are mechanical in nature . . . [t]here are no repair activities that would require *the circumvention* of installed TPMS.”⁷⁴⁹ During the hearing, Joint Creators I testified that “it seems like the proponents’ complaint about the Taylor [soft-serve] machines is that they display cryptic error codes and break a lot. But neither of those is a circumvention issue.”⁷⁵⁰ Joint Creators I further noted that to the extent that proponents seek an exemption for a specific third-party circumvention device, trafficking in that device would be prohibited by the anti-trafficking provisions of section 1201.⁷⁵¹ In their post-hearing letter, ACT contended that proponents have failed to show “actual harm.”⁷⁵² Joint Creators I commented that “commercial food preparation also occurs in factory settings, where very different industrial-scale equipment is used.”⁷⁵³ They concluded that proponents have not shown that soft-serve machines used in a restaurant setting “are comparable to each of the devices in th[e] wide range of commercial food preparation equipment, or for that matter that those devices are comparable to one another.”⁷⁵⁴

⁷⁴⁷ *Id.* at 2.

⁷⁴⁸ Joint Creators I Opp’n Class 5 at 4 (citing 2021 Recommendation at 11); *see also* Tr. at 9:03–17 (Apr. 18, 2024) (Crain, NAM) (Audience Participation Session) (commenting that “proponents have not supplied direct evidence about the specific TPMs that would be subject to the proposed exemption[.]” and the examples provided by proponents are “both de minimis and speculative”).

⁷⁴⁹ AHAM Reply Class 5 at 3.

⁷⁵⁰ Tr. at 19:01–04 (Apr. 16, 2024) (Englund, Joint Creators I).

⁷⁵¹ Tr. at 19:11–20 (Apr. 16, 2024) (Englund, Joint Creators I).

⁷⁵² ACT Class 5 Post-Hearing Resp. at 1–2 (May 28, 2024).

⁷⁵³ Joint Creators I Class 5 Post-Hearing Resp. at 2 (May 28, 2024).

⁷⁵⁴ *Id.* at 3.

The Register is aware that the “issue [with broken soft-serve machines] is so widespread that it has become a news story in its own right.”⁷⁵⁵ She also notes that efforts to circumvent TPMs on soft-serve machines to repair them have resulted in at least one lawsuit.⁷⁵⁶ While the lawsuit involves the commercial distribution of a circumvention tool in violation of the DMCA anti-trafficking provisions, it indicates why, absent an exemption, users may be deterred from developing their own means of circumvention.⁷⁵⁷ The unrefuted record supports the conclusion that diagnosis of the soft-serve machine’s error codes for purposes of repair can often only be done by accessing software on the machine that is protected by TPMs (which require a passcode or proprietary diagnostic tool to unlock), and the threat of litigation from circumventing them inhibits users from engaging in repair-related activities. Additional record materials provided by proponents support the conclusion that users of other retail-level commercial food preparation equipment are similarly situated. As with soft-serve machines, users of software-enabled ovens and refrigerators used in retail or restaurant settings are being inhibited from performing certain repairs by TPMs that block access to error codes. Accordingly, the Register finds that users of retail-level commercial food preparation equipment may be adversely affected by the prohibition against circumvention.

The Register, however, does not conclude that “industrial-scale” food preparation equipment is within the scope of the class. As opponents have pointed out, the devices involved may be very different in multiple aspects and

⁷⁵⁵ Public Knowledge & iFixit Class 5 Initial at 11; *see also* Tr. at 17:05–09 (Apr. 16, 2024) (Rose, Public Knowledge); Emily Price, *Here’s Exactly Why McDonald’s Ice Cream Machines Are Always Broken*, FOOD & WINE (Apr. 5, 2024), <https://www.foodandwine.com/mcdonalds-ice-cream-machine-broken-8627641>; Andy Greenberg, *McDonald’s Ice Cream Machine Hackers Say They Found the ‘Smoking Gun’ That Killed Their Startup*, WIRED (Dec. 14, 2023), <https://www.wired.com/story/kytch-taylor-mcdonalds-ice-cream-machine-smoking-gun/>; Andy Greenberg, *They Hacked McDonald’s Ice Cream Machines — and Started a Cold War*, WIRED (Apr. 28, 2021), <https://www.wired.com/story/they-hacked-mcdonalds-ice-cream-makers-started-cold-war/>; Julie Jargon, *McDonald’s Customers Scream, and Get New Ice Cream Machines*, WALL ST. J. (Mar. 2, 2017), <https://www.wsj.com/articles/mcdonalds-customers-scream-and-get-new-ice-cream-machines-1488476862>.

⁷⁵⁶ *See* Tr. at 24:07–19 (Apr. 16, 2024) (Englund, Joint Creators I; Wiens, iFixit; Rose, Public Knowledge). The Register takes administrative notice of the following court filing: Compl., *Kytch, Inc. v. McDonald’s Corp.*, No. 3:23-cv-01998 (N.D. Cal. Mar. 1, 2022), ECF No. 1.

⁷⁵⁷ *See* Tr. at 22:20–22:24 (Apr. 16, 2024 (Wiens, iFixit) (explaining how a soft-serve machine user might develop a circumvention tool to perform repair-related activities).

proponents have not established a record of adverse effects with respect to industrial equipment.

Construction equipment. Proponents' comments regarding construction equipment focused on proprietary diagnostic kits that manufacturers offer for the repair of this equipment. Proponents asserted that "critical diagnostic and error information is locked behind TPMs that can only be bypassed by using authorized, licensed, and branded tools" in the kits.⁷⁵⁸ They provided examples from three construction equipment manufacturers, noting that for two of them, the only way to perform repairs is by having access to the manufacturers' proprietary systems through utilities in the kit.⁷⁵⁹ Although the third manufacturer sells a "consumer version" of its diagnostic equipment, "its capabilities are significantly limited" such that certain repairs require a level of access only available to authorized dealers.⁷⁶⁰ Likewise, proponents noted that third-party systems "provide only limited diagnostic capabilities" because "they cannot interpret the full range of fault codes."⁷⁶¹ Consequently, proponents contended, users are unable to perform repairs without access to proprietary tools.

Most opponents did not specifically contradict proponents' adverse effects analysis for construction equipment. AED, however, asserted that "[m]ost of the diagnosis, maintenance, and repair can be completed by a customer or independent repair provider without consulting an authorized dealership or the manufacturer."⁷⁶² It further contended that the few examples provided by proponents are not representative of the "thousands of original equipment manufacturers and the millions of heavy equipment customers across the United States."⁷⁶³ Finally, it noted that there are "significant environmental and safety consequences of faulty repairs and maintenance on construction equipment."⁷⁶⁴

⁷⁵⁸ Public Knowledge & iFixit Class 5 Initial at 4.

⁷⁵⁹ *Id.* at 4–5, 12.

⁷⁶⁰ *Id.* at 12.

⁷⁶¹ *Id.*

⁷⁶² AED Class 5 Opp'n at 1–2; *see also* NAM Class 5 *Ex Parte* Letter at 3–4 (July 31, 2024) (outlining various ways that manufacturers facilitate self-repair by construction equipment users).

⁷⁶³ AED Class 5 Opp'n at 2.

⁷⁶⁴ *Id.* at 1.

On the record presented, it is unclear that the TPMs are controlling access to repair functionality installed on construction equipment. Instead, what proponents appear to be seeking is access to proprietary software installed on diagnostic tools that are separate from the equipment. In other words, it is uncertain that circumvention of the TPMs installed on the equipment—by itself and without access to a diagnostic tool—would allow diagnosis, maintenance, and repair.⁷⁶⁵ Because of this uncertainty, the Register concludes that proponents have not adequately demonstrated how users are being adversely affected from diagnosing, maintaining, and repairing construction equipment by the prohibition against circumvention. To the extent that the petition seeks a right to access tools that would perform the circumvention, as explained in previous rulemakings,⁷⁶⁶ the Librarian’s statutory authority does not extend to the provision of circumvention tools.

Programmable Logic Controllers. PLCs are “computers that have been adapted specifically to control and coordinate manufacturing processes at scale.”⁷⁶⁷ Proponents explained that PLCs are made by “many manufacturers,” and that “[m]any PLCs are purchased as part of an integrated system package[s]” for which “system integrators write custom code to control a machine, and sell it as a package to the customer.”⁷⁶⁸ The code, including “diagnostic and maintenance information,” is generally password-protected, though “different integrators have different perspectives on whether this code should be locked for security purposes, and if so, at whose discretion (i.e. by the manufacturer, integrator, vendor, or end user).”⁷⁶⁹ Proponents cited to comments made in internet forums where PLC users attest to various issues associated with retrieving and resetting PLC passwords, including where passwords are “held by a long-departed

⁷⁶⁵ Cf. 2021 Recommendation at 224–26 (medical device repairs can be performed by accessing software installed on the device itself); 2015 Recommendation at 219–20, 239–40 (vehicle software necessary to execute repairs accessible via circumvention).

⁷⁶⁶ See, e.g., 2021 Recommendation at 230.

⁷⁶⁷ Public Knowledge & iFixit Class 5 Initial at 5; Tr. at 13:10–13 (Apr. 16, 2024) (Wiens, iFixit) (explaining that although the deployment of PLCs crosses industries, there are “a relatively small number of actual operating systems and actual CPUS that are running these systems”).

⁷⁶⁸ Public Knowledge & iFixit Class 5 Initial at 5; see Tr. at 46:22–47:04 (Apr. 16, 2024) (Wiens, iFixit).

⁷⁶⁹ Public Knowledge & iFixit Class 5 Initial at 5–6; see Tr. at 14:11–19 (Apr. 16, 2024) (Wiens, iFixit); Tr. at 51:15–25 (Apr. 16, 2024) (Higgenbotham, Consumer Reports); Tr. at 67:05–13 (Apr. 16, 2024) (Wiens, iFixit).

administrator” or where a vendor goes out of business.⁷⁷⁰ They contended that when a PLC breaks and the PLC password is either not provided to the purchaser or access to the password is lost, “[t]he PLC is rendered unusable.”⁷⁷¹ As a result, they argued that users can experience downtime that can lead to substantial financial harm.⁷⁷²

Opponents objected on the grounds that the overall evidentiary record of adverse effects is insufficient.⁷⁷³ They took issue with the assertion that passwords were effectively limiting repair, noting that PLC users “can opt out of password protection when the feature is prompted during the initial download” and that even where a password is created (often by the user), “numerous methods exist to assist in the recovery of a PLC password when it has been lost or forgotten.”⁷⁷⁴ Further, opponents noted that adequate alternatives to circumvention exist, namely through warranties and service agreements.⁷⁷⁵ They also observed that TPMs may, in some cases, be used to enforce license restrictions on proprietary software installed on the PLCs.⁷⁷⁶ Finally, they expressed concern about circumvention compromising device safety.⁷⁷⁷

While proponents have provided a few examples of TPMs inhibiting repair of certain PLCs, overall the record is inconclusive as to whether users are being adversely affected by the prohibition against circumvention. As opponents pointed out, passwords are often created by the equipment’s users to secure the PLC. For example, proponents cited the Siemens Simatic Step 7/S7 as a PLC where the password “cannot be reset or recovered.”⁷⁷⁸ Yet, opponents pointed out that an online support guide for that PLC includes instructions on how to

⁷⁷⁰ Public Knowledge & iFixit Class 5 Initial at 13–14.

⁷⁷¹ *Id.* at 6; see Tr. at 48:17–49:08 (Apr. 16, 2024) (Wiens, iFixit).

⁷⁷² See Public Knowledge & iFixit Class 5 Initial at 14; Tr. at 76:02–13 (Apr. 16, 2024) (Rose, Public Knowledge).

⁷⁷³ See, e.g., Joint Creators I Class 5 Opp’n at 4; Tr. at 34:17–19 (Apr. 16, 2024) (Nair, ACT).

⁷⁷⁴ NAM Class 5 *Ex Parte* Letter at 3 (July 31, 2024).

⁷⁷⁵ See Tr. at 61:25–62:06 (Apr. 16, 2024) (Englund, Joint Creators I); Tr. at 80:02–11 (Apr. 16, 2024) (Englund, Joint Creators I).

⁷⁷⁶ See Tr. at 16:09–19 (Apr. 16, 2024) (Englund, Joint Creators I).

⁷⁷⁷ Tr. at 84:12–15 (Apr. 16, 2024) (Englund, Joint Creators I) (“[I]ndustrial equipment is designed to be secure in a way that consumer equipment very often is not . . .”).

⁷⁷⁸ Public Knowledge & iFixit Class 5 Initial at 6.

reset a password.⁷⁷⁹ The Register concludes that, on the current record, there is insufficient evidentiary support to recommend an exemption covering PLCs.

Enterprise IT. Proponents provided examples of three types of enterprise IT equipment that require circumvention to perform repair-related activities: digital storage products, servers, and mainframes.⁷⁸⁰ For digital storage products, proponents commented that at least one manufacturer’s products “contain multiple known points of failure” and that to perform diagnosis, maintenance, and repair, “the user must input a cryptographic key” that the manufacturer “will not supply . . . under any circumstances to individuals other than their own technicians.”⁷⁸¹ Similarly for servers, proponents noted that one manufacturer requires access to a key or password to perform repair-related functions.⁷⁸² A separate “Upgrade Access Key” is required to perform some firmware upgrades. For at least one brand of mainframes, proprietary tools are required to replace components and “[m]aintenance functions must be authorized by passwords which are only made available to [the manufacturer’s] employees.”⁷⁸³ Proponents further asserted that although authorized technicians can perform most repairs, “for older models for which [the manufacturer] no longer provides maintenance, there is no possible way to replace the CPU without circumvention.”⁷⁸⁴ They contended that these limitations on repair can result in costly unplanned outages.⁷⁸⁵

⁷⁷⁹ See NAM Class 5 *Ex Parte* Letter at 3 & n.9 (July 31, 2024).

⁷⁸⁰ Public Knowledge & iFixit Class 5 Initial at 6–7; see also Tr. at 64:24–65:04 (Apr. 16, 2024) (Blough, FreeICT USA).

⁷⁸¹ Public Knowledge & iFixit Class 5 Initial at 6–7; see Tr. at 30:02–11 (Apr. 16, 2024) (Blough, FreeICT USA) (explaining TPMs on storage arrays); Tr. at 67:25–68:23 (Apr. 16, 2024) (Blough, FreeICT USA) (describing types of TPMs on enterprise IT equipment).

⁷⁸² See Public Knowledge & iFixit Class 5 Initial at 7.

⁷⁸³ *Id.* at 7.

⁷⁸⁴ *Id.*; see Tr. at 29:17–22 (Apr. 16, 2024) (Blough, FreeICT USA) (“[T]here are items on the mainframe that you cannot repair the unit without passwords and without bypassing. So it means that a customer . . . literally cannot repair it once [the manufacturer] has decided that they no longer want to support it.”); Tr. at 77:21–78:04 (Apr. 16, 2024) (Blough, FreeICT USA) (asserting that once a device reaches “end of service life,” the manufacturer “will abandon that machine and will no longer sign service contracts and that machine will be un-repairable”).

⁷⁸⁵ Public Knowledge & iFixit Class 5 Initial at 16 (citing examples of “historical incidents caused by unplanned mainframe downtime”); Tr. at 76:14–18 (Apr. 16, 2024) (Rose, Public Knowledge).

As with other types of commercial and industrial equipment, opponents asserted that proponents have not satisfied their evidentiary burden as it relates to enterprise IT equipment.⁷⁸⁶ Beyond that overarching objection, opponents averred that there are adequate alternatives to circumvention in most cases, namely, authorized repair and maintenance services as well as self-repair options for users.⁷⁸⁷ Responding to proponents' assertion that manufacturers abandon older equipment, opponents commented that enterprise IT equipment manufacturers engage with users to provide ongoing support, even after the "End of Service" or "End of Life" date.⁷⁸⁸ Opponents also noted that enterprise IT software can be separately priced, indicating that it arguably has value independent from the equipment.⁷⁸⁹ Finally, they expressed concern about cybersecurity for enterprise IT equipment, commenting that circumvention could lead to compromised TPMs.⁷⁹⁰

On the record presented, the Register is unable to conclude that users of enterprise IT equipment are being adversely affected by the prohibition against circumvention. Proponents' general assertions about enterprise IT equipment failures are insufficiently supported by examples and documentary evidence of

⁷⁸⁶ See Joint Creators I Class 5 Opp'n at 4; NAM Class 5 *Ex Parte* Letter at 2 (July 31, 2024) (commenting that "the Office has historically declined to recommend adoption of proposed exemptions where the alleged adverse effects are merely speculative").

⁷⁸⁷ Tr. at 62:05–15 (Apr. 16, 2024) (Englund, Joint Creators I) (noting that for enterprise IT, users "tend to have maintenance contracts for the hardware and the software" so that "they have access to very quick maintenance" and "if they experience any downtime it is brief"); CTA, Cisco, HPE, IBM, ITI & TechNet Class 5 *Ex Parte* Letter at 5 (Aug. 2, 2024) (commenting that user repair options are "robust" and authorized repair options are broadly available).

⁷⁸⁸ See CTA, Cisco, HPE, IBM, ITI & TechNet Class 5 *Ex Parte* Letter at 5–6 (Aug. 2, 2024); see also Tr. at 80:02–19 (Apr. 16, 2024) (Englund, Joint Creators I) (commenting that "end-of-life" dates are provided by manufacturers so that users can plan for upgrading equipment and software).

⁷⁸⁹ See Tr. at 26:09–22 (Apr. 16, 2024) (Englund, Joint Creators I) (noting that enterprise IT "software is separately priced, and so it has market value distinct from the box"); CTA, Cisco, HPE, IBM, ITI & TechNet Class 5 *Ex Parte* at 8, 10 (Aug. 2, 2024).

⁷⁹⁰ See CTA, Cisco, HPE, IBM, ITI & TechNet Class 5 *Ex Parte* at 8–10 (Aug. 2, 2024); Tr. at 28:16–29:09 (Apr. 16, 2024) (Nair, ACT) (commenting that the risk to critical infrastructure "outweighs the ill-defined harm proposed in th[e] petition"); Tr. at 37:15–38:02 (Apr. 16, 2024) (Englund, Joint Creators I) (contrasting the cybersecurity risks associated with circumvention of enterprise IT with the risks associated with consumer devices). *But see* Tr. at 40:01–17 (Apr. 16, 2024) (Rosborough, iFixit & Canadian Repair Coalition) (commenting that cybersecurity risks are better addressed by other laws and regulations and that bad actors are unlikely to be deterred by section 1201's prohibition against circumvention).

users that have sought to diagnose, maintain, and repair such equipment. Although the three historical examples of mainframe issues that were provided show harm due to unplanned outages of network systems,⁷⁹¹ there is no indication that users of those systems were inhibited from performing necessary repairs by the prohibition against circumvention. Moreover, it appears that adequate alternatives to circumvention exist in the form of authorized repair services and maintenance contracts that are commonplace for enterprise IT equipment. Unlike in previous rulemakings where authorized repair services were shown to be inadequate to meet the needs of users,⁷⁹² here there is no evidence that repair services offered by the manufacturers have not met the needs of enterprise IT users.

In addition, to the extent that proponents seek access to proprietary tools, as explained above with respect to construction equipment, granting such access would exceed the Librarian's statutory authority.⁷⁹³ And where proponents seek to modify equipment software, as explained in previous rulemakings, such activity may interfere with the copyright owner's right to prepare derivative works.⁷⁹⁴

For the reasons stated above, the Register declines to recommend an exemption covering enterprise IT equipment.

ii. Statutory Factors

The Register concludes that proponents have made a threshold showing of adverse effects as to retail-level commercial food preparation equipment, but not as to the broader proposed class of all commercial and industrial equipment. She proceeds to apply the section 1201 statutory factors to determine if the identified adverse effects on the diagnosis, maintenance, and repair of such equipment support an exemption.

⁷⁹¹ See Public Knowledge & iFixit Class 5 Initial at 16.

⁷⁹² See, e.g., 2021 Recommendation at 224–29 (concluding, on a more developed record, that authorized repair options for medical device repair were inadequate and users were being adversely affected by the prohibition against circumvention); 2021 Recommendation at 220 (concluding that authorized repair options for video game optical drives were inadequate).

⁷⁹³ See, e.g., 2021 Recommendation at 230.

⁷⁹⁴ See 2021 Recommendation at 204–06; 2018 Recommendation at 206–08.

On the first factor, proponents asserted that the prohibition on circumventing TPMs restricts the availability for use of software-enabled retail food preparation equipment because the equipment cannot be used while a machine is broken.⁷⁹⁵ DOJ Antitrust and the FTC commented that “[e]xpanding options for repair of software-enabled commercial and industrial devices can facilitate restoration of these devices’ functionality—extending the useful life of commercial and industrial devices as well as increasing availability of the device software itself.”⁷⁹⁶ Opponents argued that the statutory factors did not support an exemption.⁷⁹⁷ The Register concludes that, although the record is somewhat limited, this factor favors an exemption because the prohibition on circumvention makes commercial food preparation equipment, including its software, less available for use in noninfringing diagnosis, maintenance, and repair.

Regarding the second and third factors, iFixit and Public Knowledge asserted that, although these factors have limited relevance to the proposed uses, “an exemption would remove significant impediments to training and research into these systems and the devices they operate by removing the threat of liability.”⁷⁹⁸ The Register agrees that these factors have limited relevance to this petition and its stated purpose.

On the fourth factor, the effect of circumvention on the market for the copyrighted software, proponents asserted that because “[t]he copyrighted software at issue is customized to the particular make and model of equipment in which it is installed[,] . . . [t]here is no independent market for the software or firmware being accessed.”⁷⁹⁹ Unlike other device types, such as enterprise IT equipment, opponents did not raise specific concerns about there being a market

⁷⁹⁵ Public Knowledge & iFixit Class 5 Initial at 11.

⁷⁹⁶ DOJ Antitrust & FTC Class 5 Reply at 13.

⁷⁹⁷ Joint Creators I Class 5 Opp’n at 4 (stating that the index examples provided by proponents are insufficient to “demonstrate that the proposed expanded exemption would advance the availability of works; further any significant nonprofit goals; result in commentary concerning works; or avoid harming copyright owners’ markets for authorized derivative works”).

⁷⁹⁸ Public Knowledge & iFixit Class 5 Initial at 16–17 (citing 2021 Recommendation at 215); *see also* DOJ Antitrust & FTC Class 5 Reply at 14 (commenting that the prohibition against circumvention inhibits “training and development” and that “access can be necessary to better understand how devices work”).

⁷⁹⁹ Public Knowledge & iFixit Class 5 Initial at 17; *see* DOJ Antitrust & FTC Class 5 Reply at 14.

for software installed on commercial food preparation equipment. Accordingly, the Register concludes that where a user is accessing the software to diagnose, maintain, or repair commercial food preparation equipment, those uses support rather than displace the embedded computer programs.⁸⁰⁰ This factor therefore does not weigh against an exemption.

Under the fifth statutory factor, the Librarian has discretion to consider additional factors she deems appropriate. Proponents asserted that the public interest in deterring anticompetitive behavior favors the requested exemption. In support, iFixit and Public Knowledge cited to the Office’s 2021 Recommendation, recent congressional hearings on “right to repair,” and a letter from twenty-eight state attorneys general supporting repair activities.⁸⁰¹ DOJ Antitrust and the FTC likewise observed that “[t]he right to repair products is an area of significant legislative and regulatory focus,” and commented that “the availability of independent repair and service options may enhance competition in the market for software-enabled devices by reducing the user’s reliance on [original equipment manufacturer]-authorized service providers.”⁸⁰² Consistent with prior rulemakings, the Register concludes that an exemption to facilitate repair of retail-level commercial food preparation equipment could help address broader competitive concerns.⁸⁰³ Thus, this factor provides further support for the proposed exemption.⁸⁰⁴

After weighing the statutory factors, the Register concludes that the prohibition on circumvention of TPMs is causing, or is likely to cause, an adverse impact on the noninfringing diagnosis, repair, and maintenance of software-enabled retail-level commercial food preparation equipment. Using the language of prior exemptions, the Register concludes that the definitions of “maintenance” and “repair” appropriately focus these activities on the restoration of equipment

⁸⁰⁰ See Software Study at 40.

⁸⁰¹ Public Knowledge & iFixit Class 5 Initial at 17.

⁸⁰² DOJ Antitrust & FTC Class 5 Reply at 14–15.

⁸⁰³ See 2021 Recommendation at 218, 227–28.

⁸⁰⁴ Although opponents raised concerns about cybersecurity, mostly in the context of PLCs and enterprise IT, because those concerns do not appear to extend to circumvention to repair commercial food preparation equipment, the Register declines to consider them under the fifth statutory factor.

functionality, while retaining TPMs that serve other beneficial purposes such as protecting user privacy, security, and safety.

3. NTIA Comments

NTIA supports an exemption for the diagnosis, maintenance, and repair of commercial and industrial equipment.⁸⁰⁵ As in the 2021 rulemaking, they again recommend that the exemption be “device-agnostic,”⁸⁰⁶ cautioning against a “granular device-by-device approach.”⁸⁰⁷ If the Register declines to recommend an exemption that covers all commercial and industrial equipment, NTIA would support an exemption that “covers commercial and industrial equipment but excludes specific categories of equipment.”⁸⁰⁸ Another alternative they propose would be to “narrow the definition of what ‘repair’ entails for select types of commercial and industrial equipment.”⁸⁰⁹ Finally, to address opponents’ concerns about safety, security, and compliance with other laws and regulations, NTIA also supports “language highlighting that an exemption does not necessarily provide a safe harbor from, or defense to, liability under other applicable laws or breach of contractual obligations.”⁸¹⁰

The Register declines to take a “device-agnostic” approach here because proponents have not satisfactorily shown that commercial and industrial equipment shares sufficient commonalities that would warrant considering a broad class. She also declines to recommend a broad class and carve out subsets of equipment types because the record is devoid of a basis for drawing such lines, and doing so would effectively shift the evidentiary burden from proponents to opponents to make a showing why certain equipment types should be excluded.

4. Conclusion and Recommendation

After consideration of the record and the applicable law, the Register recommends a new exemption covering diagnosis, maintenance, and repair of retail-level commercial food preparation equipment, a class which proponents

⁸⁰⁵ NTIA Letter at 46.

⁸⁰⁶ *Id.* at 47.

⁸⁰⁷ *Id.* at 51–52

⁸⁰⁸ *Id.* at 46, 53.

⁸⁰⁹ *Id.* at 53.

⁸¹⁰ *Id.* at 46, 53–54.

have sufficiently shown by a preponderance of the evidence to be adversely affected by the prohibition against circumvention. She declines, however, to recommend an exemption for a broad class of software-enabled commercial and industrial devices. To address any concerns about the new exemption being misused to gain unauthorized access to copyrighted works beyond the device firmware, she proposes regulatory language requiring that the circumvention is “not accomplished for the purpose of gaining access to other copyrighted works.” Her recommendation also includes the existing definitions of “maintenance” and “repair” found in the regulations and section 117.

Accordingly, the Register recommends that the Librarian designate the following classes:

Computer programs that are contained in and control the functioning of lawfully acquired equipment that is primarily designed for use in retail-level commercial food preparation when circumvention is a necessary step to allow the diagnosis, maintenance, or repair of such a device, and is not accomplished for the purpose of gaining access to other copyrighted works. For purposes of this paragraph (b)(16):

- (i) The “maintenance” of a device is the servicing of the device in order to make it work in accordance with its original specifications and any changes to those specifications authorized for that device; and**
- (ii) The “repair” of a device is the restoring of the device to the state of working in accordance with its original specifications and any changes to those specifications authorized for that device.**

F. Proposed Classes 6(a) and 6(b): Computer Programs and Video Games—Preservation

1. Background

a. Summary of Proposed Exemptions and Register Recommendations

In the current proceeding, SPN and LCA filed petitions to amend two of the current preservation exemptions. One petition requested removal of the current requirement that access to the preserved computer program is limited “to one eligible user at a time”⁸¹¹ (the “single-user limitation”). They stated that this amendment would “eliminate[] . . . uncertainty” in interpreting the current exemption, which they believe is amenable to being interpreted as either “allow[ing] a piece of software to be accessed by as many individuals as there are circumvented copies owned” or providing access to “one piece of circumvented software at a time, regardless of how many circumvented copies [the preservation institution] may own.”⁸¹² The Office designated this proposal as Class 6(a).

The proposed Class 6(a) exemption language, with proposed new text indicated in bold and proposed deletions in bold and strikethrough, is as follows:

(18)(i) Computer programs, except video games, that have been lawfully acquired and that are no longer reasonably available in the commercial marketplace, solely for the purpose of lawful preservation of a computer program, or of digital materials dependent upon a computer program as a condition of access, by an eligible library, archives, or museum, where such activities are carried out without any purpose of direct or indirect commercial advantage. Any electronic distribution, display, or performance made outside of the physical premises of an eligible library, archives, or museum of works preserved under this paragraph may be made ~~to only one user at a time~~, for a limited time, and only where the

⁸¹¹ SPN & LCA Class 6(a) Pet. at 3. Thomas Sullivan proposed a similar request. See Thomas Sullivan Class 6(b) Pet. at 2 (proposing “an expansion of the current exemption for circumvention of technological protection measures on computer programs for purposes of video game preservation . . . to include digital sharing off-premise”).

⁸¹² SPN & LCA Class 6(a) Initial at 3 n.9.

library, archives, or museum has no notice that the copy would be used for any purpose other than private study, scholarship, or research.

(ii) For purposes of the exemption in paragraph (b)(18)(i) of this section, a library, archives, or museum is considered “eligible” if—

(A) The collections of the library, archives, or museum are open to the public and/or are routinely made available to researchers who are not affiliated with the library, archives, or museum;

(B) The library, archives, or museum has a public service mission;

(C) The library, archives, or museum’s trained staff or volunteers provide professional services normally associated with libraries, archives, or museums;

(D) The collections of the library, archives, or museum are composed of lawfully acquired and/or licensed materials; and

(E) The library, archives, or museum implements reasonable digital security measures as appropriate for the activities permitted by this paragraph (b)(13).⁸¹³

SPN and LCA provided comments and testimony in support of the Class 6(a) proposal; additional supporting testimony was provided by Cass Fino-Radin of Small Data Industries. Comments and testimony in opposition were submitted by DVD CCA and AACCS LA and Joint Creators I, and additional testimony was provided by ESA.

In the second petition, SPN and LCA request “to eliminate the requirement that the [video game] program not be distributed or made available outside of the physical premises of an eligible institution if appropriate safeguards are taken to ensure users are engaged in scholarship or other permitted uses”⁸¹⁴ (the “premises limitation”). In response to Joint Creators I’s and ESA’s concerns regarding their proposal, SPN and LCA offered to add requirements that off-

⁸¹³ See SPN & LCA Class 6(a) Reply at 8–9.

⁸¹⁴ SPN & LCA Class 6(b) Pet. at 2; see 37 C.F.R. § 201.40(b)(17)(ii) (2023).

premises access can be made only (1) for a limited time and (2) after the preservation institution ensures that the off-premises user is accessing the work for the purposes of scholarship, teaching, or research.⁸¹⁵ With this revision, the Office designated this proposal as Class 6(b).

The proposed Class 6(b) exemption language, with proposed amendments indicated in bold and deletions in bold and strikethrough, is as follows:

(17)(ii) Video games in the form of computer programs embodied in physical or downloaded formats that have been lawfully acquired as complete games, that do not require access to an external computer server for gameplay, and that are no longer reasonably available in the commercial marketplace, solely for the purpose of preservation of the game in a playable form by an eligible library, archives, or museum, where such activities are carried out without any purpose of direct or indirect commercial advantage. ~~and the video game is not distributed or made available outside of the physical premises of the eligible library, archives, or museum.~~

Any electronic distribution, display, or performance made outside of the physical premises of an eligible library, archives, or museum of works preserved under this paragraph may be made only for a limited time and after the eligible institution acts to ensure that users seeking off-premises access to works are doing so for the purposes of scholarship, teaching, or research by:

(1) specifically determining that the user's interest is scholarship, teaching, or research through individualized human review of each applicant and their stated purposes,

(2) instituting access restrictions appropriate to the nature of the use and the material, and

(3) notifying users that they are receiving access to copyrighted material subject to adherence with applicable laws.

(iii) Computer programs used to operate video game consoles solely to the extent necessary for an eligible library, archives, or museum

⁸¹⁵ SPN & LCA Class 6(b) Initial at 2.

to engage in the preservation activities described in paragraph (b)(17)(i)(B) or (b)(17)(ii) of this section.

(iv) For purposes of this paragraph (b)(17), the following definitions shall apply:

(A) For purposes of paragraphs (b)(17)(i)(A) and (b)(17)(ii) of this section, “complete games” means video games that can be played by users without accessing or reproducing copyrightable content stored or previously stored on an external computer server.

...

(E) A library, archives, or museum is considered “eligible” if—

(1) The collections of the library, archives, or museum are open to the public and/or are routinely made available to researchers who are not affiliated with the library, archives, or museum;

(2) The library, archives, or museum has a public service mission;

(3) The library, archives, or museum’s trained staff or volunteers provide professional services normally associated with libraries, archives, or museums;

(4) The collections of the library, archives, or museum are composed of lawfully acquired and/or licensed materials; and

(5) The library, archives, or museum implements reasonable digital security measures as appropriate for the activities permitted by this paragraph (b)(17).⁸¹⁶

Comments in support of Class 6(b) were filed by Anonymous, Anonymous 2, Anonymous 3, Anonymous 4, Ken Austin, and Tripp Ceyssens, and SPN and LCA, and testimony was provided by Ken Austin, Dragan Espenschied of Rhizome, Professor Laine Nooney of New York University, Phil Salvador of the Video Game History Foundation, and SPN and LCA. Comments and testimony in opposition were submitted by DVD CCA and AACCS LA, Joint Creators I, and ESA.

⁸¹⁶ See SPN & LCA Class 6(b) Reply at App. A at 1–3.

For the reasons set forth below, the Register does not recommend granting either petition. She does, however, recommend an amendment to the current regulatory language covering preservation of computer programs to clarify the single-user limitation language in Class 6(a). At the same time, she is recommending renewal of the current exemptions for preservation of computer programs and video games.

b. Overview of the Issues

i. Background and History of Preservation Exemptions

In 2015, the Register first recommended an exemption to allow for video game preservation by libraries, archives and museums, when outside server support for the game had been discontinued. She found that “[o]n the whole, looking primarily to the first and fourth factors . . . the fair use analysis tends to favor . . . preservation uses” and that section 1201’s “statutory factors support an appropriately limited exemption to facilitate . . . preservation activities.”⁸¹⁷ Noting that “[c]ertain limitations set forth in section 108 of the Copyright Act [were] instructive in defining the appropriate scope of a preservation exemption for video games,” the Register’s recommendation included the following limitation:

any digital copies or adaptations of the video games or console software created by the institution as a result of preservation efforts must not be distributed or otherwise made accessible beyond the physical premises of the institution.⁸¹⁸

She specifically declined to include in her recommendation language that would expand the exemption to permit exhibiting games to the public in playable form, observing that “[t]he performance and display of a video game for visitors in a public space is a markedly different activity than efforts to preserve or study the game in a dedicated archival or research setting.”⁸¹⁹

This exemption was renewed in the 2018 rulemaking. The Acting Register recommended extending the exemption to include video games “that have been

⁸¹⁷ 2015 Recommendation at 344, 347, 352–53.

⁸¹⁸ *Id.* at 351–52.

⁸¹⁹ *Id.* at 342. The Register “expresse[d] no opinion on whether the exhibition activities proposed by proponents, insofar as they constitute public performances, would or could constitute fair or otherwise noninfringing uses of video games or associated console software.” *Id.* at 342.

lawfully acquired as complete games, [and] that do not require access to an external computer server for gameplay,”⁸²⁰ while retaining the limitation that access to the game be limited to the preserving institution’s premises. During the 2018 rulemaking, one petitioner asked to amend the exemption text to allow for “affiliate archivists,” a request which the Acting Register observed “appears directed at loosening the current restriction on distributing or making the game available outside the institution’s physical premises,”⁸²¹ and declined to recommend.⁸²² While some participants made broad references to displaying video games, no party asked to remove the premises limitation from the earlier video game preservation exemption.⁸²³

During the same cycle, proponents also petitioned for an exemption for preserving computer programs that was similar to the video game preservation exemption and included the same premises limitation.⁸²⁴ The Acting Register recommended granting an exemption that incorporated most of proponents’ requests.⁸²⁵

The exemptions for the preservation of video game and computer programs were renewed in the most recent proceeding. During that proceeding, two petitioners, SPN and LCA, sought to remove the premises limitation from both exemptions, arguing that the limitation “inhibits remote user access to preserved works and that removal of this language would benefit users, including by lowering research and teaching costs, such as those associated with travel; meeting users’ expectations, which in turn could help the institutions obtain funding; and complying with health and safety guidelines during the COVID-19 pandemic.”⁸²⁶

The Register did not recommend removing the premises limitation from the video game preservation exemption, finding that proponents did not “[meet] their burden of showing that the proposed off-premises uses are likely to be fair .

⁸²⁰ 2018 Recommendation at 282.

⁸²¹ *Id.* at 256.

⁸²² *See id.* at 280.

⁸²³ *See id.* at 257.

⁸²⁴ *See id.* at 231.

⁸²⁵ *See id.* at 255.

⁸²⁶ 2021 Recommendation at 263.

...⁸²⁷ She explained that “the heightened risk of market harm in the context of video games requires proponents to offer a more specific analysis than was provided [] as to how their proposed exemption could be limited to prevent unauthorized uses of games made available off-premises.”⁸²⁸ As she noted, “the exemption, as proposed, does not contain appropriately tailored restrictions to ensure that uses would be limited to bona fide teaching, research, or scholarship uses and would affect the market for the original works.”⁸²⁹ Finally, she noted, however, that she was “open to considering a more specific exemption request in the future upon a fuller record.”⁸³⁰

The Register did recommend, however, removing the premises limitation from the computer program preservation exemption, finding that proponents met their burden of showing that such uses were likely fair.⁸³¹ In contrast to the market for video games, she observed that the market for computer programs that are no longer reasonably available in the commercial marketplace was “limited.”⁸³² Paired with her recommendation to remove the premises limitation, she included two new limitations. First, she recommended that the exemption require that “any off-premises distribution, display, or performance must be solely for the purposes of private study, scholarship, or research”⁸³³ The Register noted that this restriction was “taken from section 108” and was “intended to reflect Congress’s guidance regarding the appropriate scope of preservation activities.”⁸³⁴ The second limitation she recommended was a requirement that “only one user will be able to access the preserved software at a time, and for a limited time.”⁸³⁵ She stated that “the inclusion of single user and

⁸²⁷ *Id.* at 276.

⁸²⁸ *Id.* at 279.

⁸²⁹ *Id.*

⁸³⁰ *Id.*

⁸³¹ *See id.* at 276.

⁸³² 2021 Recommendation at 279. The Register also noted that opposition to the computer program preservation expansion was lacking. *See id.*

⁸³³ *Id.*

⁸³⁴ *Id.*

⁸³⁵ *Id.*

limited time restrictions will minimize the risk of substitutional use of the software.”⁸³⁶

ii. Untimely Proposed Exemptions

During the proceeding, commenters proposed additional exemptions that were proposed too late to give the public notice that such changes were being considered for an amendment.⁸³⁷ Text addressing these proposals are not included in the proposed regulatory text above.

Computer Program Preservation—Amending “Private Study.” In the computer programs preservation exemption, SPN and LCA asked to replace the term “private study” in the current exemption with the term “teaching”⁸³⁸ This request came in a footnote in proponents’ reply comments. Opponents objected to this proposal as being untimely and overly broad.⁸³⁹

The Register cannot recommend this requested amendment. A certain degree of change between the proposed and final exemption language may be appropriate, depending on the circumstances. Here, however, the public—including potential opponents to either the expansion to cover “teaching” or the elimination of the “private study” language—was not given adequate notice that this portion of the current exemption was being considered for an amendment. Further, the record on this proposed change is insufficient to support it.

Preservation of Video Games with Discontinued Server Support—Removing the Premises Limitation. In response to ESA’s observation that proponents’ proposal does not include removal of the premises limitation in a different exemption addressing video game preservation where external computer servers

⁸³⁶ *Id.*

⁸³⁷ See NOI at 37,487 (“If a proponent seeks to engage in any activities not currently permitted by an existing exemption, they must submit a petition for a *new* exemption.”); see also NPRM at 72,026–27 (“The first round of public comment is limited to submissions from proponents (*i.e.*, those parties who proposed new exemptions during the petition phase) and other members of the public who support the adoption of a proposed exemption[,]” and “[r]eply comments should not raise new issues, but should instead be limited to addressing arguments and evidence presented by others during prior rounds.”).

⁸³⁸ SPN & LCA Class 6(a) Reply at 6 n.27.

⁸³⁹ See Tr. at 54:10–55:01 (Apr. 18, 2024) (Rotstein, Joint Creators I); see also Tr. at 56:11–23 (Apr. 18, 2024) (England, ESA) (noting that the inclusion of “teaching” in an exemption would require considering potentially different use cases).

have been shut down,⁸⁴⁰ in their reply comments, proponents SPN and LCA requested removal of the premises limitation in that class.⁸⁴¹ SPN and LCA stated that “it would be ‘needlessly confusing’ for video game preservation to be governed by two different set of rules.”⁸⁴² ESA argued that “[b]ecause the proponents have not made a case for deleting the on-premises limitation in [the exemption involving discontinued server support], it would be improper to make such a change.”⁸⁴³

The Register agrees with the benefits of using consistent language across exemption text. She, however, also agrees that proponents should have included this request in their initial comments, and thus declines to recommend the amendment. She likewise declines to recommend the proposed elimination of the premises limitation in Class 6(b), as discussed below. Accordingly, her conclusion regarding this request would be the same even if proponents were correct that different video game exemptions do not require separate analyses.⁸⁴⁴

iii. Inadequately Supported Proposed Exemptions

Commenters also proposed two exemptions that, while timely, were not accompanied by a sufficient evidentiary record for analysis. As with the untimely proposals, text addressing these proposals was not included in the proposed regulatory text above.

Video Game Preservation—Expanding the Exemption Beneficiaries. Petitioner Thomas Sullivan proposed that the current video game preservation exemption’s beneficiaries be expanded to include “Colleges, Universities, Museums, Archives, Libraries, and any institution dedicated to the preservation of video games.”⁸⁴⁵ The Register notes that the current video game preservation exemption’s beneficiaries are eligible libraries, archives, or museums, which would include such institutions associated with colleges or universities.

⁸⁴⁰ See ESA Class 6(b) Opp’n at 3 n.12.

⁸⁴¹ See SPN & LCA Class 6(b) Reply at 4–5.

⁸⁴² *Id.* at 4–5 (citing 2018 ESA Class 9 Opp’n at 6).

⁸⁴³ ESA Class 6(b) Opp’n at 3 n.12.

⁸⁴⁴ SPN & LCA Class 6(b) Reply at 5 n.16 (claiming that amending this language for this different class “does not require a separate case because the adverse effects caused by the lack of off-premises access to preserved games where authentication servers have been deactivated are fundamentally the same as those for ‘complete games’”).

⁸⁴⁵ Sullivan Class 6(b) Pet. at 2.

Although this petition was timely filed, proponents did not develop the rulemaking record to sufficiently address why the current exemption should be extended to “any institution dedicated to the preservation of video games.”⁸⁴⁶ There was no evidence introduced that there are any existing institutions preserving video games that are not a library, archives, or museum or, if they do exist, whether the current exemption’s eligibility requirements for these institutions would be appropriate.⁸⁴⁷

Video Games—Operating System Incompatibility. Petitioner Ken Austin requested a new exemption to permit circumvention by “individual owners of video games which have DRM (digital rights management) that no longer function[] due to incompatibility” with modern computers’ operating systems.⁸⁴⁸ The Office invited comments on Mr. Austin’s proposed exemption, including on “the relevant TPMs and whether their presence is adversely affecting noninfringing uses, including identifying whether eligible users may access the software through alternate channels that do not require circumvention and the legal basis for concluding that the proposed uses are likely to be noninfringing.”⁸⁴⁹ No one provided initial supporting comments, and ESA and Joint Creators I filed comments in opposition to the petition.⁸⁵⁰ Mr. Austin provided reply comments that largely addressed opponents’ objections, but did not provide factual or legal arguments to support his requested exemption.⁸⁵¹

In response to the absence of substantive comments supporting Mr. Austin’s proposal,⁸⁵² ESA objected that “[t]o the extent that there may be any proponents of this proposal, they have not given ESA anything meaningful to respond to, and so have not met their ‘burden of establishing that the requirements for granting an exemption have been satisfied.’”⁸⁵³ The Register agrees that Mr.

⁸⁴⁶ *Id.*

⁸⁴⁷ The Register addressed the nature and scope of preservation activities by libraries, archives, and museums in her recommendation in connection with a previous exemption proceeding. *See* 2015 Recommendation at 341–42.

⁸⁴⁸ Austin Class 6(b) Pet. at 2.

⁸⁴⁹ NPRM at 72,026.

⁸⁵⁰ ESA Class 6(b) Opp’n at 8; Joint Creators I Class 6 Opp’n at 3.

⁸⁵¹ *See generally* Austin Class 6(b) Reply.

⁸⁵² Mr. Austin’s petition referenced a single video game that used a technological protection measure that would not run on Windows 10. *See* Austin Class 6(b) Pet. at 2.

⁸⁵³ ESA Class 6(b) Opp’n at 8 (citing 2015 Recommendation at 13; 2021 Recommendation at 7–8).

Austin’s proposal was not supported by a sufficient record in this proceeding. Without a more-developed record, she cannot effectively determine whether the harm identified by Mr. Austin involves “distinct, verifiable and measurable impacts” occurring in the marketplace.⁸⁵⁴ The Register is open to considering this exemption request in the future upon a fuller record.

iv. Scope of Issues

The Register has previously noted “Congress’s recognition of preservation as an important social activity,”⁸⁵⁵ as certain preservation-related activities by libraries and archives are exempted from infringement liability by section 108 of the Copyright Act.⁸⁵⁶ Section 108 also contains specific limitations on those preservation activities, “reflecting Congress’s acknowledgment of copyright owners’ concern over unrestricted copying under the guise of preservation.”⁸⁵⁷ In prior recommendations involving preservation-related exemptions, the Register has drawn on section 108 to guide the text, even where proponents have relied on fair use (or other limitations and exceptions) to support their requests.⁸⁵⁸ In 2015, the Office explained that “section 108 provides useful and important guidance as to Congress’s intent regarding the nature and scope of legitimate preservation activities, and hence the types of uses that are most likely to qualify as fair in this area.”⁸⁵⁹

The Class 6(a) (“the computer program class”) proposal seeks removal of the existing exemption’s single-user limitation. Proponents claimed that “[l]imiting remote software access to one user at a time creates significant restrictions on scholarship, research, and teaching”⁸⁶⁰ They argued that preservation institutions’ resources “are more likely to be allocated to preserving materials when doing so will enable scholars, teachers, and other patrons to access them.”⁸⁶¹ Addressing whether possible alternatives to the proposed expansion

⁸⁵⁴ Commerce Comm. Report at 37.

⁸⁵⁵ 2018 Recommendation at 242.

⁸⁵⁶ See 2015 Recommendation at 341 (citing 17 U.S.C. 108; H.R. REP. NO. 94-1476, at 74–75 (1976), reprinted in 1976 U.S.C.C.A.N. 5659, 5688–89).

⁸⁵⁷ 2021 Recommendation at 263 (quoting 2015 Recommendation at 341).

⁸⁵⁸ See *id.*; 2018 Recommendation at 239; 2015 Recommendation at 342.

⁸⁵⁹ 2015 Recommendation at 342.

⁸⁶⁰ SPN & LCA Class 6(a) Reply at 5.

⁸⁶¹ SPN & LCA Class 6(a) Initial at 4.

are available, they contended that purchasing additional copies of obsolete software is “not possible” and that some institutions will not purchase software from secondary sources.⁸⁶² Finally, proponents argued that Class 6(a) would cure an ambiguity in the exemption’s existing language. They explained the language currently is subject to two different interpretations:

The first interpretation is that libraries and archival institutions can allow a piece of software to be accessed by as many individuals as there are circumvented copies owned. . . . The second interpretation is that libraries and archival institutions can only loan out one piece of circumvented software at a time, regardless of how many circumvented copies they may own.⁸⁶³

According to proponents, granting the Class 6(a) petition resolves this issue.

Regarding Class 6(b) (“the video game class”), proponents requested expanding the exemption by removing the premises limitation. They argued that the limitation inhibits remote user access to preserved works and that its removal would benefit users, including by reducing the time and cost associated with travel to engage in research, allowing for better collaboration, and alleviating preservation institutions’ space and staffing constraints.⁸⁶⁴ Proponents explained that video game scholarship has specific problems associated with research, as games can be “very rare,” “unevenly distributed,” and “often held by only a few collecting institutions.”⁸⁶⁵

Proponents discussed emulation and emulation-as-a-service as technologies that support both classes (although neither the proposed expansions, nor the existing preservation exemption text, includes any references to these technologies).⁸⁶⁶

⁸⁶² *Id.* at 7. Proponents suggested that the reluctance to purchase software from secondary markets was over concerns of “provenance,” Tr. at 62:01–15 (Apr. 18, 2024) (Albert, SPN & LCA), and licensing issues, *see* Tr. at 63:14–21 (Apr. 18, 2024) (Band, LCA), but other proponents suggested that original, obsolete software could be found in secondary markets. *See* Tr. at 64:13–14 (Apr. 18, 2024) (Fino-Radin, Small Data Industries) (stating that “there’s obsolete software you can find on eBay and sometimes it’s even shrink-wrapped”).

⁸⁶³ SPN & LCA Class 6(a) Initial at 3 n.9.

⁸⁶⁴ *See* SPN & LCA Class 6(b) Initial at 6–7.

⁸⁶⁵ *Id.* at 6.

⁸⁶⁶ Proponents defined an emulator as “a hardware or software tool that allows one computer system to behave like another computer system,” explaining that “[e]mulators can simulate

They argued that such technologies would allow preservation institutions to make preserved works available to users while complying with existing and proposed exemption restrictions.

Opponents contended that both proposed expansions are overbroad and unnecessary, in part, because the works at issue can already be preserved under the current exemption.⁸⁶⁷ With respect to the computer program class, opponents asserted that allowing a preservation institution to make multiple copies of a work is not permitted under the Copyright Act and would create market harm.⁸⁶⁸ For the video game class, they claimed that proponents have not provided sufficient evidence of harms caused by the premises limitation.⁸⁶⁹ They also argued that elimination of the limitation “would greatly expand the scope of who would be eligible to perform circumvention,” that proponents’ proposed access restrictions are insufficient and potentially allow the public to engage in recreational play, and that granting an exemption would cause “substantial harm to the legitimate market for games.”⁸⁷⁰ Finally, they objected that proponents are requesting too much discretion regarding how they provide access to preserved works.⁸⁷¹

obsolete computer systems and environments on newer computers to run legacy software that is incompatible with current computer systems.” SPN & LCA Class 6(a) Initial at 5. They described emulation-as-a-service infrastructure as “providing a menu of pre-configured emulated environments (a combination of emulated hardware, an operating system, and particular software) located on the collecting institution’s servers, which can be launched and viewed in the user’s web browser.” *Id.* at 6.

⁸⁶⁷ See ESA Class 6(b) Opp’n at 8–9; Joint Creators I Class 6 Opp’n at 3, 5.

⁸⁶⁸ See Tr. at 59:04–17 (Apr. 18, 2024) (Rotstein, Joint Creators I); Tr. at 78:01–07 (Apr. 18, 2024) (Taylor, DVD CCA).

⁸⁶⁹ See ESA Class 6(b) Opp’n at 15–16; Joint Creators I Class 6 Opp’n at 9.

⁸⁷⁰ ESA Class 6(b) Opp’n at 9.

⁸⁷¹ See Tr. at 8:17–20 (Apr. 18, 2024) (Englund, ESA) (arguing that proponents are “trying to reserve almost complete discretion in how they would provide access to preserve games”); Tr. at 49:10–15 (Apr. 18, 2024) (Englund, ESA) (“[P]reservation organizations want a great deal of discretion over how they handle very valuable intellectual property[,] and they have yet to suggest that there is a willingness on their part to do so in a way that might be comforting to the owners of that valuable intellectual property.”).

2. Discussion

a. Works Protected by Copyright

The proposed exemption would apply to TPMs controlling access to computer programs and video games, which are protected by copyright as computer programs, audiovisual works, or both. There is no dispute that at least some of these works are protected by copyright.⁸⁷² Therefore, the Register finds that the proposed class includes at least some works protected by copyright.

b. Asserted Noninfringing Uses

In past exemption proceedings, proponents claimed that proposed preservation activities were likely to be noninfringing, based on various copyright exceptions and limitations, including the fair use doctrine and sections 108, 110(2), 112(f), 1401(f) and 117 of title 17.⁸⁷³ In this proceeding, proponents SPN and LCA “focus on fair use” because it is “the most relevant legal basis for non-infringing use pertaining to the proposed expansion of the exemption.”⁸⁷⁴ The Register, accordingly, shall address the four factors relevant to a fair use analysis. Based on her conclusion that the uses in the proposed exemption expansions are not likely to be fair, the Register does not address the other exemption requirements.

With respect to the first fair use factor, the purpose and character of the use, proponents cited the fair use analysis from the 2021 Recommendation to support their claim that each class’s expanded uses would also be considered fair.⁸⁷⁵ They

⁸⁷² See Joint Creators I Class 6 Opp’n at 7 (“The works at issue would include thousands of highly creative video games of the kind at the heart of the Copyright Act’s objective to protect expressive works, as well as other kinds of creative works accessible with productivity software or playable on game consoles.”); ESA Class 6(b) Opp’n at 13; DVD CCA & AACS LA Class 6 Opp’n at 2.

⁸⁷³ See, e.g., 2021 Recommendation at 264–68.

⁸⁷⁴ SPN & LCA Class 6(a) Initial at 10 n.36; SPN & LCA Class 6(b) Initial at 9 n.44. Proponents SPN and LCA also state that “[i]n some cases . . . the described uses may also be protected by 17 U.S.C. §§ 108 and 118” SPN & LCA Class 6(a) Initial at 10 n.36; SPN & LCA Class 6(b) Initial at 9 n.44. Without any analysis, however, proponents have failed to meet their burden of showing that their activities are likely noninfringing under these provisions.

⁸⁷⁵ See SPN & LCA Class 6(a) Initial at 11 (citing 2021 Recommendation at 270, 272); SPN & LCA Class 6(b) Initial at 10 (citing 2021 Recommendation at 270–71).

also argued that each expanded use is noncommercial and transformative, favoring fair use.⁸⁷⁶

Proponents relied on *Apple Inc. v. Corellium Inc.*⁸⁷⁷ to support their fair use arguments in both classes.⁸⁷⁸ There, the Eleventh Circuit found that defendant Corellium’s conduct was noninfringing under the fair use doctrine when it made multiple copies of Apple’s software to create “virtualization software” to “enable security researchers to gain deeper insights into [Apple’s] operating systems.”⁸⁷⁹ Proponents also cited *Corellium* to support their arguments that both classes’ proposed uses are transformative.⁸⁸⁰

Computer Program Class. With respect to this class, proponents claimed that “[w]hether software is accessed by one researcher at a time or by multiple researchers simultaneously, the purpose and character of each use will be the same[.]”⁸⁸¹ and argued that if the Register previously determined that providing “single-user remote access to preserved software [was] likely to be fair,” then “[e]xtending that logic by allowing multiple users to simultaneously access out-of-commerce software similarly serves the purposes of copyright because there are substantial public benefits and no countervailing effect on the software market.”⁸⁸² They added that “allowing multiple researchers to simultaneously access a piece of software provides *more* public benefit than limiting access to one researcher at a time, since it will be easier for researchers and educators to successfully study and analyze software and software-dependent materials.”⁸⁸³ Proponents characterized elimination of the single use restriction as “a limited and targeted modification of an existing approved exemption,” which “does not change its fundamental nature.”⁸⁸⁴

Video Game Class. Proponents first referenced the 2021 Register’s Recommendation, which recognized that “regardless of whether the uses are

⁸⁷⁶ See SPN & LCA Class 6(a) Initial at 11; SPN & LCA Class 6(a) Reply at 4–5.

⁸⁷⁷ No. 21-cv-12835, 2023 WL 3295671 (11th Cir. May 8, 2023).

⁸⁷⁸ SPN & LCA Class 6(a) Initial at 11–13; SPN & LCA Class 6(b) Initial at 10–11.

⁸⁷⁹ *Corellium*, No. 21-cv-12835, 2023 WL 3295671 at *1.

⁸⁸⁰ See SPN & LCA Class 6(a) Initial at 11–12; SPN & LCA Class 6(b) Initial at 10–11.

⁸⁸¹ SPN & LCA Class 6(a) Initial at 11.

⁸⁸² *Id.* at 10.

⁸⁸³ *Id.* at 11.

⁸⁸⁴ SPN & LCA Class 6(a) Reply at 7.

considered transformative,” the first factor favors fair use for “preservation, research, and teaching uses”⁸⁸⁵ They then asserted that *Warhol* “reiterated the transformativeness of uses that ‘serv[e] a manifestly different purpose from the [work] itself’” and that “[s]cholarly use of preserved video games is categorically distinct from recreational play.”⁸⁸⁶ They also cited *Marano v. Metropolitan Museum of Art*,⁸⁸⁷ a district court case which found that a museum’s public display of a photo without a license constituted fair use, to support its claim that “[s]cholarly use of video games is [similarly] educational, noncommercial, and foregrounds different elements of gameplay than recreational use”⁸⁸⁸ Proponents’ comments in this class also addressed the benefits of emulation technologies.⁸⁸⁹

Opposition Arguments. Opponents argued that neither proposed exemption expansion is favored under the first fair use factor. They asserted that, for both classes, the proposed uses are commercial ones. Joint Creators I believed that the expanded exemptions would allow preservation institutions to “create new copies of works and provide access to them to authorized users who would view them in their entirety, all without payment to copyright owners.”⁸⁹⁰ They added that nonprofit institutions’ copying “remains commercial even if consumers do not pay nonprofit institutions for access or use.”⁸⁹¹

⁸⁸⁵ SPN & LCA Class 6(b) Initial at 10 (citing 2021 Recommendation at 270–71). Proponents also stated that under *Campbell v. Acuff-Rose*, “uses for purposes listed in the Section 107 preamble—teaching (including multiple copies for classroom use), scholarship, or research—are the kinds most likely to be found fair.” *Id.* at 11 (citing *Campbell*, 510 U.S. at 586).

⁸⁸⁶ *Id.* (quoting *Warhol*, 598 U.S. at 528 (2023)); see also SPN & LCA Class 6(b) Reply at 16 (“*Warhol* pertained to visual artworks competing in the same commercial market, did not directly engage with the technical and functional aspects of software, and did not grapple with the level of copying permitted under fair use for preservation or research purposes.”).

⁸⁸⁷ 844 F. App’x 436 (2d Cir. 2021). This citation references a non-precedential summary order.

⁸⁸⁸ SPN & LCA Class 6(b) Initial at 11.

⁸⁸⁹ See, e.g., *id.* at 10 (“Using emulation, institutions could display metadata, design documents, and source code alongside the emulated gameplay, allowing researchers to peek under the hood of the title they are studying, as a literary scholar might look back at early drafts of a published work.”).

⁸⁹⁰ Joint Creators I Class 6 Opp’n at 7.

⁸⁹¹ *Id.* at 7 n.21 (citing *Hachette Book Group, Inc. v. Internet Archive*, 664 F. Supp. 3d 370, 383–84 (S.D.N.Y. 2023), *aff’d*, 115 F.4th 163 (2d Cir. 2024); *Wall Data Inc. v. Los Angeles Cty. Sheriff’s Dep’t*, 447 F.3d 769, 781–82 (9th Cir. 2006)).

With respect to the video game class, ESA cited to the district court decision in *Hachette Book Group, Inc. v. Internet Archive*, which held that a nonprofit organization’s scanning of print copies of literary works and then engaging in “controlled digital lending” of those works to users was not a fair use.⁸⁹² It claimed that *Hachette* supports a finding that the proposed uses of video games by eligible libraries, archives, and museums are commercial and non-transformative under the first factor.⁸⁹³

Opponents also disagreed that the proposed uses in both classes are transformative. Joint Creators I explained that under *Warhol*, “the first fair use factor . . . focuses on whether an allegedly infringing use has a further purpose or different character, which is a matter of degree, and the degree of difference must be weighed against other considerations, like commercialism.”⁸⁹⁴ They asserted that proponents’ uses are “perfect substitutes for the underlying work,” which disfavors a fair use finding under *Warhol*.⁸⁹⁵ ESA admitted that while “access to preserved games for purposes of research and teaching may be a favored use even if not a transformative one, ‘the playing of video games’ is ‘the same use of the copyrighted work as before’ and [is therefore] . . . ‘not transformative.’”⁸⁹⁶

⁸⁹² See *Hachette*, 664 F. Supp. 3d at 391 (“What fair use does not allow . . . is the mass reproduction and distribution of complete copyrighted works in a way that does not transform those works and that creates directly competing substitutes for the originals. Because that is what IA has done with respect to the Works in Suit, its defense of fair use fails as a matter of law.”); 2021 Recommendation at 270 (“[W]hile the Register concluded in 2021 that ‘proponents’ proposed expanded uses are noncommercial in nature,’ a federal district court recently reached the contrary conclusion when considering the Internet Archive’s unauthorized dissemination of ebooks, despite its arguments that it “is a non-profit organization that does not charge patrons to borrow books and . . . private reading is noncommercial in nature.”)).

⁸⁹³ See ESA Class 6(b) Opp’n at 12–13 (quoting *Hachette*, 664 F. Supp. at 383–84). In the computer program class, proponents distinguished their request from the facts in *Hachette*, by observing that the preserved works are “out-of-commerce,” while the *Hachette* plaintiff’s ebooks were commercially exploited. SPN & LCA Class 6(a) Initial at 15 n.86. In a decision issued after the comment period closed in this proceeding, the Second Circuit found that the use at issue in *Hachette* was not commercial in nature, but because the use was nontransformative, the first factor did not favor a finding of fair use. *Hachette Book Grp., Inc. v. Internet Archive*, 115 F.4th 163, 185–86 (2d Cir. 2024).

⁸⁹⁴ Joint Creators I Class 6 Opp’n at 6–7 (quoting *Warhol*, 598 U.S. at 525).

⁸⁹⁵ *Id.* at 7 (citing *Warhol*, 598 U.S. at 531–36).

⁸⁹⁶ ESA Class 6(b) Opp’n at 12 (citing 2015 Recommendation at 337).

Opponents further objected to proponents' reliance on *Corellium* and observed that it was an unreported and nonbinding case.⁸⁹⁷ Regarding the computer program class, DVD CCA and AACCS LA distinguished *Corellium* by stating that it "neither considered nor addressed the issue of distinguishing between one-user versus multiple-users – *i.e.*, the core feature of Proponents' requested expansion [to the computer program preservation exemption]."⁸⁹⁸

DVD CCA and AACCS LA added that creating multiple copies of a work for preservation "runs counter to Section 108" – the provision that allows libraries and archives to reproduce works for certain uses and under specified restrictions – and noted that section 108(g) does not allow the reproduction of multiple copies of works.⁸⁹⁹ They explained that this restriction "ensures proper respect for the traditional limitations of video game and computer software content on physical discs and other media – one copy of the work per disc, not endless copies from a single disc" and that "[s]uch conduct robs creators of proper remuneration for each copy of their work actually accessed and used."⁹⁰⁰ Joint Creators I agreed that "[s]ection 108 should remain central to the [fair use] analysis, and this rulemaking proceeding should not provide a means for Petitioners to avoid its application."⁹⁰¹

The Register's Analysis. The Register has previously recognized that "[w]ith respect to preservation, research, and teaching uses, the first factor generally weighs in favor of fair use."⁹⁰² Proponents, however, are not seeking to simply preserve works. Regarding the computer program class, proponents want preservation institutions to be able to allow simultaneous users to access the preserved programs, including apparently by making multiple copies of preserved computer programs for their users.⁹⁰³

⁸⁹⁷ See DVD CCA & AACCS LA Class 6 Opp'n at 3; Tr. at 80:07–14 (Apr. 18, 2024) (Englund, ESA).

⁸⁹⁸ DVD CCA & AACCS LA Class 6 Opp'n at 3. Proponents dispute this point. See, *e.g.*, Tr. at 78:09–18 (Apr. 18, 2024) (Albert, SPN & LCA).

⁸⁹⁹ DVD CCA & AACCS LA Class 6 Opp'n at 4.

⁹⁰⁰ *Id.* at 4.

⁹⁰¹ Joint Creators I Class 6 Opp'n at 6 n.17.

⁹⁰² 2021 Recommendation at 270.

⁹⁰³ See Tr. at 78:10–14 (Apr. 18, 2024) (Albert, SPN & LCA ("*Corellium* . . . [is] directly factually on point about making multiple copies of software for the purpose of . . . research [and] other secondary uses . . . and found those uses to be fair.")).

The Register concludes that proponents have not demonstrated that making multiple copies of preserved computer programs would weigh in favor of fair use under the first factor. Although *Corellium* is an unreported decision decided by the Eleventh Circuit ten days before the Supreme Court’s fair use decision in *Warhol*⁹⁰⁴ and not precedential, the Register has considered its analysis and finds the circumstances distinguishable. There, the defendant was making multiple copies of Apple’s computer program for security research and to “add[] several features that are not normally available on [the original program].”⁹⁰⁵ In finding that *Corellium*’s use of Apple’s software was “moderately transformative,”⁹⁰⁶ the court distinguished circumstances where a defendant “ma[kes] available ‘virtually the entirety’ of what users would ‘want’” with respect to the copyright-protected program⁹⁰⁷—which is what proponents in this proceeding propose that preservation institutions should be permitted to do.

With respect to the video game class, proponents wish to provide off-premises access to the preserved works, a use that would necessarily implicate copyright owners’ distribution, display, or performance rights. Proponents’ legal arguments addressed preservation, research, and teaching uses generally, and not the specific uses covered by this requested expansion (*e.g.*, those involving distribution, display, and performance rights). As the Office has previously noted, where there is a proposal to “expand an existing exemption, commenters should focus their comments on the legal and evidentiary bases for modifying the exemption, rather than the underlying exemption.”⁹⁰⁸

Opponents reiterated concerns expressed in earlier proceedings that an expansion would include a “significant risk of use of preserved video games for

⁹⁰⁴ 598 U.S. 508. Proponents note that the “Eleventh Circuit was asked to reconsider *Corellium* in light of *Warhol* and did not” and that “*Warhol* doesn’t fundamentally . . . change the analysis in *Corellium*” Tr. at 81:22–24 (Apr. 18, 2024) (Albert, SPN & LCA).

⁹⁰⁵ *Corellium*, No. 21-cv-12835, 2023 WL 3295671, at *1, 8.

⁹⁰⁶ *Id.* at *6.

⁹⁰⁷ *Id.* at *10 (quoting *Fox News Network, LLC v. TVEyes, Inc.*, 883 F.3d 169, 179 (2d Cir. 2018)). *Corellium* agreed that “making verbatim copies of a copyrighted work and converting those works into a different format is not transformative.” *Id.* at *8 (alterations removed).

⁹⁰⁸ Exemptions to Permit Circumvention of Access to Controls on Copyrighted Works, 82 Fed. Reg. 49,550, 49,558 (Oct. 26, 2017); NPRM at 72,026 (similar).

recreational purposes”⁹⁰⁹ and suggested that “comments filed by individual commenters in this proceeding make clear that there is a desire for recreational play through such offerings.”⁹¹⁰

In the 2021 Recommendation, the Register observed the following:

Although proponents’ intention in making the video games available off-premises may be to facilitate education and research, opponents have presented credible evidence that at least some users are likely to use video games made available pursuant to a broad proposed exemption for entertainment purposes. If a significant use of the works would be for the entertainment purposes for which the works were originally created, that would not be transformative or otherwise favor fair use under the first factor. The use of the preserved video games for entertainment purposes seems particularly likely given proponents’ unwillingness to impose user verification requirements or other measures that would make the video games more likely to be used solely for education or research purposes.⁹¹¹

In this proceeding, proponents seek again to allow libraries, archives, and museums to make preserved video games more broadly available for research

⁹⁰⁹ ESA Class 6(b) Opp’n at 10; *see also, e.g.*, 2021 Recommendation at 263–64 (reflecting ESA’s concerns that the exemption would be used for “entertainment purposes”).

⁹¹⁰ ESA Class 6(b) Opp’n at 10 (citing Ceyssens Class 6(b) Initial (emphasis added by ESA) (supporting an exemption “for the purposes of historical preservation and *public enjoyment*” and relaying understanding that the exemption would “allow the general population to experience the history of games without massive inconveniences”) and Anonymous 2 Class 6(b) Initial (emphasis added by ESA) (stating “I think it should be legal to use video game roms/isos to make classic video games always accessible *to the public*” and “[a]ll Video games should be able to be enjoyed by anyone regardless of where a person is located in the world”)); *see also* Tr. at 13:06–10 (Apr. 18, 2024) (Englund, ESA) (“[I]t’s very clear from the record, and I’d point you to the comments by all of the individual commentors, that the individual commentors are interested in playing games recreationally.”); Tr. at 17:06–11 (Apr. 18, 2024) (Ayers, AACCS LA) (“There are not a lot of individual comments that come into these proceedings, and I think it’s notable that the ones that did were in this class and that a number of them noted essentially the desire to play games recreationally”); 2015 Recommendation at 340 (noting potential overlap with interest in preservation and recreational play).

⁹¹¹ 2021 Recommendation at 272.

and teaching. Making these games more broadly available, however, also increases the likelihood that they would be used for recreational purposes.

For the Register to find that the proposed video game exemption is favored under the first factor, the exemption would need to appropriately guard against recreational uses, including by “contain[ing] appropriately tailored restrictions to ensure that uses would be limited to bona fide teaching, research, or scholarship uses.”⁹¹² As discussed under the fourth fair use factor below, she does not believe that proposed restrictions would guard against recreational use of preserved games. The record in this proceeding has not alleviated concerns that preserved video games made available outside of a preservation institution’s premises would also be used for recreational purposes. Thus, the first factor does not weigh in favor of a finding of fair use with respect to the video game class.

Proponents’ suggestion that preservation institutions would make preserved computer programs and video games available via emulation technologies⁹¹³ does not change the analysis under the first factor for either class. First, as emulation technologies are not a part of the proposed exemptions’ text,⁹¹⁴ the institutions would not be required to use them to enjoy the exemption. Second, adding functionalities to preserved works using emulation technologies could implicate the copyright owners’ right to prepare derivative works, departs from traditional understandings of preservation,⁹¹⁵ and seems comparable to format-

⁹¹² *Id.* at 279.

⁹¹³ See SPN & LCA Class 6(a) Initial at 12; SPN & LCA Class 6(b) at 10.

⁹¹⁴ Proponents explained that they did not include requirements for using emulation as a method of access into the exemption text to retain flexibility regarding the methods that preservation institutions use when providing users access to preserved works. Tr. at 84:12–18 (Apr. 18, 2024) (Albert, SPN & LCA) (“As to one note of caution there — we don’t write [emulation] into the rule because there are circumstances under which certain kinds of software materials might run certain kinds of software . . . in a context in which you’re doing scholarship would require actually like some amount of local data access.”); see also Tr. at 11:18–19 (Apr. 18, 2024) (Albert, SPN & LCA) (referencing general “need for flexibility” desired for preservation institutions).

⁹¹⁵ See, e.g., Karen Kroslowitz, *Preservation, Conservation, Restoration: What’s the Difference?*, COMPUT. HISTORY MUSEUM (Oct. 26, 2012), <https://computerhistory.org/blog/preservation-conservation-restoration-whats-the-difference/> (“Preservation — or more accurately preventive conservation — is the practice of maintaining artifacts by providing a stable storage or display environment in order to minimize further damage or deterioration. . . . Cleaning and replacing significant parts, whether original to the object’s manufacturer or not, alter the historical integrity

shifting, which the Register has not found to “constitute fair use[] under current law.”⁹¹⁶ Finally, it is not entirely clear from the record whether or to what extent the use of emulation would result in any preserved works being distributed to users.⁹¹⁷ Such uses would implicate copyright owners’ distribution rights beyond the exemptions’ preservation-based uses.

The second fair use factor considers the nature of the work being used. The works at issue in both classes remain the same as in prior proceedings: computer programs and video games. In the last proceeding, proponents asserted that the second fair use factor favored fair use, because computer programs and video games are “functional.”⁹¹⁸ The Register’s prior recommendation noted that while computer programs are functional, this did not mean that this factor would always favor fair use, as that “would overlook cases which have found this factor to weigh against the fair use of computer programs.”⁹¹⁹ Ultimately, she concluded that “[w]hile this factor favors fair use in the context of software other than video games, it does not do so with respect to [video] games, which are often highly expressive in nature.”⁹²⁰

of an artifact. Once changed an object’s provenance has also been altered and it is no longer a true document of its place in history. That’s a big deal in museums, which are considered by the majority of Americans to be the most trustworthy source of information about the past.”); Tr. at 197:25–198:06 (May 20, 2015) (Stoltz, EFF) (asserting that “the goal of preservation is to preserve every aspect of the original experience of playing a game”).

⁹¹⁶ 2018 Recommendation at 113 (quoting 2015 Recommendation at 108).

⁹¹⁷ *Compare* Tr. at 39:03–14 (Apr. 18, 2024) (Espenschied, Rhizome) (referring to an emulation example where “[t]he emulator and the disk is initiated on [a cloud] computer and there is an audio/video connection made to that cloud computer . . . bringing up this computer and copying this data over”) and Tr. at 37:21–38:03 (Apr. 18, 2024) (Espenschied, Rhizome) (discussing “how access to an emulator is actually managed online and also how that effects . . . recreational use” and stating that “it is possible to run, for instance, . . . simpler games . . . [by] download[ing] them and to run them on their own computer in some kind of . . . local setting”) with Tr. at 84:06–09 (Apr. 18, 2024) (Albert, SPN & LCA) (“[I]n most cases emulation as a service context . . . folks are not running the software on their machine, as I think Mr. Espenschied said in the last hearing.”).

⁹¹⁸ 2021 Recommendation at 273.

⁹¹⁹ *Id.* (citing *Wall Data Inc. v. Los Angeles Cty. Sheriff’s Dep’t*, 447 F.3d 769, 780 (9th Cir. 2006); *Cable/Home Commc’n Corp. v. Network Prods., Inc.*, 902 F.2d 829, 844 (11th Cir. 1990) (internal quotations omitted)).

⁹²⁰ *Id.* (citing 2015 Recommendation at 338).

In this proceeding, proponents made similar claims regarding the functionality of computer programs and video games.⁹²¹ In response, opponents reiterated that video games are “not functional” and “highly creative,”⁹²² and claimed that the proposed video game exemption would enable “significant recreational gameplay.”⁹²³ Joint Creators I also noted a concern that the video game class would include “other kinds of creative works accessible with productivity software or playable on game consoles.”⁹²⁴

The Register again concludes that the second factor favors fair use in the context of computer programs, but not video games.

The third fair use factor focuses on the amount and substantiality of the portion of the work used. In discussing the preservation classes in the last proceeding, “[t]he Register conclude[d] that this factor does not necessarily weigh against fair use, as it may be necessary to copy an entire work to provide researchers with access to the work for educational or research purposes.”⁹²⁵

Computer Program Class. Regarding this class, proponents envision emulating preserved computer programs and suggested that “[i]t is typically impossible to emulate only a portion of a software program.”⁹²⁶ They again cited *Corellium* to support their claim that the Register’s focus should not be on the amount of copying that preservationists engage in, but should be on “whether the ‘copying was tethered to a valid, and transformative, purpose.’”⁹²⁷ Because they claim their proposed use is transformative, proponents concluded that “[w]hen the purpose of a use is favored by the Copyright Act, and there is no effect of the use on the market for the work, courts do not focus the factor three analysis on how many copies might be made.”⁹²⁸

Video Game Class. For this class, proponents made similar arguments as those made to support the computer program class. They added that “the third fair

⁹²¹ SPN & LCA Class 6(a) Initial at 13; SPN & LCA Class 6(b) Initial at 11–12.

⁹²² Joint Creators I Class 6 Opp’n at 7.

⁹²³ ESA Class 6(b) Opp’n at 13.

⁹²⁴ Joint Creators I Class 6 Opp’n at 7.

⁹²⁵ 2021 Recommendation at 274.

⁹²⁶ SPN & LCA Class 6(a) Initial at 14.

⁹²⁷ *Id.* (quoting *Corellium*, No. 21-cv-12835, 2023 WL 3295671 at *31).

⁹²⁸ *Id.* at 14.

use factor should focus on the amount and substantiality of what is made available to the user rather than the amount that may be stored for preservation and other technological purposes.”⁹²⁹ In response, opponents argued that “use of entire games for recreational purposes” weighs against fair use under this factor,⁹³⁰ “especially when the use contemplated is substitutional.”⁹³¹

The Register’s Analysis. The Register has previously acknowledged that preservation uses may need “to copy an entire work to make a fair use.”⁹³² Moreover, it remains potentially necessary to copy and preserve an entire work for educational or research purposes. Therefore, she again finds that this factor does not necessarily weigh against fair use, with respect to preservation uses. She notes, however, that recreational uses of an entire work in ways that would serve as a market substitute would not favor fair use under this factor.⁹³³

Proponents argued that the fourth factor, which considers the effect of the use upon the potential market for or value of the copyrighted work, favors fair use because only computer programs and video games that are not being exploited in the commercial marketplace are subject to the exemption.⁹³⁴ They also claimed that the proposed uses would not disrupt copyright owners’ market-related interests because such uses are transformative.⁹³⁵ Finally, they again touted the use of emulation technologies, arguing that using these technologies to provide users limited access to preserved works would weigh in favor of fair use under

⁹²⁹ SPN & LCA Class 6(b) Initial at 12 (citing *Google Books*, 804 F.3d at 221–22).

⁹³⁰ ESA Class 6(b) Opp’n at 13; *see also* Joint Creators I Class 6 Opp’n at 7.

⁹³¹ Joint Creators I Class 6 Opp’n at 7 (citing *Brammer v. Violent Hues Prods., LLC*, 922 F.3d 255, 268 (4th Cir. 2019) (“[U]nless the use is transformative, the use of a copyrighted work in its entirety will normally weigh against a finding of fair use.”) (internal quotations omitted)).

⁹³² 2018 Recommendation at 243 (reflecting the Acting Register’s agreement with proponent’s assertion); *see also* 2021 Recommendation at 274.

⁹³³ *See, e.g., Peter Letterese & Assocs. v. World Inst. of Scientology Enters.*, 533 F.3d 1287, 1314 n.30 (11th Cir. 2008) (citing *Campbell*, 510 U.S. at 588) (“The inquiry is whether the amount taken is reasonable in light of the purpose of the use and the likelihood of market substitution.”); *Campbell*, 510 U.S. at 588 (noting that reasonableness of the amount taken can depend on “the likelihood that the [secondary use] may serve as a market substitute for the original”).

⁹³⁴ SPN & LCA Class 6(a) Initial at 16–17; SPN & LCA Class 6(b) Reply at 19 (“There can be no harm to a market for games that are not commercially available.”).

⁹³⁵ SPN & LCA Class 6(a) Initial at 15; SPN & LCA Class 6(b) Initial at 13.

this factor.⁹³⁶ Because proponents made additional arguments in support of the video game class, each class is addressed separately below.

Computer Program Class. The Register finds that the fourth factor does not support a fair use finding regarding this class. In the 2021 proceeding, she noted that the single-user limitation would “minimize the risk of substitutional use of the software.”⁹³⁷ Proponents now seek to remove that requirement, and there would be no such safeguard with respect to the creation of multiple copies. She agrees with Joint Creators I’s claim that copies made under the proposed exemption would be “perfect substitutes for the underlying work.”⁹³⁸

Video Game Class. Regarding this class, proponents provided comments addressing the market for video games that are no longer reasonably available in the commercial marketplace, including the secondary and reissue marketplaces. They claimed that “the vast majority of historic video games—more than 87% according to a recent study—are effectively inaccessible in their original form because copies are no longer sold by their publishers.”⁹³⁹

They acknowledged that “a healthy market for certain game reissues does exist,” and that “[i]n the recent past, the video game industry has made greater concerted efforts to reissue historical video games.”⁹⁴⁰ But, they argued that such efforts are unlikely to be sustainable and do not alter the fact that most games remain unavailable through reissue.⁹⁴¹ Although proponents likewise acknowledged that some “second-hand copies of some games can be purchased

⁹³⁶ See, e.g., SPN & LCA Class 6(a) Initial at 15 (“Emulation-as-a-Service can control user access to the internet, ensuring that researchers and educators have limited—not unfettered—software access.”); see also SPN & LCA Class 6(b) Initial at 20.

⁹³⁷ 2021 Recommendation at 279.

⁹³⁸ Joint Creators I Class 6 Opp’n at 7 (citing *Warhol*, 598 U.S. at 531–36).

⁹³⁹ SPN & LCA Class 6(a) Initial at 2.

⁹⁴⁰ Phil Salvador, *Survey of the Video Game Reissue Market in the United States*, VIDEO GAME HISTORY FOUNDATION 4, 11 (July 2023) (submitted in Anonymous 2 Class 6(b) Reply) (“Video Game Reissue Market Report”).

⁹⁴¹ *Id.* at 11 (also arguing that services through which reissues are now available “will eventually be discontinued for budgetary and technical reasons,” taking those games out of release); see also *id.* at 1–2 (noting that the availability of games in the reissue market “is overshadowed by the volume of games that remain unavailable” and “[o]nly 13 percent of classic video games published in the United States are currently in release”); *id.* at 39 (defining classic games as those issued before 2010).

from third-party sellers . . . like eBay,” they stated that these copies are “hard to find,” that “prices can be significantly inflated,” and that these games may require “expensive and difficult to find vintage hardware” to play.⁹⁴²

They asserted that neither the new video game market nor the video game re-release market would be adversely affected by the expanded exemption.⁹⁴³ To support that claim, they provided comments from Antstream and Limited Run Games, two video game re-release companies who support the proposed exemption. Further, both proponents and these re-release companies explained that the primary barriers to re-release market expansion were commercial and logistical hurdles, and not competition from scholarly access.⁹⁴⁴

Proponents also claimed that the proposed user restrictions could protect against infringing uses of preserved video games. Initially, they suggested that these restrictions could include “engag[ing] in user vetting, provid[ing] copyright notices, and [engaging in] use access restrictions.”⁹⁴⁵ Their reply comments suggested somewhat more specific regulatory restrictions, requiring that:

Any electronic distribution, display, or performance made outside of the physical premises of an eligible library, archives, or museum of works preserved . . . may be made only for a limited time and after the eligible institution acts to ensure that users seeking off-premises access to works are doing so for the purposes of scholarship, teaching, or research by: 1) specifically determining that the user’s interest is scholarship, teaching, or research through individualized human review of each applicant and their stated purposes, 2) instituting access restrictions appropriate to the nature of the use and the material, and 3) notifying users that they are receiving access to copyrighted material subject to adherence with applicable laws.⁹⁴⁶

Proponents claimed that these restrictions will restrict access to preserved video games to only “bona fide researchers” or those with a “bona fide academic

⁹⁴² SPN & LCA Class 6(b) Initial at 2, 15.

⁹⁴³ See, e.g., SPN & LCA Class 6(b) Reply at 23–27.

⁹⁴⁴ *Id.* at 6–8, 24–26.

⁹⁴⁵ SPN & LCA Class 6(b) Initial at 18.

⁹⁴⁶ SPN & LCA Class 6(b) Reply at App. A.

purpose.”⁹⁴⁷ When asked how a preservation institution would determine whether a researcher was “bona fide,” they replied that the institution would “look[] at who the researcher is [and] what they want access to.”⁹⁴⁸ They explained that “most cultural institutions already make use of similar policies to govern access to their physical collections” and “are well-equipped to extend these practices to off-premises use.”⁹⁴⁹ But they acknowledged that a cultural institution’s provision of access “often does not . . . require a specific affiliation”⁹⁵⁰ and that limiting access to researchers “who already have certain kinds of formal academic institutional affiliations” would have “really regressive and problematic effects on the field, as “[t]here are plenty of independent scholars and researchers who put out really meaningful work.”⁹⁵¹ Proponents noted that “bandwidth at cultural institutions, [would be a] natural constraint[] on the prevalence of remote access.”⁹⁵²

Proponents’ comments also discussed how the proposed restrictions could work. Regarding the proposal to display a copyright notice, proponents suggested that such notices could be provided via “full-screen pop-ups, clickwrap, physical forms, or a verbal attestation.”⁹⁵³ Regarding access restrictions appropriate to the nature of the use and the material, proponents stated that access restrictions could include “time-bounded access and technological controls,”⁹⁵⁴ but did not provide additional detail on how those restrictions could be made to be appropriate to the nature of the use and the material.

Proponents also suggested that the use of emulation technologies, which “do[] not deliver a comparable experience to a platform specific rerelease,” could be used to effectuate the foregoing restrictions.⁹⁵⁵ They stated that “[e]mulated

⁹⁴⁷ SPN & LCA Class 6(b) Initial at 10.

⁹⁴⁸ Tr. at 28:03–15 (Apr. 18, 2024) (Albert, SPN & LCA).

⁹⁴⁹ SPN & LCA Class 6(b) Reply at 4.

⁹⁵⁰ Tr. at 27:07–08 (Apr. 18, 2024) (Albert, SPN & LCA).

⁹⁵¹ Tr. at 28:03–15 (Apr. 18, 2024) (Albert, SPN & LCA). *But see* SPN & LCA Class 6(a) Initial at 17 (“Vetting could include *institutional verification* by way of a requirement that users fill out a research request detailing the scope of their project, a process already widely used by museums with video game collections.”) (emphasis added).

⁹⁵² SPN & LCA Class 6(b) Initial at 13.

⁹⁵³ *Id.* at 17.

⁹⁵⁴ *Id.*

⁹⁵⁵ SPN & LCA Class 6(b) Reply at 19.

games would not be plastered on the homepage of cultural institutions' websites; instead, they would exist within catalogued archives with other special collections resources, requiring a user to know what they are looking for and, more importantly, to request access after finding it."⁹⁵⁶ Proponents claimed "[t]he attention-to-detail and academic literacy necessary to see [a human review] process through to the end will go a long way toward filtering out nefarious users."⁹⁵⁷

Opposition Arguments. Opponents objected that none of these proposed restrictions were included in the proposed regulatory text.⁹⁵⁸ Possible restrictions and requirements such as the use of emulation technologies are discussed only in proponents' comments. Opponents also claimed that these proposals would "provide[] only illusory protection."⁹⁵⁹ For example, ESA stated that proponents are "not proposing a clear requirement to know who the users are or why they want to access a game, although they have introduced passingly the concept of human review,"⁹⁶⁰ calling the human review requirement "at best incomplete."⁹⁶¹ They also objected that the use of emulation technologies was not included in the proposed exemption.⁹⁶² ESA suggested that by not proposing specific requirements, proponents were "trying to reserve almost complete discretion in how they would provide access to preserve[d] games."⁹⁶³

Opponents also disagreed over the market for older video games. They claimed that "there remains a substantial market for classic games"⁹⁶⁴ and, as in past proceedings, provided examples of "a vibrant and growing market for authorized versions of classic games that could be jeopardized by the broad exemption proposed here," including the classic games offered by ESA's members such as re-releases sales and making the games available using

⁹⁵⁶ SPN & LCA Class 6(b) Initial at 18.

⁹⁵⁷ *Id.*

⁹⁵⁸ ESA Class 6(b) Opp'n at 14.

⁹⁵⁹ *Id.*

⁹⁶⁰ Tr. at 14:03–06 (Apr. 18, 2024) (Englund, ESA).

⁹⁶¹ Tr. at 13:15–21 (Apr. 18, 2024) (Englund, ESA).

⁹⁶² Tr. at 43:16–23 (Apr. 18, 2024) (Englund, ESA).

⁹⁶³ Tr. at 8:17–20 (Apr. 18, 2024) (Englund, ESA). At the same time, they acknowledged that there was not "any combination of limitations that ESA members would support to provide remote access [to those games]." Tr. at 15:16–18 (Apr. 18, 2024) (Englund, ESA).

⁹⁶⁴ ESA Class 6(b) Opp'n at 14.

subscription services.⁹⁶⁵ They also suggested that the existence of secondary markets demonstrates that there are alternatives to circumvention and any “unwillingness” to acquire works from those markets is unrelated to the prohibition on circumventing access controls.⁹⁶⁶

Ultimately, opponents argued that the video game class fails to contain “appropriate safeguards to prevent users from further distributing or making entertainment uses of video games.”⁹⁶⁷ They believed that “[e]nabling widespread remote access to preserved games with minimal supervision would present a serious risk to an important market.”⁹⁶⁸

The Register’s Analysis. The Register finds that the fourth factor does not support a finding of fair use with respect to the proposed video game class. Opponents have presented evidence of a substantial market for older video games. While proponents are correct that some older games will not have a reissue market, they concede there is a “healthy” market for other reissued games and that the industry has been making “greater concerted efforts” to reissue games.⁹⁶⁹

Further, while the Register appreciates that proponents have suggested broad safeguards that could deter recreational uses of video games in some cases, she believes that such requirements are not specific enough to conclude that they would prevent market harms. Additionally, the record on the use of emulation technologies is inconsistent and incomplete and the technologies are not addressed in the exemption text.⁹⁷⁰ As one example, proponents both suggested that emulated video games are appropriate for research uses, as they are faithful to the original game, and inappropriate for recreational uses, because they do not

⁹⁶⁵ *Id.* at 6.

⁹⁶⁶ Tr. at 62:18–23 (Apr. 18, 2024) (Rotstein, Joint Creators I).

⁹⁶⁷ ESA Class 6(b) Opp’n at 14 (quoting 2021 Recommendation at 275).

⁹⁶⁸ *Id.* at 5.

⁹⁶⁹ Video Game Reissue Market Report at 4, 11.

⁹⁷⁰ Further, while hardware emulation may be noninfringing and attitudes may be changing, video game emulation technologies have been historically associated with piracy, raising a potential concern with their proposed use. See Video Game Reissue Market Report at 7; Game Developers Conference, *It’s Still Emulation: Saving Video Game History Before It’s Too Late*, YOUTUBE (Apr. 11, 2019), <https://www.youtube.com/watch?v=dp-DRU24J18> (statement of Frank Cifaldi, founder Video Game History Foundation) (noting that emulation is viewed as “a means of piracy”).

have all the features that were available in the original game.⁹⁷¹ As noted above, there was also inconsistent testimony on whether an emulated game would need to be distributed to remote users or to the cloud.⁹⁷²

Balancing the four fair use factors, she finds that proponents have not met their burden of showing that reproducing works to allow for multiple simultaneous use in the computer program class is likely to be fair. The Register also finds that proponents have not met their burden of showing that the proposed off-premises uses in the video game class are likely to be fair. As proponents have not satisfied their burden to demonstrate that the requested uses are or are likely to be noninfringing, it is unnecessary to engage in an analysis of whether the implementation of technological protection measures on these works has caused adverse impacts on those users.

3. NTIA Comments

NTIA supports the adoption of expanded exemptions for Class 6, including to remove the single-user limitation in the computer program class and to remove the premises limitation in the video game class.⁹⁷³ It also recognizes “that software and video game infringement are legitimate concerns that must be addressed vigorously.”⁹⁷⁴

Regarding the computer program class, NTIA agrees with proponents that “eliminating the single-user limitation would greatly enhance the preservation of out-of-commerce software.”⁹⁷⁵ It also states that “[i]t is unrealistic to expect that private study, scholarship, teaching, or research efforts can be adequately supported by allowing only one remote user at a time, forcing others to expend

⁹⁷¹ *Compare* Tr. at 30:23–31:05 (Apr. 18, 2024) (Albert, SPN & LCA) (“[O]ftentimes the kinds of emulation environments that preservation institutions provide access to are . . . meant to replicate the experience of playing [the game] in an original setting.”) *with* SPN & LCA Class 6(b) Initial at 14 (“[A] game accessed remotely through emulation loses many features that make it appealing from a recreational standpoint”) and *id.* at 10 (“[E]mulation services in development at libraries and archives . . . lack features that an actual vintage game would have—namely, the original physical hardware”).

⁹⁷² *Compare* Tr. at 39:03–14 (Apr. 18, 2024) (Espenschied, Rhizome) and Tr. at 37:21–38:03 (Apr. 18, 2024) (Espenschied, Rhizome), *with* Tr. at 84:06–09 (Apr. 18, 2024) (Albert, SPN & LCA).

⁹⁷³ NTIA did not comment on the substance of Ken Austin’s proposed exemption.

⁹⁷⁴ NTIA Letter at 56, 59.

⁹⁷⁵ *Id.* at 57.

limited financial resources to travel to an eligible institution.”⁹⁷⁶ Finally, NTIA does not believe that removing the single-user restriction would harm the market for computer programs.⁹⁷⁷

For the video game class, NTIA notes “the long history of exemptions for preservation in this rulemaking process, and the careful balance of interests that the Librarian tries to craft as they align the final rules with the Section 1201 statutory factors and copyright law.”⁹⁷⁸ It notes the Register’s earlier concerns with removing the premises limitation, including “that the proposed language to the exemption did not contain ‘tailored restrictions to ensure that uses would be limited to bona fide teaching, research, or scholarship uses and would affect the market for the original works.’”⁹⁷⁹ In this proceeding, NTIA believes that proponents’ proposed exemption language would address such concerns.⁹⁸⁰

The Register appreciates that “NTIA has a long history of supporting preservation efforts” and has focused its comments on preservation-based policy considerations.⁹⁸¹ While she also supports preservation efforts and has recommended preservation-related exemptions in prior rulemaking cycles,⁹⁸² the statute requires her to consider whether the affected uses are or are likely to be

⁹⁷⁶ *Id.* NTIA also states that the computer program preservation exemption’s single-user limitation “undermines the very purpose of software preservation by restricting access to those with the means to travel, thereby excluding a significant portion of the academic community.” *Id.* at 57. The current exemption, however, allows for remote access to preserved computer programs. 37 C.F.R. § 201.40(b)(18)(i) (permitting the “electronic distribution, display, or performance made outside of the physical premises of an eligible library, archives, or museum” under the exemption). It is unclear how travelling to a preservation institution would allow multiple users to simultaneously use a preserved computer program. For the program to be simultaneously used by multiple academic researchers, the Register understands that a preservation institution would need to either obtain additional copies of the work or reproduce the work—regardless of whether the work was accessed on or off the preservation institution’s premises.

⁹⁷⁷ NTIA Letter at 57.

⁹⁷⁸ *Id.* at 58.

⁹⁷⁹ *Id.* (quoting 2021 Recommendation at 279).

⁹⁸⁰ *Id.*

⁹⁸¹ *Id.* at 56.

⁹⁸² *See* 2021 Recommendation at 97–98, 279–82; 2018 Recommendation at 253–55, 280–83; 2015 Recommendation at 350–52; 2006 Recommendation at 30.

noninfringing.⁹⁸³ The Register cannot recommend these exemption expansions without the rulemaking record establishing that the proposed uses are or are likely to be noninfringing.

4. Conclusion and Recommendation

Considering the record before her and applicable law, the Register does not recommend granting Class 6(a)'s proposed removal of the single-user limitation for computer programs or Class 6(b)'s removal of the premises limitation from the video game exemption. She does recommend clarifying the single copy restriction language to reflect that preservation institutions can allow a copy of a computer program to be accessed by as many individuals as there are circumvented copies legally owned. This new text will address the perceived ambiguity in the current exemption, while serving the single-user limitation's intended purpose to minimize the risk of substitutional uses of preserved computer programs.⁹⁸⁴

Accordingly, the Register recommends that the Librarian add the following provision to the current computer program preservation class:

For purposes of paragraph (b)(20) of this section, the phrase “one user at a time” means that for each copy of a work lawfully owned by an eligible library, archives, or museum and preserved under paragraph (b)(20)(i) of this section, such library, archives, or museum may make an electronic distribution, display, or performance of that work outside of its physical premises. An eligible library, archives, or museum may make each copy of such lawfully owned and preserved work available to different users simultaneously. This provision does not permit an eligible library, archives, or museum to make multiple, simultaneous copies of the same copy of a work for the purposes of providing users access to the work.

⁹⁸³ As Congress has noted, “the rulemaking process ‘ensure[s] that the concept of fair use remains firmly established in the law’ and ‘extends into the digital environment the bedrock principle of “balance” in American intellectual property law for the benefit of both copyright owners and users.’” Section 1201 Report at 23 (quoting Commerce Comm. Report at 35–36).

⁹⁸⁴ See 2021 Recommendation at 279.

G. Proposed Class 7: Computer Programs – Vehicle Operational Data

1. Background

a. Summary of Proposed Exemption and Register’s Recommendation

The Office received one petition seeking a new exemption to permit lawful vehicle and vessel owners or lessees, or those acting on their behalf, to access, store, and share operational data that is generated when driving.⁹⁸⁵ Petitioner MEMA proposed allowing circumvention of technological protection measures on computer programs stored within lawfully acquired motorized land vehicles or marine vessels, commercial vehicles or vessels, and mechanized agricultural vehicles or vessels to access, store, and share vehicle operational and telematics data.⁹⁸⁶ Comments in support were submitted by MEMA and the Specialty Equipment Market Association (“SEMA”).⁹⁸⁷ Opposition comments were submitted by the Alliance for Automotive Innovation (“Auto Innovators”), the Association of Equipment Manufacturers (“AEM”), Joint Creators I, and the National Association of Manufacturers (“NAM”).⁹⁸⁸ They argued that consumers already enjoy sufficient access under current laws and market practices; that the proposed exemption as a whole, or portions thereof, are overly broad; and that it raises privacy, safety, and intellectual property concerns.⁹⁸⁹ Reply comments were submitted by MEMA, and by DOJ Antitrust and the FTC.⁹⁹⁰

⁹⁸⁵ MEMA Class 7 Pet. at 2.

⁹⁸⁶ *Id.*

⁹⁸⁷ MEMA Class 7 Initial; SEMA Class 7 Initial.

⁹⁸⁸ Auto Innovators Class 7 Opp’n; AEM Class 7 Opp’n; Joint Creators I Class 7 Opp’n; NAM Class 7 Opp’n.

⁹⁸⁹ Auto Innovators Class 7 Opp’n at 4, 6; AEM Class 7 Opp’n at 2, 5–6; NAM Class 7 Opp’n at 2; Joint Creators I Class 7 Opp’n at 2–3; Tr. at 12:04–10 (Apr. 18, 2024) (Humphrey, Auto Innovators); *see also* Tr. at 23:16–24, 55:01–06 (Apr. 18, 2024) (Englund, Joint Creators I) (“[I]t still isn’t clear to me that this exemption serves a purpose that is meaningfully distinct from Class 13 or current Exemption 13.”); NAM Class 7 *Ex Parte* Letter at 1–2 (July 31, 2024) (discussing how the proposed exemption is “overly broad” and “vague[]” thereby “allow[ing] for the circumvention of TPMs across a broad and abstract class that would include any lawfully acquired vehicle or vessel”).

⁹⁹⁰ MEMA Class 7 Reply; DOJ Antitrust & FTC Class 7 Reply.

The Register recommends granting the petition, subject to certain limitations on which the parties agreed. These limitations—which mirror provisions in the current repair exemption codified at 37 C.F.R. § 201.40(b)(13)—state that the exemption does not permit accessing computer programs through separate subscription services, permit circumventing TPMs for the purpose of gaining unauthorized access to other copyrighted works, or negate compliance with or liability under other applicable laws.

b. Overview of Issues

The proposed exemption would permit “lawful vehicle owners and lessees, or those acting on their behalf, to access, store, and share” “their own vehicle operational and telematics data.”⁹⁹¹ Proponents alleged that this data is inaccessible because of the TPMs in hardware and software units that monitor and control vehicle functions, even when owners and lessees of the vehicles and vessels generate this data when driving.⁹⁹² They contended that circumventing TPMs to access the data would enable owners and lessees to engage in noninfringing, productive uses of such data, such as monitoring vehicle use.⁹⁹³ Proponents distinguished their application from the existing exemption in 37 C.F.R. § 201.40(b)(13), which covers the diagnosis, repair, and lawful modification of vehicles and vessels (the “Repair Exemption”),⁹⁹⁴ asserting that the Repair Exemption does not “clearly apply to telematics and operational data.”⁹⁹⁵ One proponent characterized the Repair Exemption and the proposed

⁹⁹¹ MEMA Class 7 Initial at 1–2.

⁹⁹² *Id.* at 2; *see also* SEMA Class 7 Initial at 1–2 (discussing how vehicles owners create data when driving); MEMA Class 7 Post-Hearing Resp. at 2 (May 28, 2024) (“Examples of TPMs include, for example, passwords, so-called security dongles, challenge-response mechanisms, encryption, and disabled access ports on the circuitry itself.”)

⁹⁹³ MEMA Class 7 Initial at 3, 7; *see also* SEMA Class 7 Initial at 2 (discussing the importance of access to diagnose vehicle issues, such as fewer repair and service options); MEMA Class 7 Post-Hearing Resp. at 2 (May 28, 2024) (“[T]he proposed exemption would allow a vehicle owner to grant access to vehicle data to an aftermarket supplier engaged in customizing vehicles.”); Tr. at 8:04–10:07 (Apr. 18, 2024) (Jasnow, MEMA) (discussing potential use cases).

⁹⁹⁴ The Repair Exemption has been recommended for renewal in this proceeding. *See* NPRM at 72,020.

⁹⁹⁵ MEMA Class 7 Initial at 6; *see also* Tr. at 8:04–8:08 (Apr. 18, 2024) (Jasnow, MEMA) (“[T]he proposed exemption, the Class 7 exemption is a little bit beyond the scope of the existing exemption for diagnosis, repair or modification of the vehicle.”).

exemption as a “Venn Diagram.”⁹⁹⁶ Although proponents agreed that some aspects of the two exemptions would overlap, they stated that the Repair Exemption does not encompass all of the proposed uses—even with regard to some types of uses related to repair.⁹⁹⁷ MEMA, for instance, stated that telematics data “streamline[s] the repair process by providing shops with real time access to vehicle data . . . to anticipate needs before the car pulls into the shop.”⁹⁹⁸ iFixit stated that telematics data is particularly useful when assessing a fleet of vehicles in the aggregate.⁹⁹⁹ These distinct use cases are due, in part, to vehicles and vessels “being built with increasingly powerful hardware units and software, which together are capable of collecting exponentially more data” than previously available.¹⁰⁰⁰

Opponents disagreed with MEMA’s characterization of the Repair Exemption, and argued that the proposed uses are already exempted pursuant to the existing provision.¹⁰⁰¹ They also claimed that the proposed exemption would be contrary to the limitations the Office has applied to the Repair Exemption because the proposed “broad, abstract, and undefined class” includes uses already excluded in the context of the Repair Exemption.¹⁰⁰² Additionally, opponents stated that

⁹⁹⁶ Tr. at 16:21–17:10 (Apr. 18, 2024) (Greenstein, Auto Care Ass’n).

⁹⁹⁷ See, e.g., Tr. at 8:05–10:17 (Apr. 18, 2024) (Jasnow, MEMA) (contending that the proposed exemption is “a little bit beyond the scope of the existing exemption for diagnosis, repair or modification”); MEMA Class 7 Reply at 3 (stating that, unlike the Repair Exemption, telematics data “streamline[s] the repair process by providing shops with real time access to vehicle data . . . to anticipate needs before the car pulls into the shop”); Tr. at 7:18–22 (Apr. 18, 2024) (Wiens, iFixit) (explaining that telematics data is particularly useful when assessing a fleet in aggregate).

⁹⁹⁸ MEMA Class 7 Reply at 3.

⁹⁹⁹ Tr. at 7:18–22 (Apr. 18, 2024) (Wiens, iFixit).

¹⁰⁰⁰ MEMA Class 7 Initial at 2.

¹⁰⁰¹ Auto Innovators Class 7 Opp’n at 6; AEM Class 7 Opp’n at 2, 5; see also Tr. at 23:16–24, 54:25–55:06 (Apr. 18, 2024) (Englund, Joint Creators I) (“[I]t still isn’t clear to me that this exemption serves a purpose that is meaningfully distinct from Class 13 or current Exemption 13.”).

¹⁰⁰² Joint Creators I Class 7 Opp’n at 2, 6; see also *id.* at 3; Auto Innovators Class 7 Opp’n at 3–4; AEM Class 7 Opp’n at 2; Tr. at 12:04–10 (Apr. 18, 2024) (Humphrey, Auto Innovators); see also NAM Class 7 *Ex Parte* Letter at 1–2 (July 31, 2024) (stating that the proposed exemption is “overly broad” and “vague[.]” thereby “allow[ing] for the circumvention of TPMs across a broad and abstract class that would include any lawfully acquired vehicle or vessel”).

the proposed exemption raises privacy, safety, and intellectual property concerns aside from copyright.¹⁰⁰³

In response, proponents reiterated that the Repair Exemption is more limited than the proposal because it “does not permit access to one’s own personal data for purposes of personalization or to streamline the repair process by providing shops with real-time access to vehicle data in advance of any potential malfunction.”¹⁰⁰⁴ MEMA also clarified that telematics data “go[es] beyond the scope of just geolocation information” and includes “data that is being conveyed from the vehicle to some remote cloud application or system.”¹⁰⁰⁵ MEMA provided further detail about how it proposed to define the term “operational data,”¹⁰⁰⁶ for which it had initially included no definition. Acknowledging some of the privacy, safety, and intellectual property concerns, MEMA offered in its comments and hearing testimony to support additional limitations on the proposed exemption. Modeling limitations based on the Repair Exemption, it asserted that “a similar carve-out” for separate subscription services like the one in the Repair Exemption “may be appropriate here” and that the Office “can and should limit the exemption to uses that comply with local and federal laws.”¹⁰⁰⁷ Based on the record, and in the absence of any objection from opponents, the Register will evaluate the proposed exemption with the suggested limitations.

2. Discussion

a. Scope of the Proposed Class

The Register addresses two issues related to the scope of the proposed class: (1) whether the proposed exemption should be limited only to personal land

¹⁰⁰³ NAM Class 7 Opp’n at 2; AEM Class 7 Opp’n at 6; Joint Creators I Class 7 Opp’n at 3.

¹⁰⁰⁴ MEMA Class 7 Reply at 3; *see also* Tr. at 8:04–8:08 (Apr. 18, 2024) (Jasnow, MEMA) (“[T]he proposed exemption, the Class 7 exemption is a little bit beyond the scope of the existing exemption for diagnosis, repair or modification of the vehicle.”); Tr. at 16:20–17:02 (Apr. 18, 2024) (Greenstein, Auto Care Ass’n).

¹⁰⁰⁵ Tr. at 6:06–7:10, 28:19–21 (Apr. 18, 2024) (Jasnow, MEMA).

¹⁰⁰⁶ Tr. at 6:06–7:10 (Apr. 18, 2024) (Jasnow, MEMA) (defining “operational data” as data that is “generated pursuant to a vehicle owner or lessee’s use of a vehicle,” including things like vehicle performance data, vehicle status data, driver behavior data, and environmental data).

¹⁰⁰⁷ MEMA Class 7 Reply at 4–5; *see also* Tr. at 13:11–16, 48:01–04 (Apr. 18, 2024) (Jasnow, MEMA) (discussing acceptance of potential regulatory language carveouts); Tr. at 48:19–20 (Apr. 18, 2024) (Foshee, Auto Care Ass’n) (agreeing that potential regulatory carveouts are acceptable).

vehicles or also encompass additional vehicle types, and (2) whether only vehicle owners and lessees should be permitted to rely on the proposed exemption, or whether it should also allow access by “operators” or those acting “on behalf of” owners and lessees.

i. Vehicles Covered by Proposed Exemption

Proponents seek an exemption that applies to “a lawfully acquired motorized land vehicle or marine vessel such as a personal automobile or boat, commercial vehicle or vessel, or mechanized agricultural vehicle or vessel.”¹⁰⁰⁸ Because the record pertains primarily to personal land vehicles, the Register must consider whether the record supports an exemption that includes other categories of vehicles. MEMA asserted that there are no “major technological differences” between the proposed vehicle classes relevant to the proposed exemption and that the relevant TPMs present “very similar issues.”¹⁰⁰⁹

The proposed exemption concerns the same types of vehicles and vessels as the Repair Exemption.¹⁰¹⁰ That exemption originally applied only to “motorized land vehicles,” including “agricultural vehicles,”¹⁰¹¹ but was expanded in the 2021 rulemaking to include marine vessels.¹⁰¹² In that rulemaking, the Register credited the similarities between marine vessels and land vehicles, especially agricultural vehicles, and found “no reason to deviate from the adverse effects analysis in the previous recommendations for land vehicles.”¹⁰¹³ Moreover, she

¹⁰⁰⁸ MEMA Class 7 Initial at 6.

¹⁰⁰⁹ Tr. at 36:06–17 (Apr. 18, 2024) (Jasnow, MEMA); Tr. at 36:19–37:08 (Apr. 18, 2024) (Wiens, iFixit); *see also* 37 C.F.R. § 201.40(b)(13) (current Repair Exemption).

¹⁰¹⁰ *See* 37 C.F.R. § 201.40(b)(13) (providing a temporary exemption for persons engaged in noninfringing uses of “[c]omputer programs that are contained in and control the functioning of a lawfully acquired motorized land vehicle or marine vessel such as a personal automobile or boat, commercial vehicle or vessel, or mechanized agricultural vehicle or vessel”); Tr. at 36:06–17 (Apr. 18, 2024) (Jasnow, MEMA) (stating that the proposed exemption “mirrors the scope of the . . . existing repair exemption”); Tr. at 36:19–37:08 (Apr. 18, 2024) (Wiens, iFixit).

¹⁰¹¹ *See* 2015 Recommendation at 218–20, 248–49. The Register recommended some expansion of the vehicle repair exemption in 2018, and in that rulemaking, maintained the exemption’s express inclusion of “mechanized agricultural vehicle[s].” *See* 2018 Recommendation at 230.

¹⁰¹² 2021 Recommendation at 208; *see also* 37 C.F.R. § 201.40(b)(13).

¹⁰¹³ 2021 Recommendation at 222–23 (crediting assertions that “users of marine vessels are adversely affected in the same manner as users of land vehicles, in particular, tractor owners,” and noting that the same manufacturers made engine and diagnostic tools for both land vehicles

determined that the fair use analysis applicable to personal vehicles and agricultural vehicles also extended to marine vessels.¹⁰¹⁴

Here, the record supports a class covering a similar scope of vehicles. Opponents did not make any arguments about why agricultural vehicles and marine vessels present meaningfully different issues from personal automobiles with respect to the relevant TPMs,¹⁰¹⁵ adverse effects, or noninfringing uses.¹⁰¹⁶ Moreover, the renewal of the Repair Exemption, which covers personal, agricultural, and commercial vehicles and vessels, is unopposed.¹⁰¹⁷ Thus, consistent with previous rulemakings and the renewed Repair Exemption, the Register concludes that the scope of the proposed exemption should include personal automobiles, as well as commercial vehicles, agricultural vehicles, and personal and commercial marine vessels.

and marine vessels). Moreover, the Register notes that the adverse effects of TPMs on agricultural vehicle repair closely align with the adverse effects for personal vehicles: costlier, longer repair processes, and waste. *See* Tr. at 36:06–11 (Apr. 18, 2024) (Jasnow, MEMA); DOJ Antitrust & FTC Class 7 Reply at 8–9, 12–13.

¹⁰¹⁴ 2021 Recommendation at 208.

¹⁰¹⁵ *See* Tr. at 23:13–24 (Apr. 18, 2024) (Englund, Joint Creators I) (suggesting that the proposed exemption and the existing Repair Exemption “both apply to software that controls vehicles. So I believe it’s the same software we’re talking about . . . that looks like they’re substantially overlapping to me.”).

¹⁰¹⁶ Auto Innovators distinguished that “other groups [besides manufacturers of personal automobiles] . . . have in the past been much more restrictive about the data that’s been available than the auto industry has.” Tr. at 35:21–36:04 (Apr. 18, 2024) (Humphrey, Auto Innovators). This distinction, that manufacturers for other classes of vehicles are more restrictive, does not necessarily suggest that the manufacturers employ substantially different TPMs. Moreover, Auto Innovators declined to take a position as to “whether this exemption should be adopted or rejected with respect to” vessels, commercial vehicles, or mechanized agricultural vehicles, confining their comments to personal automobiles. Auto Innovators Class 7 Opp’n at 2. NAM presented a report detailing certain voluntary measures and agreements by agricultural equipment manufacturers. *See generally* NAM Class 7 Opp’n at App. (Ike Brannon & Kerri Seyfert, *The Economic Downsides of “Right-to-Repair,”* NAT’L ASS’N OF MFERS (2023)). However, NAM did not argue that this report showed agricultural vehicles are distinct from other vehicles or vessels relevant to the scope of the proposed exemption.

¹⁰¹⁷ In addition to the instant proposal, petitioners iFixit and MEMA filed petitions to renew the existing Repair Exemption; no oppositions were filed against renewal, and the Office recommended renewal. *See* NPRM at 72,020.

ii. Persons entitled to rely on the proposed exemption

The Register also evaluates whether the proposed exemption should encompass persons besides owners and lessees. The proposed exemption applies not only to “lawful vehicle owners and lessees,” but also to “those acting on their behalf.”¹⁰¹⁸ MEMA characterized “those acting on their behalf” as those persons who consumers “themselves expressly authorize to use [their] data.”¹⁰¹⁹ SEMA argued, for example, that although “millions of Americans continue to work on and fix their own vehicles,” not everyone is able to do so themselves: “[f]or people who do not have the time, knowledge, and ability to work on their own vehicles, it is critical that their repairer of choice has access to [vehicle performance data] and is protected from copyright infringement for accessing” it.¹⁰²⁰

Opponents suggested that including the phrase “those acting on their behalf” would inappropriately broaden the scope of the proposed exemption. AEM noted that “the Office and Library have recognized that there is no authority to adopt exemptions to the anti-trafficking provisions of 1201(a)(2) and 1201(b),” and argued that the proposed inclusion of the term “acting on [owners’ or lessees’] behalf” risks “crossing this line.”¹⁰²¹

In light of AEM’s argument that the Office and Library should not extend to those acting “on behalf” of owners and lessees, the Register revisits the relationship between the anti-circumvention and anti-trafficking provisions, articulated in section 1201(a)(2) and 1201(b) respectively.¹⁰²² The Section 1201 Report noted that “[i]n the past, the Office has declined to recommend

¹⁰¹⁸ MEMA Class 7 Initial at 6.

¹⁰¹⁹ MEMA Class 7 Reply at 5.

¹⁰²⁰ SEMA Class 7 Initial at 2 (using the term “designee” in addition to “repairer”); *see also* Auto Care Ass’n Class 7 Post Hearing Resp. at 1 (May 29, 2024) (arguing that “[a]s vehicles become more complex and technologically advanced, the need for choice [of repair provider] will be critically important, and that consumers seeking third-party assistance with repair frequently choose independent shops over dealerships).

¹⁰²¹ AEM Class 7 Opp’n at 7; *see also* Tr. at 56:18–25 (Apr. 18, 2024) (Humphrey, Auto Innovators) (suggesting that third parties merely wanted to “hit the jackpot” when consumers elect to provide data to those third parties).

¹⁰²² *See* Section 1201 Report at 56–62 (“[T]here is, at a minimum, substantial uncertainty as to whether there are types of third-party assistance that would fall outside the reach of the ‘service’ bar.”).

exemptions allowing circumvention on behalf of another person,” because such exemptions might implicate the 1201(b) provision barring trafficking in technology, products *or services* designed to circumvent TPMs.¹⁰²³ However, because the line between non-prohibited third-party assistance and prohibited circumvention services was “untested and outside the scope of the rulemaking,” the Register suggested that in subsequent rulemakings, the Office would “seek to avoid recommending unduly narrow definitions of exemption beneficiaries.”¹⁰²⁴

Consistent with that suggestion, in 2021 the Register recommended amending the exemption for data generated by medical devices, to encompass data obtained via circumvention undertaken “by or *on behalf of* a patient,”¹⁰²⁵ because ordinary consumers were unable to engage in noninfringing uses core to the exemption absent specialized computer skills.¹⁰²⁶ Addressing concerns about section 1201(a)(2) and 1201(b), the Register cautioned that she was not “expressing any view as to whether particular examples of assistance do or do not constitute unlawful circumvention services,” and emphasized that the exemptions did “not affect liability under the anti-trafficking provisions.”¹⁰²⁷ The same reasoning is applicable here. Like medical device data, vehicle operational data can be difficult to extract and use.¹⁰²⁸ This problem has grown commensurate with advances in automobile technology,¹⁰²⁹ which has driven up the costs of and expertise necessary for vehicle repair.¹⁰³⁰ Consistent with her

¹⁰²³ *Id.*; see 17 U.S.C. § 1201(b).

¹⁰²⁴ Section 1201 Report at 61–62.

¹⁰²⁵ 2021 Recommendation at 146 (2021); see also 37 C.F.R. § 201.40(b)(7) (permitting circumvention “where such circumvention is undertaken by *or on behalf of* a patient for the sole purpose of lawfully accessing data generated by a patient’s own medical device or monitoring system”) (emphasis added).

¹⁰²⁶ 2021 Recommendation at 145–46.

¹⁰²⁷ *Id.* at 146–47.

¹⁰²⁸ See 2018 Recommendation at 5 (explaining that the Acting Register drafted exemption language, to the extent it did not “implicate the anti-trafficking provisions” and without opining on that issue, to address the concerns that “limiting the exemption to individual owners threatens to render it effectively meaningless for those who lack the technical knowledge to access and manipulate increasingly complex embedded computer systems”).

¹⁰²⁹ See MEMA Class 7 Initial at 2 (observing that “vehicles are also being built with *increasingly* powerful hardware units and software, which together are capable of collecting *exponentially* more data and performing an *ever-increasing* number of vital tasks”) (emphasis added).

¹⁰³⁰ Auto Care Ass’n Class 7 Post-Hearing Resp. at 1–2 (May 29, 2024).

prior approach, the Register recommends including “those acting on [an owner’s or lessee’s] behalf” in the regulatory language. She takes no position as to whether any particular act of circumvention by third parties on an owner’s or lessee’s behalf would implicate the section 1201(b) prohibition on trafficking.

b. Works Protected by Copyright

Proponents defined the relevant copyrighted works as “computer programs that are contained in and control the functioning of” various types of vehicles and vessels.¹⁰³¹ They asserted that “software and hardware” controlling the vehicle and vessel functions are copyrightable works that restrict access to the requested data.¹⁰³² Opponents do not dispute, and the Register agrees, that the relevant software constitutes a computer program within the meaning of the Copyright Act and, therefore, at least some works in the proposed class are protected by copyright.

The record indicates that “vehicle software programs . . . collect and process a large amount of raw data generated . . . [that] may be stored as unmodified raw data or it may be processed and stored as part of an organized database schema.”¹⁰³³ Proponents asserted that a copyright owner “may be able to claim copyright protection in the database schema,” as opposed to the raw data itself.¹⁰³⁴ While they did not provide information concerning the precise nature of organized database schemas, the record indicates that some database schemas produced from the generated data may qualify for copyright protection if they

¹⁰³¹ MEMA Class 7 Pet. at 2.

¹⁰³² MEMA Class 7 Initial at 3–4.

¹⁰³³ *Id.* at 3.

¹⁰³⁴ *Id.* at 3–4; see *Feist Publ’ns, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340, 348 (1991) (holding that factual compilations may be copyrightable where the “choices as to selection and arrangement, so long as they are made independently by the compiler and entail a minimal degree of creativity, are sufficiently original”). Because proponents seek to access data generated by vehicles and vessels, they admitted that “the raw and unprocessed data is not capable of copyright protection because it is purely factual.” MEMA Class 7 Initial at 4; see also SEMA Class 7 Initial at 2 (“While the electronic control unit (ECU) and vehicle software are copyrightable, data is generally a fact and not an expression, and as such is not subject to copyright.”); DOJ Antitrust & FTC Class 7 Reply at 16 (discussing “uncopyrighted telematics data”). Where that is the case, proponents do not need an exemption to engage in their desired uses because TPMs on those vehicles and vessels would not “effectively control[] access to a [copyrighted] work.” 17 U.S.C. § 1201(a)(1)(A).

contain sufficient originality in their selection, coordination, or arrangement.¹⁰³⁵ In those cases, section 1201 would apply to circumvention of TPMs that control access to the data generated by vehicles and vessels.

c. Asserted Noninfringing Uses

Proponents asserted that the proposed uses constitute fair uses under section 107 of the Copyright Act.¹⁰³⁶ These uses include, for instance, accessing data or authorizing others to review performance data, evaluating driver safety, or increasing knowledge of vehicle operations including safety features and fuel economy. Opponents did not engage in substantive analyses of the four fair use factors.¹⁰³⁷ Because proponents have provided evidence that the proposed uses are the same, or similar, across vehicle types, the Register concludes that a single fair use analysis is appropriate.¹⁰³⁸

Regarding the first fair use factor—the purpose and character of the use—MEMA asserted that the purpose and character of the proposed uses weigh in its favor. Proponents alleged that several uses—“analyz[ing] and mak[ing] important determinations about [consumers’] own driving practices, the safety and efficiency of their vehicles, the timing and possible causes of accidents and malfunctions, and potential replacement parts that may improve the performance and longevity of their vehicles”—are all non-commercial.¹⁰³⁹ They asserted that “evaluat[ing] how [owners’ and lessees’] vehicles serve [their] unique needs, grant[ing] aftermarket services providers access to certain vehicle

¹⁰³⁵ See U.S. COPYRIGHT OFFICE, COMPENDIUM OF U.S. COPYRIGHT OFFICE PRACTICES § 508.1 (3d ed. 2021); *CACI, Inc. v. U.S. Navy*, 674 F. Supp. 3d 257, 277 (E.D. Va. 2023); *Digit. Drilling Data Sys. LLC v. Petrolink Servs.*, No. 4:15-CV-02172, 2018 U.S. Dist. LEXIS 83158, at *14–21 (S.D. Tex. May 16, 2018); *Merch. Transaction Sys. Inc. v. Nelcela, Inc.*, No. CV 2-1954, 2009 U.S. Dist. LEXIS 25663, at *56–57 (D. Ariz. Mar. 17, 2009); *DSMC, Inc. v. Convera Corp.*, 479 F. Supp. 2d 68, 80–83 (D.D.C. 2007); see also 2021 Recommendation at 138–39 (discussing the possibility that data outputs may qualify for copyright protection); 2015 Recommendation at 393 & n.2644 (similar).

¹⁰³⁶ See e.g., MEMA Class 7 Initial at 4–5; see also 17 U.S.C. § 107 (fair use).

¹⁰³⁷ See Auto Innovators Class 7 Opp’n at 10; Tr. at 40:18–41:02 (Apr. 18, 2024) (Humphrey, Auto Innovators).

¹⁰³⁸ Tr. at 38:17–40:01 (Apr. 18, 2024) (Jasnow, MEMA); 2021 Recommendation at 208. *But see* Tr. at 39:20–22 (Apr. 18, 2024) (Jasnow, MEMA) (“[T]here *might* be different use cases with respect to a commercial vehicle or a personal vehicle” (emphasis added)).

¹⁰³⁹ MEMA Class 7 Initial at 4. At the hearing, proponents also discussed commercial vehicle owners and independent operators of heavy-duty vehicles using data for lawful purposes. Tr. at 38:17–39:07 (Apr. 18, 2024) (Jasnow, MEMA).

performance metrics, and monitor[ing] use of the family car” are “primarily non-commercial in nature when undertaken by or on behalf of the vehicle owner or lessee for his or her own personal use.”¹⁰⁴⁰ Proponents further argued that the purposes of the proposed uses “differ[] significantly from that of the original work” because they seek to use the data within the copyrightable software to “derive new insight and understanding about their own driving habits and vehicle performance,” that “add[s] something new, with a further purpose of different character.”¹⁰⁴¹

The Register agrees that the proposed uses serve a different purpose than the copyrighted works and are either non-commercial or not primarily commercial in nature.¹⁰⁴² She therefore concludes that the analysis of the first factor supports a finding of fair use.

The Register also agrees with MEMA that the second fair use factor—the nature of the copyrighted work—favors fair use. Proponents correctly noted that the second factor “calls for recognition that some works are closer to the core of intended copyright protection than others.”¹⁰⁴³ As the Register determined in previous rulemakings, the “vehicle software is a functional work used for the limited purpose of operating a vehicle, rather than a creative work with expressive or artistic value.”¹⁰⁴⁴

¹⁰⁴⁰ MEMA Class 7 Initial at 4; *see also* MEMA Class 7 Reply at 5 (“[T]he possible uses of telematics and vehicle operational data under this proposed Class 7 exemption are largely non-commercial.”).

¹⁰⁴¹ MEMA Class 7 Initial at 4–5; *see also* DOJ Antitrust & FTC Class 7 Reply at 16, 17 (discussing that accessing data “is useful for numerous non-infringing purposes including the repair and maintenance of vehicles, as well as other valuable monitoring uses”). Proponents further contend that any “insights will be limited to the user’s *own* vehicle, with little, if any, value to anyone other than the vehicle owner or lessee.” MEMA Class 7 Initial at 5.

¹⁰⁴² The Office recognizes that the information gathered from the data within the copyrighted software may be utilized by other downstream actors for diagnosis, maintenance, and repair purposes, which may be commercial in nature.

¹⁰⁴³ *Campbell*, 510 U.S. at 586; *see also* MEMA Class 7 Initial at 5.

¹⁰⁴⁴ *See* MEMA Class 7 Initial at 5 (citing 2015 Recommendation at 301); *see also* DOJ Antitrust & FTC Class 7 Reply at 17 (“Telematics data [is] . . . primarily functional and used for repair rather than creative works with expressive or artistic value.”). The Register likewise determined that the computer software within vessels may be functional in nature and that repair implicating a vessel ECU’s informational and operational aspects is likely to be fair use. *See* 2021

MEMA contended that the third factor—the amount and substantiality of the portion used in relation to the copyrighted work as a whole—weighs in favor of fair use because while owners and lessees may copy the software, they are “unlikely to reproduce or otherwise use any substantial portion” of it,¹⁰⁴⁵ and will only use a “minimal” portion of the work.¹⁰⁴⁶ MEMA further claimed that access to the software is necessary “merely to retrieve the non-copyrightable data” generated by vehicles and vessels.¹⁰⁴⁷ Finally, they stated that courts have held that “the third factor does not necessarily weigh against fair use when” an alleged infringer creates copies of copyrighted software in order to analyze and understand its functions.¹⁰⁴⁸

The Register concludes that the third factor, though somewhat favoring fair use, should be given little weight. Based on the record, any copying necessary to retrieve and access data is likely to be minimal or of an incidental nature.¹⁰⁴⁹ The amount used therefore is reasonable relative to the purpose of the use.¹⁰⁵⁰

Discussing the fourth factor—the effect of the use upon the potential market for or value of the copyrighted work—MEMA asserted that accessing data would not result in harm to the potential market for computer software within vehicles and vessels. It observed that the Register previously concluded that “computer programs on the majority of ECUs are only meaningful in connection with the vehicle, that the copies are generally sold only with the vehicle, and that the

Recommendation at 199, 201–02, 208; *see also* 2018 Recommendation at 195–200; 2015 Recommendation at 234–37.

¹⁰⁴⁵ MEMA Class 7 Initial at 5.

¹⁰⁴⁶ Tr. at 39:13–40:01 (Apr. 18, 2024) (Jasnow, MEMA).

¹⁰⁴⁷ MEMA Class 7 Initial at 5; *see also* Tr. at 26:22–27:03, 39:13–40:01 (Apr. 18, 2024) (Jasnow, MEMA) (discussing accessing some portion or a minimal portion of the copyrighted software).

¹⁰⁴⁸ MEMA Class 7 Initial at 5 (citing *Connectix Corp.*, 203 F.3d at 599–601).

¹⁰⁴⁹ Even in situations where the work must be copied in its entirety, which does not appear contemplated by proponents, such copying is not dispositive in rejecting a claim to fair use, but has been found permissible where necessary to achieve a transformative purpose. *See Google*, 593 U.S. at 34 (“The ‘substantiality’ factor will generally weigh in favor of fair use where . . . the amount of copying was tethered to a valid, and transformative, purpose.”); *Connectix Corp.*, 203 F.3d at 605–06; 2021 Recommendation at 211 (“[C]ourts have nonetheless concluded that use of the entirety of a work is permissible where necessary to achieve a transformative purpose.”).

¹⁰⁵⁰ The work’s location, whether in a vehicle or vessel, does not appear to impact the amount of the work used to access the data.

consumer pays for those copies when purchasing the vehicle.”¹⁰⁵¹ It also noted that “[t]here is limited, if any, market for vehicle software as a standalone product that is separate and distinct from the market for vehicles,” arguing that any impact would be minute at most.¹⁰⁵²

Consistent with prior rulemakings,¹⁰⁵³ and with the evidence proponents present, the Register concludes that the fourth factor weighs in favor of fair use. There is no specific evidence that a market or potential market exists for the copyrighted software alone or that granting the proposed exemption would negatively impact any such market or potential market.¹⁰⁵⁴ To the contrary, the record suggests that if a separate market did exist, enabling a greater number of owners and lessees to make noninfringing uses of the material could bolster the market by adding participants and beneficiaries.

Weighing the fair use factors together and considering the record provided by proponents, the Register concludes that circumventing computer software within vehicles and vessels to access operational data is likely to be noninfringing.

d. Causation

The Register finds that MEMA has met its burden of showing that the statutory prohibition on circumvention of TPMs limits its ability to engage in the proposed uses. But for the prohibition, users likely could gain lawful access to vehicle operational data and telematics for the desired purposes.¹⁰⁵⁵

¹⁰⁵¹ MEMA Class 7 Initial at 5 (quoting 2015 Recommendation at 236); *see also* DOJ Antitrust & FTC Class 7 Reply at 17 (“Copyrighted ECU programming is sold with each vehicle and is designed in tandem with the specific ECU installed in the vehicle. The market for copyrighted ECU programming is, therefore, limited” and the “access contemplated under the proposed exemptions bolsters the market for the copyrighted works.”).

¹⁰⁵² MEMA Class 7 Initial at 5; *see also* Tr. at 40:09–16 (Apr. 18, 2024) (Greenstein, Auto Care Ass’n) (discussing the effected market).

¹⁰⁵³ *See* 2021 Recommendation at 208; *see also* 2018 Recommendation at 195–200; 2015 Recommendation at 234–37.

¹⁰⁵⁴ *Cf.* Software Study at 41. *See generally* 2021 Recommendation at 139–42.

¹⁰⁵⁵ *See* MEMA Class 7 Initial at 2, 6; *see also* MEMA Class 7 Post-Hearing Resp. at 1 (May 28, 2024) (explaining one must “circumvent[] TPMs in order to grant access to one’s vehicle data to a third party service provider of the vehicle owner’s choosing (rather than to the OEM)”).

e. Asserted Adverse Effects

MEMA asserted that the prohibition on circumvention adversely affects users' noninfringing access to computer programs that house operational and telematics data within vehicles and vessels. They argued that without the proposed exemption, users are "excluded from benefiting from the data *they themselves have generated* by driving."¹⁰⁵⁶ Specifically, they contended that TPMs and section 1201 will continue to "stifle competition" because original equipment manufacturers have "exclusive control over that data," which "ultimately result[s] in less competition and higher prices for consumers" with respect to the markets for vehicle service and aftermarket parts.¹⁰⁵⁷ Additionally, they stated that TPMs restrict "access to driving records and vehicle logs" that could be used to "monitor or evaluate the driving habits of new drivers using the family car,"¹⁰⁵⁸ or which drivers could provide to insurance companies evaluating driver safety to establish usage-backed rates.¹⁰⁵⁹ Lastly, MEMA claimed that TPMs "creat[e] inefficiencies in vehicle repair and maintenance processes" by, for example, precluding owners and lessees from informing service providers about performance metrics before bringing the vehicle or vessel in for service.¹⁰⁶⁰

Opponents asserted that owners and lessees have sufficient alternatives to circumvention such that an exemption is unwarranted. First, opponents alleged that current statutory exemptions are sufficient to enable many proposed uses. Joint Creators I, for instance, contended that section 1201(i) (the "PII Exemption") "already contains an exemption allowing users to circumvent technological protection measures that collect personal data" to the "extent that driving records constitute driver's personal data."¹⁰⁶¹ Moreover, opponents argued that insofar as many of the proposed uses pertain to diagnosis, maintenance, and repair, circumvention is already permitted under the Repair Exemption.¹⁰⁶²

¹⁰⁵⁶ MEMA Class 7 Initial at 7.

¹⁰⁵⁷ *Id.* at 2–3.

¹⁰⁵⁸ *Id.* at 3; *see also* Tr. at 10:03–07 (Apr. 18, 2024) (Jasnow, MEMA).

¹⁰⁵⁹ Tr. at 9:21–10:02 (Apr. 18, 2024) (Jasnow, MEMA).

¹⁰⁶⁰ MEMA Class 7 Initial at 3.

¹⁰⁶¹ Joint Creators I Class 7 Opp'n at 3, 5; *see also* 17 U.S.C. § 1201(i) (permanent exemption for the protection of personally identifying information).

¹⁰⁶² 37 C.F.R. § 201.40(b)(13); *see also* AEM Class 7 Opp'n at 5 ("[T]he proposed Exemption appears to be redundant and cumulative with respect to the existing 1201 exemption that already covers

Second, opponents stated that original equipment manufacturers (“OEMs”) voluntarily provide access to the underlying data relevant to identified use cases. For example, Auto Innovators described vehicle manufacturers’ 2014 Memorandum of Understanding and 2023 Data Sharing Commitment, under which many automotive companies agree to provide certain data and information to independent vehicle repair shops.¹⁰⁶³ Third, they suggested that many use cases related to monitoring do not require circumvention because third-party applications available on GPS-enabled devices provide the same data.¹⁰⁶⁴

Proponents contended that current statutory exemptions are insufficient to cover the proposed class. Regarding section 1201(i), the PII Exemption, MEMA argued that the exemption requires beneficiaries to disable data collection and dissemination, and thus “provides no solution for a vehicle owner who does not want to disable the collection of data.”¹⁰⁶⁵ Regarding the sufficiency of the Repair Exemption, proponents stated that even though some of the use cases involve accessing similar data for similar purposes, the Repair Exemption is insufficient, even in the vehicle repair and maintenance context.¹⁰⁶⁶ MEMA explained that some use cases, such as monitoring driver safety, are not for purposes of diagnosis and repair.¹⁰⁶⁷

what is necessary or essential for repair and diagnosis (and even lawful modification of a vehicle function, where the latter has safety risks).”).

¹⁰⁶³ Auto Innovators Class 7 Opp’n at 5–8; Tr. at 18:17–19:23, 58:09–13 (Apr. 18, 2024) (Humphrey, Auto Innovators). *See also* Auto Innovators Class 7 Post-Hearing Resp. at 2 (May 28, 2024) (noting that “the [U.S. Government Accountability Office (“GAO”)] Report provides support for the [agreements] being codified through federal law [] because many of the independent repair stakeholders interviewed by the GAO expressed concern about the voluntary nature of both agreements and a potential lack of enforceability”); AEM Class 7 Opp’n at 2, 5 (noting voluntary measures by some manufacturers and service providers related to off-road vehicle telematics data); NAM Class 7 Opp’n at 8 & n.17 (noting voluntary measures by some manufacturers related to agricultural equipment).

¹⁰⁶⁴ *See, e.g.*, Auto Innovators Class 7 Opp’n at 7.

¹⁰⁶⁵ MEMA Class 7 Initial at 6; *see* 17 U.S.C. § 1201(i)(C)–(D) (requiring that the act of circumvention must have the “sole effect” and “sole[] purpose” of preventing data collection or dissemination).

¹⁰⁶⁶ Tr. at 8:05–10:17 (Apr. 18, 2024) (Jasnow, MEMA) (contending that the proposed exemption is “a little bit beyond the scope of the existing exemption for diagnosis, repair or modification”).

¹⁰⁶⁷ Tr. at 10:03–07 (Apr. 18, 2024) (Jasnow, MEMA); *see also* MEMA Class 7 Post-Hearing Resp. at 1–2 (describing customizing vehicles).

The Register finds that neither the PII Exemption nor the Repair Exemption permits all the non-infringing uses that proponents identified. Uses that existing exemptions do not cover include monitoring driver safety for insurance rate-setting, and aggregating data to analyze a fleet of vehicles. The record is insufficient to determine whether certain other repair-related uses discussed by hearing participants are, in fact, permitted under the Repair Exemption.¹⁰⁶⁸

Proponents also contested the sufficiency of the proffered alternatives to circumvention. They contended that purported alternatives to circumvention—voluntary agreements and third-party applications—do not provide owners and lessees with alternatives that address the adverse effect on non-infringing uses. As proponents pointed out,¹⁰⁶⁹ and as the Register has previously determined,¹⁰⁷⁰ voluntary agreements between OEMs are limited in scope. The voluntary agreements opponents cite do not address all classes of vehicles, they include only some OEMs and some independent repair shops,¹⁰⁷¹ and they lack enforcement mechanisms to bind signatories.¹⁰⁷² Additionally, third-party devices and applications provide insufficient alternatives to circumvention.

¹⁰⁶⁸ See, e.g., Tr. at 59:15–23 (Apr. 18, 2024) (Foshee, Auto Care Ass’n) (asserting most independent repair shops refer “up to five vehicles per month to dealerships because of vehicle data restrictions, because they can’t fix them”). Cf. Tr. at 62:05–18 (Apr. 18, 2024) (Englund, Joint Creators I) (responding that “it seems like that’s repair if anything is repair, and so isn’t a reason to grant a new exemption”).

¹⁰⁶⁹ See MEMA Class 7 Reply at 3–4 (“[N]either the MOU nor the Data Sharing Commitment cover uses by consumers outside the scope of diagnosis and repair. . . . [N]ot all OEMs are party to the [agreements] and certain types of vehicles, such as mechanized agricultural vehicles, motorcycles and RVs, are not covered by the MOU or Data Sharing Commitment.” Activities conducted pursuant to the MOU require consumers “to purchase duplicative copies as part of the repair process.”).

¹⁰⁷⁰ 2015 Recommendation at 240 (evaluating that the 2014 Memorandum of Understanding between automobile manufacturers did not fully address the adverse impacts of TPMs in the context of land vehicle repair, because, “[a]mong other things . . . the MOU does not apply to a significant portion of vehicles that would be covered by the proposed exemption” and lacks adequate enforcement mechanisms).

¹⁰⁷¹ See Tr. at 21:04–10 (Apr. 18, 2024) (Foshee, Auto Care Ass’n) (noting that the 2023 Data Sharing Commitment is only supported by the OEMs and an organization representing “less than two percent of the independent shops in the United States”).

¹⁰⁷² See Tr. at 20:06–13 (Apr. 18, 2024) (Foshee, Auto Care Ass’n) (characterizing “the 2014 MOU and the . . . Data-Sharing Agreement” as “voluntary. They are non-binding. There’s no enforcement mechanism.”).

Proponents noted that those devices relate to only some of the proposed uses and provide limited information compared to vehicle operational data.¹⁰⁷³ The Register finds that as proposed alternatives to circumvention, voluntary agreements and third-party applications do not sufficiently mitigate the adverse effect on non-infringing uses.

Turning to the section 1201 statutory factors, proponents argued that TPMs adversely affect the first factor—the availability of copyrighted works for use. As noted above, MEMA argued that the proposed exemption aims “solely to allow vehicle owners and lessees or those acting under their direction to copy, download, and otherwise utilize non-copyrightable data stored within [] copyrighted works.”¹⁰⁷⁴ It also argued that to the extent that the database schema and other related code are copyrightable, “vehicle software is a functional work used for the limited purpose of operating a vehicle, rather than a creative work with expressive or artistic value.”¹⁰⁷⁵ Although opponents did not directly address this statutory factor, NAM suggested that “[a]llowing the proposed exemption for vehicles’ operational data would undermine [the DMCA’s] statutory scheme, exposing manufacturers’ intellectual property and disincentivizing further innovation into groundbreaking technologies.”¹⁰⁷⁶

Considering the above arguments, the Register finds that the first statutory factor favors the proposed exemption. Under the proposed exemption and consistent with the functional purpose of the copyrighted works, owners and lessees—as well as independent repair shops and other authorized third parties acting at the owner or lessee’s direction—may use the functional copyrighted works integrated into existing vehicles to obtain vehicle operational data.¹⁰⁷⁷ At a minimum, the proposed exemption facilitates use by an additional party—the

¹⁰⁷³ Tr. at 7:01–10, 28:18–25 (Apr. 18, 2024) (Jasnow, MEMA) (noting that “telematics data goes . . . beyond [the scope of just] geolocation data,” which applications and devices might be able to track, and listing telematics data uses beyond location data and basic facts about use, including driving style, aggressiveness, cautiousness, and information about the operating environment.); Tr. at 46:06–23 (April 18, 2024) (Wiens, iFixit) (noting that a phone app would not differentiate data collection based on which vehicle he is in or if he is driving).

¹⁰⁷⁴ MEMA Class 7 Initial at 4.

¹⁰⁷⁵ *Id.* at 5.

¹⁰⁷⁶ NAM Class 7 Opp’n at 3. This impliedly suggests that manufacturers would invest less in the creation of new copyrighted works, reducing access to said works for consumers.

¹⁰⁷⁷ DOJ Antitrust and the FTC Class 7 Reply at 16.

owner or lessee of the vehicle or vessel—whose data is unreadable absent use of the copyrighted software.¹⁰⁷⁸ Finally, despite conclusory references to innovation, opponents provided no evidence that as a result of the exemption OEMs would cease to develop and incorporate useful software in vehicles or vessels.

Based on the current record, the second and third statutory 1201 factors—the availability for nonprofit archival, preservation, and educational purposes, and the impact on criticism, comment, news reporting, teaching, scholarship, or research—bear little weight. While proponents reference potential educational, teaching, and research uses;¹⁰⁷⁹ opponents do not address these factors. However, these proposed uses are not well-supported by record evidence and the Register is not persuaded that they are the kinds of uses contemplated by these statutory factors.

Regarding the fourth statutory factor, the effect of the use upon the potential market for or value of the copyrighted work, MEMA contended that “[t]here is limited, if any, market for vehicle software as a standalone product that is separate and distinct from the market for vehicles.”¹⁰⁸⁰ Moreover, Auto Care Association explained that “[t]o the extent that there is an effective market, it’s a market that is not with respect to anything copyrightable. It’s with respect to the repair or convoyed [sic] services, for example, which don’t have any relation to the market for the copyrightable work itself.”¹⁰⁸¹

Opponents identified two relevant market effects. First, NAM represented that “[a]llowing the proposed exemption for vehicles’ operational data would undermine [the DMCA] statutory scheme, exposing manufacturers’ intellectual property and disincentivizing further innovation into groundbreaking technologies.”¹⁰⁸² Second, Joint Creators I expressed concern that, absent

¹⁰⁷⁸ Tr. at 12:20–13:14 (Apr. 18, 2024) (Jasnow, MEMA).

¹⁰⁷⁹ See DOJ Antitrust and the FTC Class 7 Reply at 16–17 (“[I]ndependent service shops [can] use such data to train employees in the diagnosis and interpretation of telematics information,” and “research into vehicle operation, safety, driver behavior, and other valuable areas of inquiry [which] could be valuable in promoting public health and safety, for example, by enabling the analysis of driving practices and behaviors, and the safety and efficiency of various vehicles.”).

¹⁰⁸⁰ MEMA Class 7 Initial at 5.

¹⁰⁸¹ Tr. at 40:09–14 (Apr. 18, 2024) (Greenstein, Auto Care Ass’n).

¹⁰⁸² NAM Class 7 Opp’n at 3.

protective language, expressive creative works like video games, movies, television shows, and songs, might face market harms.¹⁰⁸³

The Register agrees with proponents that the proposed exemption will not negatively affect any potential market or value of the copyrighted software code comprising ECUs. This conclusion comports with her analysis of the fourth fair use factor. Opponents do not contest proponents' assertion,¹⁰⁸⁴ or their supporting record evidence, that the pace of change in vehicle software integration and automative innovation is "nothing short of astonishing."¹⁰⁸⁵ Consistent with this observation, it appears unlikely that the proposed exemption will have a negative effect on innovation. Regarding "other copyrighted works," the Register agrees with Joint Creators I that there may be some effect on the market for creative works unrelated to vehicle maintenance. To ameliorate this concern, participants reached a consensus that a limitation for "other copyrighted works" should be included, as it has in past rulemakings, including for the Repair Exemption.¹⁰⁸⁶ Based on the foregoing, the Register again concludes that the market effects on copyrighted software integrated into vehicles are negligible.

The fifth statutory factor permits consideration of other factors. The Register takes this opportunity to address three non-copyright issues that recur throughout the record: privacy, safety, and unlawful activities.

Privacy and safety issues arose throughout this proceeding, although participants disagreed as to their relevance and effects. Auto Innovators urged that "privacy [is] not something that we should be concerned with" in these proceedings,¹⁰⁸⁷ whereas AEM stated that "[t]he proposed Exemption raises

¹⁰⁸³ Joint Creators I Class 7 Opp'n at 6–7.

¹⁰⁸⁴ Opponents claim that the exemption is unnecessary because it is encompassed in the Repair Exemption. *See* Tr. at 37:10–15 (Apr. 18, 2024) (Englund, Joint Creators I); AEM Class 7 Opp'n at 5.

¹⁰⁸⁵ MEMA Class 7 Initial at 2.

¹⁰⁸⁶ MEMA Class 7 Initial at 6 (including "other copyrighted works" in proposed regulation); Tr. at 17:20–18:12 (Apr. 18, 2024) (Englund, Joint Creators I) ("[P]roponents have to varying degrees accepted" the "other copyrighted works" limitation and the "separate subscription services" exception.).

¹⁰⁸⁷ Tr. at 63:16–20 (Apr. 18, 2024) (Humphrey, Auto Innovators); *see also* Tr. at 56:03–10 (Apr. 18, 2024) (Humphrey, Auto Innovators) (observing "if we're going to allow broad access to this data

significant privacy concerns because certain telematics software and data could constitute personal data or personal identification data,” subject to regulation under different legal regimes.¹⁰⁸⁸ In addition to regulatory compliance, AEM noted that “[t]he proposed exemption creates a new class of third parties to whom data may be shared, over whom the manufacturer may have no contractual privity, no control or insight and may not be able to adequately address in privacy policies and consents.”¹⁰⁸⁹ NAM also cited data privacy concerns connected to the right-to-repair, noting that “expanded connectivity of smart products would engender an environment susceptible to data security risks.”¹⁰⁹⁰

In contrast, DOJ Antitrust and the FTC noted that the Federal Trade Commission’s *Nixing the Fix Report* “contained no empirical evidence to suggest that independent repair shops are more or less likely than authorized repair shops to compromise or misuse customer data,” nor did diagnostic and firmware patches provided to independent repairers “introduce cybersecurity risks,” and that with adequate information and tools, “consumers and independent repair shops would be equally capable of minimizing cybersecurity risks as authorized repairers.”¹⁰⁹¹

Proponents also suggested that OEMs themselves compromise owners’ data privacy,¹⁰⁹² and that the proposed exemption could in fact provide vehicle owners with tools to protect their data from such OEMs¹⁰⁹³ and a given vehicle’s

and allow users to potentially authorize others to use it, there are concerns about personal data I think getting out there. If someone were to give it to a certain company, what would happen to that data, how would it be used[?]”).

¹⁰⁸⁸ AEM Class 7 Opp’n at 6.

¹⁰⁸⁹ *Id.*

¹⁰⁹⁰ NAM Class 7 Opp’n at 2.

¹⁰⁹¹ DOJ Antitrust and the FTC Class 7 Reply at 10.

¹⁰⁹² *See, e.g.*, Tr. at 57:02–12 (Apr. 18, 2024) (Foshee, Auto Care Ass’n) (arguing that if “auto manufacturers can monetize the personal data off the vehicles, which is what they’re doing today[, but] your concern [is] that a consumer might use their own data to monetize it, and that seems to have the paradigm backwards, in terms of who should have control over where their data goes”).

¹⁰⁹³ Tr. at 62:20–63:14 (Apr. 18, 2024) (Wiens, iFixit) (“[A]s a vehicle owner, I would be very concerned about my driving patterns, driving data going back to a Chinese manufacturer. So being able to . . . manage and control and delete, modify the data that I own on my vehicle, where I may not trust the OEM Do we really trust the OEM with the data? I certainly don’t.”).

subsequent buyer.¹⁰⁹⁴ The Register concludes that while OEMs will have fewer tools to “vet third parties”¹⁰⁹⁵ with respect to data handling, empowering owners to voluntarily share the data they generate when driving does not present a significant privacy harm. Ultimately, she credits DOJ Antitrust and the FTC’s view that the proposed exemption would in fact have very little effect on the privacy considerations discussed above, and that neither consumers nor independent repair shops are more or less responsible than OEMs in protecting data privacy.

Several opponents raised issues regarding safety, private contracts, and regulatory compliance—but these issues are beyond the scope of this rulemaking and unsupported by the record.¹⁰⁹⁶ The record does not support the assertion that the proposed exemption would harm safety interests or undermine regulations governing them. The recommended regulatory language is explicit that the exemption would not provide a safe harbor from or defense to liability under other laws and regulations. Similarly, despite conclusory statements from opponents, the record does not indicate that the proposed exemption will lead to an increase in the misappropriation of trade secrets or affect liability for such conduct. Section 1201 exemptions, including the one proposed here, also have no ability to alter any contract or contractual relationship between private parties. This includes any potential effects on warranties, licensing agreements, or contractual terms, as well as any liability for damage to vehicles or vessels.

3. NTIA Comments

NTIA supports an exemption to access vehicle operational data, including diagnostic and telematics data.¹⁰⁹⁷ It describes the “rapid” and continuing “proliferation of vehicle data” and the importance of granting consumers the “ability to obtain and share data directly produced by their vehicles” as

¹⁰⁹⁴ Tr. at 15:15–16:18 (Apr. 18, 2024) (Wiens, iFixit) (identifying that consumers may want to “wipe the previous owner’s data completely off the car before [they] sell it to the next person, so they don’t have data leakage”).

¹⁰⁹⁵ AEM Class 7 Opp’n at 7.

¹⁰⁹⁶ See, e.g., *id.* at 6 (“As currently understood, telematics data is also subject to privacy, contracts, end user licenses, trade secrets, and may constitute confidential information.”).

¹⁰⁹⁷ NTIA Letter at 5, 61. Although NTIA’s comments are limited to vehicle data, the Office understands its recommendation to encompass both vehicle and vessel data. See *id.* at 63 (proposing regulatory language that includes access to data within vehicles and marine vessels).

justifying the exemption.¹⁰⁹⁸ Similar to the Register, NTIA agrees that the proposed exemption should operate as a “standalone” exemption, “separate from the existing vehicle repair exemption” found in section 37 C.F.R. § 201.40(b)(13).¹⁰⁹⁹ While recognizing that the two exemptions may be “closely related” in some situations, it states that the proposed exemption’s purpose and use cases are focused on understanding vehicle data outside the vehicle repair context.¹¹⁰⁰

NTIA also notes that vehicle operational data can be segmented into separate systems, placing such data outside the scope of the Repair Exemption, making a separate exemption necessary to ensure consumer access.¹¹⁰¹ Additionally, it agrees with the Register that the existing agreements discussed during the rulemaking are not “viable alternative[s],” but instead act as a “barrier” to accessing and sharing vehicle data.¹¹⁰² Finally, NTIA suggests that “to the extent possible,” the proposed exemption should permit third-parties to assist with carrying out the proposed uses.¹¹⁰³ It notes that allowing third-party assistance “further empowers” vehicle owners to control their own vehicle-generated data and to “seek out additional assistance” in interpreting that data.¹¹⁰⁴ Any concerns with such assistance, it asserts, are reduced by requiring a vehicle owner’s or lessee’s consent.¹¹⁰⁵

Regarding the proposed regulatory language, NTIA recommends including the word “analyze.”¹¹⁰⁶ It believes that this inclusion better “recognize[s] the importance” of the rights permitted under the exemption (*i.e.*, accessing, storing, sharing, and *analyzing* the data) and “highlights its scope beyond” the current

¹⁰⁹⁸ *Id.* at 62.

¹⁰⁹⁹ *Id.* at 61.

¹¹⁰⁰ *Id.* at 62–63.

¹¹⁰¹ *Id.* at 63–64.

¹¹⁰² *Id.* at 64. NTIA does not specifically name the agreements it references, but the Office understands it to mean those discussed during the rulemaking process (*e.g.*, 2014 Memorandum of Understanding).

¹¹⁰³ NTIA Letter at 62, 63.

¹¹⁰⁴ *Id.* at 62–63; *see id.* at 63 (noting that the Office has permitted third party assistance in previous rulemakings).

¹¹⁰⁵ *Id.* at 63.

¹¹⁰⁶ *Id.* at 5, 61–62.

repair exemption.¹¹⁰⁷ As NTIA explains, once vehicle owners or lessees have obtained the data, it “may not be readily readable” and may require the assistance of others.¹¹⁰⁸ This assistance, it suggests, “ensures” consumers can “truly own and understand” the data, thereby furthering the intended goals of the proposed exemption.¹¹⁰⁹

The Register’s recommendation aligns with most of NTIA’s suggestions. As discussed above, a distinct exemption is warranted separate from the Repair Exemption, based on the former’s disparate, through sometimes overlapping, uses. Further, while not opining on the legality of third-party assistance as it relates to section 1201(b), she agrees that given the increased complexities surrounding data extraction and use, the proposed exemption should extend beyond lawful owners or lessees. The Register, however, does not recommend including “analyze” in the regulatory language, as she believes it is unnecessary and encompassed within the proposed uses discussed above.

4. Conclusion and Recommendation

Proponents have satisfied their burden of showing that technological measures applied to computer programs within vehicles and vessels have, or are likely to have, an adverse effect on noninfringing uses. The Register accordingly recommends adoption of the proposed exemption. She also proposes adopting regulatory provisions parallel to those in the Repair Exemption regarding the applicability of the exemption to other laws, separate subscription services, and unauthorized access to other copyrighted works.

Accordingly, the Register recommends that the Librarian designate the following class:

Computer programs that are contained in and control the functioning of a lawfully acquired motorized land vehicle or marine vessel such as a personal automobile or boat, commercial vehicle or vessel, or mechanized agricultural vehicle or vessel, except for programs accessed through a separate subscription service, to allow vehicle or vessel owners and lessees, or those acting on their behalf, to access, store, and share operational data, including diagnostic and telematics data, where

¹¹⁰⁷ *Id.* at 63.

¹¹⁰⁸ *Id.*

¹¹⁰⁹ *Id.*

such circumvention is not accomplished for the purpose of gaining unauthorized access to other copyrighted works. Eligibility for this exemption is not a safe harbor from, or defense to, liability under other applicable laws, including without limitation regulations promulgated by the Department of Transportation or the Environmental Protection Agency.

APPENDIX

RECOMMENDED REGULATORY LANGUAGE

Recommended Regulatory Language

(a) *General.* This section prescribes the classes of copyrighted works for which the Librarian of Congress has determined, pursuant to 17 U.S.C. 1201(a)(1)(C) and (D), that noninfringing uses by persons who are users of such works are, or are likely to be, adversely affected. The prohibition against circumvention of technological measures that control access to copyrighted works set forth in 17 U.S.C. 1201(a)(1)(A) shall not apply to such users of the prescribed classes of copyrighted works.

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

(1) Motion pictures (including television shows and videos), as defined in 17 U.S.C. 101, where the motion picture is lawfully made and acquired on a DVD protected by the Content Scramble System, on a Blu-ray disc protected by the Advanced Access Content System, or via a digital transmission protected by a technological measure, and the person engaging in circumvention under paragraphs (b)(1)(i) and (b)(1)(ii)(A) and (B) of this section reasonably believes that non-circumventing alternatives are unable to produce the required level of high-quality content, or the circumvention is undertaken using screen-capture technology that appears to be offered to the public as enabling the reproduction of motion pictures after content has been lawfully acquired and decrypted, where circumvention is undertaken solely in order to make use of short portions of the motion pictures in the following instances:

(i) For the purpose of criticism or comment:

(A) For use in documentary filmmaking, or other films where the motion picture clip is used in parody or for its biographical or historically significant nature;

(B) For use in noncommercial videos (including videos produced for a paid commission if the commissioning entity's use is noncommercial); or

(C) For use in nonfiction multimedia e-books.

(ii) For educational purposes:

(A) By college and university faculty and students or kindergarten through twelfth-grade (K–12) educators and students (where the K–12 student is circumventing under the direct supervision of an educator), or employees acting at the direction of faculty of such educational institutions for the purpose of teaching a course, including of accredited general educational development (GED) programs, for the purpose of criticism, comment, teaching, or scholarship;

(B) By faculty of accredited nonprofit educational institutions and employees acting at the direction of faculty members of those institutions, for purposes of offering massive open online courses (MOOCs) to officially enrolled students through online platforms (which platforms themselves may be operated for profit), in film studies or other courses requiring close analysis of film and media excerpts, for the purpose of criticism or comment, where the MOOC provider through the online platform limits transmissions to the extent technologically feasible to such officially enrolled students, institutes copyright policies and provides copyright informational materials to faculty, students, and relevant staff members, and applies technological measures that reasonably prevent unauthorized further dissemination of a work in accessible form to others or retention of the work for longer than the course session by recipients of a transmission through the platform, as contemplated by 17 U.S.C. 110(2); or

(C) By educators and participants in nonprofit digital and media literacy programs offered by libraries, museums, and other nonprofit entities with an educational mission, in the course of face-to-face instructional activities, for the purpose of criticism or comment, except that such users may only circumvent using screen-capture technology that appears to be offered to the public as enabling the reproduction of

motion pictures after content has been lawfully acquired and decrypted.

(2)

(i) Motion pictures (including television shows and videos), as defined in 17 U.S.C. 101, where the motion picture is lawfully acquired on a DVD protected by the Content Scramble System, on a Blu-ray disc protected by the Advanced Access Content System, or via a digital transmission protected by a technological measure, where:

(A) Circumvention is undertaken by a disability services office or other unit of a kindergarten through twelfth-grade educational institution, college, or university engaged in and/or responsible for the provision of accessibility services for the purpose of adding captions and/or audio description to a motion picture to create an accessible version for students, faculty, or staff with disabilities;

(B) The educational institution unit in paragraph (b)(2)(i)(A) of this section has a reasonable belief that the motion picture will be used for a specific future activity of the institution and, after a reasonable effort, has determined that an accessible version of sufficient quality cannot be obtained at a fair market price or in a timely manner, including where a copyright holder has not provided an accessible version of a motion picture that was included with a textbook; and

(C) The accessible versions are provided to students or educators and stored by the educational institution in a manner intended to reasonably prevent unauthorized further dissemination of a work.

(ii) For purposes of this paragraph (b)(2):

(A) "Audio description" means an oral narration that provides an accurate rendering of the motion picture;

(B) "Accessible version of sufficient quality" means a version that in the reasonable judgment of the educational institution unit has captions and/or audio description that are sufficient to meet the accessibility needs of students, faculty, or staff with disabilities and

are substantially free of errors that would materially interfere with those needs; and

(C) Accessible materials created pursuant to this exemption and stored pursuant to paragraph (b)(2)(i)(C) of this section may be reused by the educational institution unit to meet the accessibility needs of students, faculty, or staff with disabilities pursuant to paragraphs (b)(2)(i)(A) and (B) of this section.

(3)

(i) Motion pictures (including television shows and videos), as defined in 17 U.S.C. 101, where the motion picture is lawfully acquired on a DVD protected by the Content Scramble System, or on a Blu-ray disc protected by the Advanced Access Content System, solely for the purpose of lawful preservation or the creation of a replacement copy of the motion picture, by an eligible library, archives, or museum, where:

(A) Such activity is carried out without any purpose of direct or indirect commercial advantage;

(B) The DVD or Blu-ray disc is damaged or deteriorating;

(C) The eligible institution, after a reasonable effort, has determined that an unused and undamaged replacement copy cannot be obtained at a fair price and that no streaming service, download service, or on-demand cable and satellite service makes the motion picture available to libraries, archives, and museums at a fair price; and

(D) The preservation or replacement copies are not distributed or made available outside of the physical premises of the eligible library, archives, or museum.

(ii) For purposes of paragraph (b)(3)(i) of this section, a library, archives, or museum is considered “eligible” if—

(A) The collections of the library, archives, or museum are open to the public and/or are routinely made available to researchers who are not affiliated with the library, archives, or museum;

(B) The library, archives, or museum has a public service mission;

(C) The library, archives, or museum's trained staff or volunteers provide professional services normally associated with libraries, archives, or museums;

(D) The collections of the library, archives, or museum are composed of lawfully acquired and/or licensed materials; and

(E) The library, archives, or museum implements reasonable digital security measures as appropriate for the activities permitted by paragraph (b)(3)(i) of this section.

(4)

(i) Motion pictures, as defined in 17 U.S.C. 101, where the motion picture is on a DVD protected by the Content Scramble System, on a Blu-ray disc protected by the Advanced Access Content System, or made available for digital download where:

(A) The circumvention is undertaken by a researcher affiliated with a nonprofit institution of higher education, or by a student or information technology staff member of the institution at the direction of such researcher, solely to deploy text and data mining techniques on a corpus of motion pictures for the purpose of scholarly research and teaching;

(B) The copy of each motion picture is lawfully acquired and owned by the institution, or licensed to the institution without a time limitation on access;

(C) The person undertaking the circumvention or conducting research or teaching under this exemption views or listens to the contents of the motion pictures in the corpus solely to conduct text and data mining research or teaching;

(D) The institution uses effective security measures to prevent dissemination or downloading of motion pictures in the corpus, and upon a reasonable request from a copyright owner who reasonably believes that their work is contained in the corpus, or a trade association representing such author, provide information to that copyright owner or trade association regarding the nature of such measures; and

(E) The institution limits access to the corpus to only the persons identified in paragraph (b)(4)(i)(A) of this section or to researchers affiliated with other nonprofit institutions of higher education, with all access provided only through secure connections and on the condition of authenticated credentials, solely for purposes of text and data mining research or teaching.

(ii) For purposes of paragraph (b)(4)(i) of this section:

(A) An institution of higher education is defined as one that:

(1) Admits regular students who have a certificate of graduation from a secondary school or the equivalent of such a certificate;

(2) Is legally authorized to provide a postsecondary education program;

(3) Awards a bachelor's degree or provides not less than a two-year program acceptable towards such a degree;

(4) Is a public or other nonprofit institution; and

(5) Is accredited by a nationally recognized accrediting agency or association.

(B) The term "effective security measures" is defined as:

(1) Security measures that have been agreed to by all interested copyright owners of motion pictures and institutions of higher education; or

(2) Security measures that the institution uses to keep its own highly confidential information secure.

(5)

(i) Literary works, excluding computer programs and compilations that were compiled specifically for text and data mining purposes, distributed electronically where:

(A) The circumvention is undertaken by a researcher affiliated with a nonprofit institution of higher education, or by a student or

information technology staff member of the institution at the direction of such researcher, solely to deploy text and data mining techniques on a corpus of literary works for the purpose of scholarly research and teaching;

(B) The copy of each literary work is lawfully acquired and owned by the institution, or licensed to the institution without a time limitation on access;

(C) The person undertaking the circumvention or conducting research or teaching under this exemption views the contents of the literary works in the corpus solely to conduct text and data mining research or teaching;

(D) The institution uses effective security measures to prevent dissemination or downloading of literary works in the corpus, and upon a reasonable request from a copyright owner who reasonably believes that their work is contained in the corpus, or a trade association representing such author, provide information to that copyright owner or trade association regarding the nature of such measures; and

(E) The institution limits access to the corpus to only the persons identified in paragraph (b)(5)(i)(A) of this section or to researchers affiliated with other nonprofit institutions of higher education, with all access provided only through secure connections and on the condition of authenticated credentials, solely for purposes of text and data mining research or teaching.

(ii) For purposes of paragraph (b)(5)(i) of this section:

(A) An institution of higher education is defined as one that:

(1) Admits regular students who have a certificate of graduation from a secondary school or the equivalent of such a certificate;

(2) Is legally authorized to provide a postsecondary education program;

(3) Awards a bachelor’s degree or provides not less than a two-year program acceptable towards such a degree;

(4) Is a public or other nonprofit institution; and

(5) Is accredited by a nationally recognized accrediting agency or association.

(B) The term “effective security measures” is defined as:

(1) Security measures that have been agreed to by all interested copyright owners of literary works and institutions of higher education; or

(2) Security measures that the institution uses to keep its own highly confidential information secure.

(6)

(i) Literary works or previously published musical works that have been fixed in the form of text or notation, distributed electronically, that are protected by technological measures that either prevent the enabling of read-aloud functionality or interfere with screen readers or other applications or assistive technologies:

(A) When a copy or phonorecord of such a work is lawfully obtained by an eligible person, as such a person is defined in 17 U.S.C. 121; provided, however, that the rights owner is remunerated, as appropriate, for the market price of an inaccessible copy of the work as made available to the general public through customary channels; or

(B) When such a work is lawfully obtained and used by an authorized entity pursuant to 17 U.S.C. 121.

(ii) For the purposes of paragraph (b)(6)(i) of this section, a “phonorecord of such a work” does not include a sound recording of a performance of a musical work unless and only to the extent the recording is included as part of an audiobook or e-book.

(7) Literary works consisting of compilations of data generated by medical devices or by their personal corresponding monitoring systems, where such

circumvention is undertaken by or on behalf of a patient for the sole purpose of lawfully accessing data generated by a patient's own medical device or monitoring system. Eligibility for this exemption is not a safe harbor from, or defense to, liability under other applicable laws, including without limitation the Health Insurance Portability and Accountability Act of 1996, the Computer Fraud and Abuse Act of 1986, or regulations of the Food and Drug Administration.

(8) Computer programs that enable wireless devices to connect to a wireless telecommunications network, when circumvention is undertaken solely in order to connect to a wireless telecommunications network and such connection is authorized by the operator of such network.

(9) Computer programs that enable smartphones and portable all-purpose mobile computing devices 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 smartphone or device, or to permit removal of software from the smartphone or device. For purposes of this paragraph (b)(9), a "portable all-purpose mobile computing device" is a device that is primarily designed to run a wide variety of programs rather than for consumption of a particular type of media content, is equipped with an operating system primarily designed for mobile use, and is intended to be carried or worn by an individual.

(10) Computer programs that enable smart televisions 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 smart television, and is not accomplished for the purpose of gaining unauthorized access to other copyrighted works. For purposes of this paragraph (b)(10), "smart televisions" includes both internet-enabled televisions, as well as devices that are physically separate from a television and whose primary purpose is to run software applications that stream authorized video from the internet for display on a screen.

(11) Computer programs that enable voice assistant devices 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 device, or to permit removal of software from the device, and is not accomplished for the purpose of gaining unauthorized access to other

copyrighted works. For purposes of this paragraph (b)(11), a “voice assistant device” is a device that is primarily designed to run a wide variety of programs rather than for consumption of a particular type of media content, is designed to take user input primarily by voice, and is designed to be installed in a home or office.

(12) Computer programs that enable routers and dedicated network devices 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 router or dedicated network device, and is not accomplished for the purpose of gaining unauthorized access to other copyrighted works. For the purposes of this paragraph (b)(12), “dedicated network device” includes switches, hubs, bridges, gateways, modems, repeaters, and access points, and excludes devices that are not lawfully owned.

(13) Computer programs that are contained in and control the functioning of a lawfully acquired motorized land vehicle or marine vessel such as a personal automobile or boat, commercial vehicle or vessel, or mechanized agricultural vehicle or vessel, except for programs accessed through a separate subscription service, when circumvention is a necessary step to allow the diagnosis, repair, or lawful modification of a vehicle or vessel function, where such circumvention is not accomplished for the purpose of gaining unauthorized access to other copyrighted works. Eligibility for this exemption is not a safe harbor from, or defense to, liability under other applicable laws, including without limitation regulations promulgated by the Department of Transportation or the Environmental Protection Agency.

(14) Computer programs that are contained in and control the functioning of a lawfully acquired motorized land vehicle or marine vessel such as a personal automobile or boat, commercial vehicle or vessel, or mechanized agricultural vehicle or vessel, except for programs accessed through a separate subscription service, to allow vehicle or vessel owners and lessees, or those acting on their behalf, to access, store, and share operational data, including diagnostic and telematics data, where such circumvention is not accomplished for the purpose of gaining unauthorized access to other copyrighted works. Eligibility for this exemption is not a safe harbor from, or defense to, liability under other applicable laws, including without limitation regulations promulgated by the Department of Transportation or the Environmental Protection Agency.

(15) Computer programs that are contained in and control the functioning of a lawfully acquired device that is primarily designed for use by consumers, when circumvention is a necessary step to allow the diagnosis, maintenance, or repair of such a device, and is not accomplished for the purpose of gaining access to other copyrighted works. For purposes of this paragraph (b)(15):

(i) The “maintenance” of a device is the servicing of the device in order to make it work in accordance with its original specifications and any changes to those specifications authorized for that device; and

(ii) The “repair” of a device is the restoring of the device to the state of working in accordance with its original specifications and any changes to those specifications authorized for that device. For video game consoles, “repair” is limited to repair or replacement of a console’s optical drive and requires restoring any technological protection measures that were circumvented or disabled.

(16) Computer programs that are contained in and control the functioning of lawfully acquired equipment that is primarily designed for use in retail-level commercial food preparation when circumvention is a necessary step to allow the diagnosis, maintenance, or repair of such a device, and is not accomplished for the purpose of gaining access to other copyrighted works. For purposes of this paragraph (b)(16):

(i) The “maintenance” of a device is the servicing of the device in order to make it work in accordance with its original specifications and any changes to those specifications authorized for that device; and

(ii) The “repair” of a device is the restoring of the device to the state of working in accordance with its original specifications and any changes to those specifications authorized for that device.

(17) Computer programs that are contained in and control the functioning of a lawfully acquired medical device or system, and related data files, when circumvention is a necessary step to allow the diagnosis, maintenance, or repair of such a device or system. For purposes of this paragraph (b)(17):

(i) The “maintenance” of a device or system is the servicing of the device or system in order to make it work in accordance with its original specifications and any changes to those specifications authorized for that device or system; and

(ii) The “repair” of a device or system is the restoring of the device or system to the state of working in accordance with its original specifications and any changes to those specifications authorized for that device or system.

(18)

(i) Computer programs, where the circumvention is undertaken on a lawfully acquired device or machine on which the computer program operates, or is undertaken on a computer, computer system, or computer network on which the computer program operates with the authorization of the owner or operator of such computer, computer system, or computer network, solely for the purpose of good-faith security research.

(ii) For purposes of paragraph (b)(18)(i) of this section, “good-faith security research” means accessing a computer program solely for purposes of good-faith testing, investigation, and/or correction of a security flaw or vulnerability, where such activity is carried out in an environment designed to avoid any harm to individuals or the public, and where the information derived from the activity is used primarily to promote the security or safety of the class of devices or machines on which the computer program operates, or those who use such devices or machines, and is not used or maintained in a manner that facilitates copyright infringement.

(iii) Good-faith security research that qualifies for the exemption under paragraph (b)(18)(i) of this section may nevertheless incur liability under other applicable laws, including without limitation the Computer Fraud and Abuse Act of 1986, as amended and codified in title 18, United States Code, and eligibility for that exemption is not a safe harbor from, or defense to, liability under other applicable laws.

(19)

(i) Video games in the form of computer programs embodied in physical or downloaded formats that have been lawfully acquired as complete games, when the copyright owner or its authorized representative has ceased to provide access to an external computer server necessary to facilitate an authentication process to enable gameplay, solely for the purpose of:

(A) Permitting access to the video game to allow copying and modification of the computer program to restore access to the game for personal, local gameplay on a personal computer or video game console; or

(B) Permitting access to the video game to allow copying and modification of the computer program to restore access to the game on a personal computer or video game console when necessary to allow preservation of the game in a playable form by an eligible library, archives, or museum, where such activities are carried out without any purpose of direct or indirect commercial advantage and the video game is not distributed or made available outside of the physical premises of the eligible library, archives, or museum.

(ii) Video games in the form of computer programs embodied in physical or downloaded formats that have been lawfully acquired as complete games, that do not require access to an external computer server for gameplay, and that are no longer reasonably available in the commercial marketplace, solely for the purpose of preservation of the game in a playable form by an eligible library, archives, or museum, where such activities are carried out without any purpose of direct or indirect commercial advantage and the video game is not distributed or made available outside of the physical premises of the eligible library, archives, or museum.

(iii) Computer programs used to operate video game consoles solely to the extent necessary for an eligible library, archives, or museum to engage in the preservation activities described in paragraph (b)(19)(i)(B) or (b)(19)(ii) of this section.

(iv) For purposes of this paragraph (b)(19), the following definitions shall apply:

(A) For purposes of paragraphs (b)(19)(i)(A) and (b)(19)(ii) of this section, “complete games” means video games that can be played by users without accessing or reproducing copyrightable content stored or previously stored on an external computer server.

(B) For purposes of paragraph (b)(19)(i)(B) of this section, “complete games” means video games that meet the definition in

paragraph (b)(19)(iv)(A) of this section, or that consist of both a copy of a game intended for a personal computer or video game console and a copy of the game's code that was stored or previously stored on an external computer server.

(C) "Ceased to provide access" means that the copyright owner or its authorized representative has either issued an affirmative statement indicating that external server support for the video game has ended and such support is in fact no longer available or, alternatively, server support has been discontinued for a period of at least six months; provided, however, that server support has not since been restored.

(D) "Local gameplay" means gameplay conducted on a personal computer or video game console, or locally connected personal computers or consoles, and not through an online service or facility.

(E) A library, archives, or museum is considered "eligible" if—

(1) The collections of the library, archives, or museum are open to the public and/or are routinely made available to researchers who are not affiliated with the library, archives, or museum;

(2) The library, archives, or museum has a public service mission;

(3) The library, archives, or museum's trained staff or volunteers provide professional services normally associated with libraries, archives, or museums;

(4) The collections of the library, archives, or museum are composed of lawfully acquired and/or licensed materials; and

(5) The library, archives, or museum implements reasonable digital security measures as appropriate for the activities permitted by this paragraph (b)(19).

(i) Computer programs, except video games, that have been lawfully acquired and that are no longer reasonably available in the commercial marketplace, solely for the purpose of lawful preservation of a computer program, or of digital materials dependent upon a computer program as a condition of access, by an eligible library, archives, or museum, where such activities are carried out without any purpose of direct or indirect commercial advantage. Any electronic distribution, display, or performance made outside of the physical premises of an eligible library, archives, or museum of works preserved under this paragraph may be made to only one user at a time, for a limited time, and only where the library, archives, or museum has no notice that the copy would be used for any purpose other than private study, scholarship, or research.

(ii) For purposes of the exemption in paragraph (b)(20)(i) of this section, a library, archives, or museum is considered “eligible” if—

(A) The collections of the library, archives, or museum are open to the public and/or are routinely made available to researchers who are not affiliated with the library, archives, or museum;

(B) The library, archives, or museum has a public service mission;

(C) The library, archives, or museum’s trained staff or volunteers provide professional services normally associated with libraries, archives, or museums;

(D) The collections of the library, archives, or museum are composed of lawfully acquired and/or licensed materials; and

(E) The library, archives, or museum implements reasonable digital security measures as appropriate for the activities permitted by this paragraph (b)(20).

(iii) For purposes of paragraph (b)(20) of this section, the phrase “one user at a time” means that for each copy of a work lawfully owned by an eligible library, archives, or museum and preserved under paragraph (b)(20)(i) of this section, such library, archives, or museum may make an electronic distribution, display, or performance of that work outside of its physical premises. An eligible library, archives, or museum may make each copy of such lawfully owned and preserved work available to different users simultaneously. This provision does not permit an eligible

library, archives, or museum to make multiple, simultaneous copies of the same copy of a work for the purposes of providing users access to the work.

(21) Computer programs that operate 3D printers that employ technological measures to limit the use of material, when circumvention is accomplished solely for the purpose of using alternative material and not for the purpose of accessing design software, design files, or proprietary data.

(22) Computer programs, solely for the purpose of investigating a potential infringement of free and open source computer programs where:

(i) The circumvention is undertaken on a lawfully acquired device or machine other than a video game console, on which the computer program operates;

(ii) The circumvention is performed by, or at the direction of, a party that has a good-faith, reasonable belief in the need for the investigation and has standing to bring a breach of license or copyright infringement claim;

(iii) Such circumvention does not constitute a violation of applicable law; and

(iv) The copy of the computer program, or the device or machine on which it operates, is not used or maintained in a manner that facilitates copyright infringement.

(c) *Persons who may initiate circumvention.* To the extent authorized under paragraph (b) of this section, the circumvention of a technological measure that restricts wireless telephone handsets or other wireless devices from connecting to a wireless telecommunications network may be initiated by the owner of any such handset or other device, by another person at the direction of the owner, or by a provider of a commercial mobile radio service or a commercial mobile data service at the direction of such owner or other person, solely in order to enable such owner or a family member of such owner to connect to a wireless telecommunications network, when such connection is authorized by the operator of such network.

