



SECTION 1201 OF TITLE 17

A REPORT OF THE REGISTER OF COPYRIGHTS

JUNE 2017





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ACKNOWLEDGEMENTS

This Report reflects the efforts of many people within the U.S. Copyright Office. Deputy General Counsel Regan Smith and Senior Counsel for Policy and International Affairs Kevin Amer were the primary authors of this Report. They managed and oversaw the complex research, public roundtables, writing, and recommendations. Without their efforts, this Report would not have been possible.

I am grateful as well for the contributions of Assistant General Counsel Cindy Abramson; Attorney-Advisors Abioye Mosheim, John Riley, and Jason Sloan; and Barbara A. Ringer Copyright Honors Program Fellow Andrew Moore, all of whom researched and drafted significant portions of the Report. In addition, Ms. Mosheim coordinated the scheduling, transcription, and video recording of the public roundtables in Washington, D.C. and San Francisco.

General Counsel and Associate Register of Copyrights Sarang (Sy) Damle, Senior Advisor to the Register Catherine Rowland, and Deputy Director of Policy and International Affairs Maria Strong reviewed the Report and provided important insights and suggestions during its drafting. Counsels Brad Greenberg and Emily Lanza and Ringer Fellows Rachel Fertig and Emma Raviv provided helpful citation assistance. Law clerks Adelaide Dunn, Sara Gates, Nouran Sedaghat, Olga Susuni, and Giulio Yaquinto provided valuable research support.

The Copyright Office also benefitted from assistance provided by colleagues outside of Washington, D.C. In particular, I am grateful to Chancellor and Dean David Faigman and Professor Ben Depoorter of the University of California, Hastings College of the Law for facilitating the roundtable held in Hasting's Alumni Reception Center in San Francisco.

Finally, I would like to sincerely thank the organizations, law students, and other individuals who provided written commentary and shared their perspectives and experiences in the roundtable discussions.

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EXECUTIVE SUMMARY

Among the many changes to the copyright system spurred by digital technologies, perhaps the most fundamental has been the development of new platforms and formats for delivering creative works to the public. In addition to physical media such as compact discs and DVDs, copyright owners and consumers alike have a broad and expanding array of online options to conveniently disseminate, access, and use creative works. Many of these options emerged after essential updates to the copyright law were made to accommodate rapid technological change and foster digital innovations. In 1998, as part of the Digital Millennium Copyright Act (“DMCA”), and in compliance with two newly adopted international treaties, Congress added a new section 1201 to title 17 to provide greater legal protection for copyright owners in the emerging digital environment.

In enacting section 1201, Congress aimed to create a legal foundation to launch the global digital online marketplace for copyrighted works. Congress recognized that the same features that make 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,” or “TPMs,” when offering their works in digital form. TPMs include both measures protecting against unauthorized access to a copyrighted work (*e.g.*, a password requirement) as well as measures protecting against unauthorized uses (*e.g.*, prevention of digital copying).¹ By providing independent legal protection for technologies used by copyright owners to prevent piracy, Congress sought to bolster rightsholders’ willingness to make their works available to the public in a variety of digital formats.

Accordingly, section 1201 supplements the preexisting rights of copyright owners under the Copyright Act of 1976 by establishing separate and distinct legal remedies against the circumvention of certain types of TPMs, as well as against trafficking in devices and services primarily designed for circumvention.² At the same time, Congress recognized that there are many lawful purposes for which individuals may have a legitimate need to engage in circumvention—activities that have little to do with facilitating piracy. Congress therefore included within section 1201 a series of permanent exemptions to one or more of the statute’s prohibitions. Among others, these include exemptions for

¹ See 17 U.S.C. § 1201(a)(3)(B), (b)(2)(B).

² As defined in the statute, to “circumvent” generally refers to acts such as avoiding, bypassing, removing, deactivating, or impairing a TPM. See *id.* § 1201(a)(3)(A), (b)(2)(A).

certain activities of libraries, archives, and educational institutions, law enforcement activities, reverse engineering, encryption research, and security testing.

In addition to these exemptions, Congress also created a procedure to grant exemptions on a temporary basis. Every three years, the Librarian of Congress, upon the recommendation of the Register of Copyrights, determines through a rulemaking proceeding whether the bar on circumvention is having, or is likely to have, an adverse effect on users' ability to make noninfringing uses of a particular class of copyrighted works. The Librarian may adopt a temporary exemption waiving the prohibition for such users for the ensuing three-year period. Congress established this rulemaking as a "fail-safe" mechanism to ensure that the new protection against circumvention would not be used to diminish the public's access to copyrighted works for lawful uses, including activities protected by the fair use doctrine.

Over the years, section 1201 has become a source of deep and widespread debate among copyright stakeholders. Many copyright owners argue that the statute has worked just as Congress intended, laying the legal foundation for the explosion in legitimate digital dissemination models over the past two decades. At the time of its enactment, DVDs were not yet the "predominant medium" for the distribution of motion pictures in the home video market,³ and the first iPod would not be invented for three more years. Today, DVDs, Blu-ray, and 4K Ultra HD Blu-ray discs compete with streaming services such as Hulu, Netflix, Amazon Instant Video, and Google Play, while millions of consumers have "cut the cord" with traditional cable services in favor of over-the-top subscription services. In the music industry, the majority of revenues now come from streaming services like Spotify, Pandora, and Apple Music, displacing download revenues, which in turn previously displaced compact disc revenues. Likewise, cloud computing has become standard, and software as a service is now a leading licensing and delivery model for businesses and individuals. These platforms, copyright owners argue, have given consumers more lawful options to access creative works than ever before, and all rely on TPMs to effectively operate in the marketplace. Copyright owners also credit the statute's anti-trafficking provisions with keeping circumvention technologies out of the mainstream.

Others, including many user groups, argue that section 1201 does little to prevent digital piracy, while chilling a wide range of otherwise lawful activities. In their view, the statutory language sweeps far beyond the concerns Congress had in mind when it adopted the DMCA and has given rise to anticompetitive and other claims unrelated to legitimate copyright interests. They point to cases in which manufacturers of products such as garage door openers and printer toner cartridges have invoked section 1201 to

³ Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, 65 Fed. Reg. 64,556, 64,567–68 (Oct. 27, 2000).

prevent competitors from marketing compatible products, including replacement parts, because of the TPM-protected software in those products. These challenges will only become more commonplace, these users argue, as the Internet of Things expands and growing numbers of everyday products—automobiles, refrigerators, medical devices, and so on—operate using software protected by TPMs. While consumers historically have been free to repair, modify, or tinker with their own goods without implicating copyright, such activities now may require circumvention of a TPM to access the software that enables the device to function. For many, it is not clear why copyright law should apply at all in these contexts.

User groups argue that these concerns are only partially remedied by the permanent exemptions and the triennial rulemaking. Many contend that the permanent exemptions cover only a handful of legitimate circumvention activities and have been outpaced by technological change in the areas they do address. And while some stakeholders praise the rulemaking as a flexible means of responding to marketplace developments, noting that it consistently yields large numbers of exemptions, others argue that it imposes substantial costs and burdens on participants, especially for individuals and public interest organizations with limited resources. They urge that the process be streamlined, particularly when evaluating whether to renew an exemption granted in the previous rulemaking that encounters no meaningful opposition. Others have noted the proceeding's substantive limitations. For example, the Librarian is not authorized to grant exemptions to the anti-trafficking provisions, and many argue that the right to circumvent can be effectively meaningless absent assistance from third parties, such as service technicians.

In light of all of these issues, and at the request of the Ranking Member of the House Judiciary Committee, the Copyright Office has completed the first comprehensive public study on the operation of section 1201 since its enactment nearly twenty years ago. In some instances, the Office does not propose statutory changes. Rather, the Office believes that the application of existing law, which the Office has described in this Report, will sufficiently address some of the concerns raised by stakeholders. In other instances, the Office proposes a combination of targeted legislative updates and changes to the Office's administration of the triennial rulemaking to improve section 1201's overall operation and effectiveness. The Office believes that legislative reform is most appropriate where there is significant evidence that the current statute is not achieving Congress' objectives, or where it appears that a statutory exemption may be preferable to evaluating new or expanded temporary exemptions through the triennial rulemaking. The Office's conclusions and recommendations are summarized as follows:

Basic Framework. The Copyright Office does not propose altering the basic framework of section 1201. The Office believes that the statute's overall structure and scope—including its treatment of circumvention as a standalone violation independent of copyright infringement—remain sound.

Anti-Trafficking Provisions. The Office agrees with the many copyright owners who maintain that the anti-trafficking provisions provide critical enforcement tools against digital piracy. At the same time, the Office recognizes that uncertainty over the reach of those provisions may prevent some users from taking full advantage of exemptions to which they are entitled pursuant to the rulemaking. In response to this concern, the Office concludes:

- Beneficiaries of exemptions should themselves be able to develop necessary tools solely for their own use in carrying out exempted circumventions. We do not believe, however, that legislative change is currently needed to effectuate that right. Such action appears premature, as no court has suggested that the bar on the “manufacture” of circumvention tools extends to beneficiaries engaging in self-help. More fundamentally, the statutory text and structure indicate that this provision was not intended to cover such activity; instead, the language is best read to apply only in connection with trafficking conduct.
- In cases where beneficiaries cannot themselves make use of an exemption, the Office believes that it is important to allow users to seek assistance in making use of that exemption. As raised in the most recent rulemaking, the Office *does* recommend amending section 1201 to expressly grant the Librarian discretion to adopt temporary regulatory exemptions that permit third-party assistance “at the direction of” an intended user. This change would extend to the entire rulemaking the authority to adopt exemptions similar in scope to exemptions for the unlocking of wireless devices, as mandated by Congress in the Unlocking Consumer Choice and Wireless Competition Act.⁴ Prior to a legislative solution, the Office will seek to avoid defining classes of persons eligible for exemptions overly narrowly in future rulemaking proceedings, which may allow for more effective use of the granted exemptions.

Permanent Exemptions. Both this study and the experience of past rulemakings suggest that, in certain cases, the existing permanent exemptions have not been sufficiently flexible to keep pace with evolving technologies. The Office makes the following recommendations:

- As the Register has previously testified, to accommodate a broader range of legitimate security research, the Office recommends that Congress consider

⁴ See Unlocking Consumer Choice and Wireless Competition Act, Pub. L. No. 113-144, § 2(c), 128 Stat. 1751, 1751–52 (2014) (providing that circumvention “may be initiated . . . 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”).

expanding the exemption for security testing under section 1201(j). This could include expanding the definition of security testing, easing the requirement that researchers obtain authorization, and abandoning or clarifying the exemption's multifactor test for eligibility.

- The exemption for encryption research under section 1201(g) may benefit from similar revision, including removal of the requirement to seek authorization and clarification or removal of the multifactor test.
- In some cases, it may make sense to consider the adoption of new permanent exemptions to provide certainty for noninfringing activities that have repeatedly received exemptions in past triennial rulemakings, or where there is a particularly broad-based need. Specifically, the Office recommends legislative consideration of the following as new permanent exemptions:
 - An exemption permitting circumvention to enable blind or visually impaired persons to utilize assistive technologies. The exemption for such purposes granted in the most recent triennial rulemaking could provide an appropriate starting point for legislative language.
 - An exemption to allow circumvention solely for purposes of diagnosis, repair, or maintenance of a computer program, including to circumvent obsolete access controls. The Office does not, however, recommend that such an exemption extend to circumvention for purposes of making other lawful modifications to software, or “tinkering.”
 - An exemption for the unlocking of used mobile devices, based on the language of exemptions adopted in prior rulemakings.
- In other cases, the views received suggest that the rulemaking already provides an adequate forum to address needs for circumvention, or that legislative reform is otherwise premature:
 - The Office previously has noted that the exemption under section 1201(f) for reverse engineering is somewhat ambiguous with respect to whether it permits end users to circumvent for purposes of making computer programs interoperable, or instead is limited to circumvention done solely for certain analytical purposes. Based on the statutory text, legislative history, and relevant case law, the Office concludes that the stronger interpretation is that section 1201(f) does permit circumvention to enable interoperability in certain circumstances, and subject to various statutory safeguards. Therefore, the Office does not believe that amendment of section 1201(f) is currently necessary to allow consumers to engage in legitimate activity of this type.

- The Office does not currently recommend adopting a permanent exemption to facilitate the lawful preservation, replacement, and research activities of libraries and archives. We believe such an exemption to be premature in light of the Office's ongoing review of the copyright exceptions for such institutions under section 108 of the Copyright Act, but are hopeful that the recommended exemption for obsolete access controls noted above can accommodate many of these activities.
- The Office does not currently recommend adopting a permanent exemption for educational and derivative uses of audiovisual works. Although exemptions for such purposes have been granted in prior rulemakings, their language and scope has changed over time, suggesting that adoption on a permanent basis may be premature.
- In light of the Office's conclusion that a circumvention violation is and should continue to be independent of copyright infringement, the Office does not recommend adoption of a permanent exemption permitting circumvention for any lawful or noninfringing use. In addition, the Office does not see a sufficient basis for abandoning Congress' considered decision to establish the triennial rulemaking as the forum for consideration of exemptions for activities protected by fair use.
- Any revisions to the permanent exemptions should take into account international obligations, including applicable trade agreements. The Office expresses no view on any potential trade implications, but reaches its conclusions and recommendations solely for purposes of domestic copyright policy and advising Congress.

Triennial Rulemaking. Apart from the question of whether the current statute should be adjusted, the Copyright Office expects growing numbers of copyright owners and users to continue to rely upon the triennial rulemaking. After careful consideration, the Office has identified ways the rulemaking process may be improved or clarified to facilitate administrability and ensure that the rulemaking continues to function as a useful fail-safe mechanism to prevent a diminishment in the public's ability to access copyrighted works.

First, the study revealed broad consensus in favor of streamlining the process for renewing exemptions to which there is no meaningful opposition. While the Office continues to support legislation providing for presumptive renewal of existing exemptions where there is no opposition, the Office concludes that under its existing regulatory authority, it can implement some changes in this regard independently. In particular, the Office believes that the statutory language permits rulemaking determinations to be based upon evidence drawn from prior proceedings, where there is a showing that the prior record is still a relevant reflection of the legal or factual concerns at issue in the succeeding rulemaking. The Office intends to implement such

changes in the next rulemaking, for example by allowing petitioners to seek renewal through submission of a short declaration stating that there has been no material change to the facts and circumstances supporting the exemption since the previous triennial period.

Second, the Office is providing guidance clarifying the applicable evidentiary standards that must be satisfied to obtain an exemption. The Office's evidentiary inquiry is derived directly from the statute, and its application is guided by legislative history. The Office hopes that this articulation will be useful to future rulemaking participants.

Finally, the Office will undertake further efforts to make the rulemaking process clear and accessible to the public, consistent with its statutory obligations. These will include educational outreach in the form of a tutorial or webinar for the upcoming seventh rulemaking, adjusting the schedule to maximize participation from legal clinics, exploring the use of webcasting and/or remote participation technology, and greater efforts to use simplified regulatory language.

I. INTRODUCTION AND STUDY HISTORY

The Digital Millennium Copyright Act (“DMCA”)⁵ has played a pivotal role in the development of the modern digital economy. Enacted by Congress in 1998 to implement the United States’ obligations under two international treaties,⁶ the DMCA was intended to foster the growth and development of a thriving, innovative, and flexible digital marketplace by making digital networks safe places to disseminate and use copyrighted materials.⁷ It did so most notably by limiting the liability of online service providers⁸ and, as this Report addresses, by ensuring adequate legal protections for copyrighted content to “support new ways of disseminating copyrighted materials to users, and to safeguard the availability of legitimate uses of those materials by individuals.”⁹

Members of Congress have recognized that these latter protections, codified in section 1201 of title 17, United States Code, have been integral to discouraging piracy and infringement, facilitating innovation, and providing consumers with a wide range of content delivery options.¹⁰ As envisioned by Congress, section 1201 seeks to balance the

⁵ Pub. L. No. 105-304, 112 Stat. 2860 (1998).

⁶ WIPO Copyright Treaty, Dec. 20, 1996, 36 I.L.M. 65 (1997) (“WCT”); WIPO Performances and Phonograms Treaty, Dec. 20, 1996, 36 I.L.M. 76 (1997) (“WPPT”).

⁷ See 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 4TH, 1998, at 2 (Comm. Print 1998) (“HOUSE MANAGER’S REPORT”); H.R. REP. NO. 105-551, pt. 2, at 21, 23 (1998) (“COMMERCE COMMITTEE REPORT”); H.R. REP. NO. 105-551, pt. 1, at 10 (1998) (“HOUSE JUDICIARY COMMITTEE REPORT”); S. REP. NO. 105-190, at 1–2, 8–9 (1998) (“SENATE JUDICIARY COMMITTEE REPORT”).

⁸ Pub. L. No. 105-304, tit. II, § 202, 112 Stat. 2860, 2877–86 (1998) (codified as amended at 17 U.S.C. § 512).

⁹ HOUSE MANAGER’S REPORT at 6.

¹⁰ See, e.g., *Chapter 12 of Title 17: Hearing Before the Subcomm. on Courts, Intellectual Prop. & the Internet of the H. Comm. on the Judiciary*, 113th Cong. 2 (2014) (statement of Rep. Tom Marino, Vice-Chairman, Subcomm. on Courts, Intellectual Prop. & the Internet) (“The digital economy has enabled wide distribution of movies, music, eBooks and other digital content. Chapter 12 seems to have a lot to do with [that] economic growth”); *id.* at 2–3 (statement of Rep. Jerrold Nadler, Ranking Member, Subcomm. on Courts, Intellectual Prop. & the Internet) (“The DMCA has been effective and has worked to encourage the creation of new digital works and has allowed authors a way to protect against copyright infringement while also helping to promote the development of new and innovative business models. . . . Section 1201 has proven to be extremely helpful to creators because it has helped creators to have the confidence to provide video content over the internet despite the risk of piracy. And Section 1201 has helped deter . . . unauthorized access by prohibiting circumvention of protection measures and trafficking tools designed for

interests of copyright owners and users, including the personal interests of consumers, in the digital environment.¹¹ It does so by protecting the use of technological measures (also called “technological protection measures” or “TPMs”) used by copyright owners to prevent unauthorized access to or use of their works.¹² Section 1201 contains three separate protections for TPMs. First, it prohibits circumvention of technological measures employed by or on behalf of copyright owners to protect access to their works (also known as “access controls”). Second, the statute prohibits trafficking in devices or services primarily designed to circumvent access controls. Finally, it prohibits trafficking in devices or services primarily designed to circumvent TPMs used to protect the copyright rights of the owner of a work (also known as “copy controls”). Copy controls protect against unauthorized uses of a copyrighted work once access has been lawfully obtained. Because title 17 already forbids copyright infringement, there is no corresponding ban on the act of circumventing a copy control.¹³

At the same time, section 1201 contains a number of discrete exemptions to these prohibitions, to avoid curtailing legitimate activities such as security testing, law enforcement activities, or the protection of personally identifying information.¹⁴ In addition, to accommodate changing marketplace realities and ensure that access to copyrighted works for lawful purposes is not unjustifiably diminished,¹⁵ the statute provides for a rulemaking proceeding whereby additional, temporary exemptions to the prohibition on circumventing access controls may be adopted by the Librarian of Congress, upon the recommendation of the Register of Copyrights in consultation with the Assistant Secretary for Communications and Information of the Department of Commerce.¹⁶ In contrast to the permanent exemptions set out by statute, exemptions adopted pursuant to the rulemaking must be reconsidered every three years.¹⁷

circumvention.”); *id.* at 4 (statement of Rep. John Conyers, Jr., Ranking Member, H. Comm. on the Judiciary) (“Chapter 12 encourages the use of technology protection measures to protect copyright by making it unlawful to circumvent these measures or to assist others in doing so. This strengthens our copyright system by cultivating innovative business models that encourage the lawful dissemination of copyrighted works to the public. This in turn discourages piracy and infringement.”).

¹¹ See COMMERCE COMMITTEE REPORT at 26.

¹² Pub. L. No. 105-304, tit. I, § 103, 112 Stat. 2860, 2863–72 (1998) (codified as amended at 17 U.S.C. § 1201).

¹³ SENATE JUDICIARY COMMITTEE REPORT at 12.

¹⁴ 17 U.S.C. § 1201 (d)–(j).

¹⁵ COMMERCE COMMITTEE REPORT at 35–36.

¹⁶ 17 U.S.C. § 1201(a)(1)(C); see also *id.* § 1201(a)(1)(B)–(D).

¹⁷ *Id.* § 1201(a)(1)(C).

Since the enactment of the DMCA, the Copyright Office has conducted six rulemakings, which have grown in both public interest and scope.¹⁸ In the most-recently concluded rulemaking, the Office received many proposals seeking to access copyrighted computer code that now pervades consumer devices, and the rulemaking correspondingly touched upon a wide range of activities, from accessing personal data in medical devices to tractor repair, not previously implicated by copyright.¹⁹ The Office also received many requests for the renewal of previously granted and uncontested temporary exemptions, raising the question whether, in such cases, the rulemaking has become unnecessarily burdensome.²⁰ Finally, the growth of specialized computer code serving as technological protection measures yielded concerns that members of the general public are unable to make use of these exemptions without assistance from third parties (such as service technicians), and that the anti-trafficking prohibitions might prevent such aid.²¹

In light of these issues, and as part of its comprehensive review of the nation's copyright law, the House of Representatives Committee on the Judiciary's Subcommittee on Courts, Intellectual Property, and the Internet held a hearing on section 1201 in September of 2014.²² During a subsequent hearing before the full Judiciary Committee in April of 2015, the Register of Copyrights testified that the impact and efficacy of section 1201 merit analysis, and Ranking Member John Conyers, Jr. requested that the Office complete a report studying section 1201.²³

This Report is the result of that request. On December 29, 2015, the Copyright Office published a notice of inquiry in the Federal Register ("First Notice") announcing the

¹⁸ See *infra* p. 25 (discussing significant increase in number of comments received).

¹⁹ Register of Copyrights, Section 1201 Rulemaking: Sixth Triennial Proceeding to Determine Exemptions to the Prohibition on Circumvention, Recommendation of the Register of Copyrights 2–3 (2015) ("2015 Recommendation").

²⁰ *Id.* at 4.

²¹ *Id.* at 4–5.

²² See *Chapter 12 of Title 17: Hearing Before the Subcomm. on Courts, Intellectual Prop. & the Internet of the H. Comm. on the Judiciary*, 113th Cong. (2014).

²³ See *Register's Perspective on Copyright Review: Hearing Before the H. Comm. on the Judiciary*, 114th Cong. 6 (2015) (statement of Maria A. Pallante, Register of Copyrights and Dir., U.S. Copyright Office) ("For [certain] aspects of section 1201, we are recommending a comprehensive study, including the permanent exemptions for security, encryption, and privacy research."); *id.* at 49 (statement of Rep. John Conyers, Jr., Ranking Member, H. Comm. on the Judiciary) ("[T]here are policy issues that warrant studies and analysis, including . . . section 1201. . . . I would like the Copyright Office to conduct and complete reports on those policy issues . . .").

study and soliciting public input.²⁴ The Office received sixty-eight initial comments and sixteen reply comments in response from a broad spectrum of interested parties, including creators and copyright owners, service providers, technology and cybersecurity companies, device manufacturers, libraries, legal scholars, public interest groups, and individual members of the public.²⁵ In May 2016, the Office conducted three days of public roundtables in Washington, D.C. and San Francisco.²⁶ Following the roundtables, the Office published a second notice of inquiry in the Federal Register (“Second Notice”) requesting additional comments on a number of significant issues raised in earlier comments and discussed at the roundtables.²⁷ The Office received forty-three comments and fourteen reply comments in response to the Second Notice.²⁸

II. CURRENT LEGAL FRAMEWORK

A. Historical Background

The United States’ effort to update its laws to ensure protection of copyrighted works in the digital age began in February 1993 with the formation of the Information Infrastructure Task Force, which established a working group to investigate the effects of emerging digital technology on intellectual property rights and recommend appropriate

²⁴ Section 1201 Study: Notice and Request for Public Comment, 80 Fed. Reg. 81,369 (Dec. 29, 2015). This notice is attached in Appendix A.

²⁵ The comments received in response to the First Notice are available online at <https://www.regulations.gov/docketBrowser?rpp=25&po=0&dct=PS&D=COLC-2015-0012>. References to these comments are by party name (abbreviated where appropriate) followed by either “Initial Comments” or “Initial Reply Comments,” as appropriate. A list of the parties who responded to the First Notice is attached in Appendix B.

²⁶ See Software-Enabled Consumer Products Study and Section 1201 Study: Announcement of Public Roundtables, 81 Fed. Reg. 17,206 (Mar. 28, 2016). The Federal Register notice announcing the roundtables is attached in Appendix A. A list of those who participated in the Office’s public roundtables is attached in Appendix B. Transcripts of the Washington, D.C. roundtables are available at http://www.copyright.gov/policy/1201/public-roundtable/transcript_05-19-2016.pdf and http://www.copyright.gov/policy/1201/public-roundtable/transcript_05-20-2016.pdf. A transcript of the San Francisco roundtable is available at https://www.copyright.gov/policy/1201/public-roundtable/transcript_05-25-2016.pdf.

²⁷ Section 1201 Study: Request for Additional Comments, 81 Fed. Reg. 66,296 (Sept. 27, 2016). This notice is attached in Appendix A.

²⁸ The comments received in response to the Second Notice are available online at <https://www.regulations.gov/docketBrowser?rpp=25&po=0&dct=PS&D=COLC-2015-0012>. References to these comments are by party name (abbreviated where appropriate) followed by either “Additional Comments” or “Additional Reply Comments.” A list of the parties who responded to the Second Notice is attached in Appendix B.

changes to U.S. law and policy.²⁹ This working group ultimately published a White Paper in 1995, which recommended that the United States adopt, among other things, measures to prevent the circumvention of TPMs.³⁰ These recommendations resulted in legislation introduced in September 1995,³¹ which ultimately stalled when negotiations failed to resolve core issues.³²

During this time, however, an effort to ensure that copyrighted works would be adequately protected online was proceeding internationally. In December 1996, the World Intellectual Property Organization (“WIPO”), of which the United States is a member state, held a diplomatic conference, which resulted in the adoption of two treaties—the WIPO Copyright Treaty (“WCT”) and the WIPO Performances and Phonograms Treaty (“WPPT”), collectively known as the “WIPO Internet Treaties.”³³ The WCT is a special agreement³⁴ under the Berne Convention for the Protection of Literary and Artistic Works;³⁵ it deals with the protection of works and the rights of their authors in the digital environment. Relevant to this Report, Article 11 of the WCT obligates member states to:

provide adequate legal protection and effective legal remedies against the circumvention of effective technological measures that are used by authors in connection with the exercise of their rights under this Treaty or the Berne Convention and that restrict acts, in respect of their works, which are not authorized by the authors concerned or permitted by law.³⁶

The WPPT, which provides protection for performances and sound recordings, has a provision that is nearly identical to Article 11 of the WCT.³⁷

²⁹ SENATE JUDICIARY COMMITTEE REPORT at 2.

³⁰ INFO. INFRASTRUCTURE TASK FORCE, WORKING GRP. ON INTELLECTUAL PROP. RIGHTS, INTELLECTUAL PROPERTY AND THE NATIONAL INFORMATION INFRASTRUCTURE: THE REPORT OF THE WORKING GROUP ON INTELLECTUAL PROPERTY RIGHTS 230–35 (1995).

³¹ NII Copyright Protection Act of 1995, H.R. 2441, 104th Cong. (1995); NII Copyright Protection Act of 1995, S. 1284, 104th Cong. (1995).

³² SENATE JUDICIARY COMMITTEE REPORT at 2–4.

³³ WCT, *supra* note 6; WPPT, *supra* note 6.

³⁴ WCT, *supra* note 6, art. 1(1).

³⁵ Berne Convention for the Protection of Literary and Artistic Works, Sept. 9, 1886, as revised July 24, 1971, and as amended Sept. 28, 1979, S. Treaty Doc. 99-27, 1161 U.N.T.S. 3.

³⁶ WCT, *supra* note 6, art. 11.

³⁷ WPPT, *supra* note 6, art. 18.

The Clinton Administration submitted the WIPO Internet Treaties to the Senate for ratification in July 1997, and draft implementing legislation was introduced in both the House and Senate.³⁸ These bills became the basis for title I of the DMCA, which includes the provisions eventually codified in 17 U.S.C. § 1201.³⁹ Throughout 1997 and 1998, the draft legislation for the DMCA, including title I, went through a number of changes before being enacted on October 28, 1998.⁴⁰ Since enactment, section 1201 has been amended once, in 1999, to make a technical correction.⁴¹

B. Statutory Structure

Section 1201 has six primary components. First, section 1201(a)(1)(A) prohibits the circumvention of technological measures employed by or on behalf of copyright owners to control access to their works (*i.e.*, access controls).⁴² Access controls include, for example, a password requirement limiting access to a website to paying customers, or authentication codes in video game consoles to prevent the playing of pirated copies. Second, section 1201(a)(2) prohibits manufacturing of or otherwise trafficking in technologies, products, or services that are primarily designed or produced for circumventing access controls.⁴³ Third, section 1201(b) prohibits manufacturing of or otherwise trafficking in technologies, products, or services that are primarily designed or produced for circumventing technological measures that protect the exclusive rights granted to copyright owners under title 17 (*i.e.*, copy controls).⁴⁴ Copy controls include, for example, technology preventing the copying of an e-book after it has been downloaded to a user's device.

³⁸ SENATE JUDICIARY COMMITTEE REPORT at 5; *see also* WIPO Copyright and Performances and Phonograms Treaty Implementation Act of 1997, S. 1121, 105th Cong. (as introduced, July 31, 1997); WIPO Copyright Treaties Implementation Act, H.R. 2281, 105th Cong. (as introduced, July 29, 1997).

³⁹ *See* SENATE JUDICIARY COMMITTEE REPORT at 5.

⁴⁰ Pub. L. No. 105-304, 112 Stat. 2860 (1998). The WIPO treaties were ratified by the Senate shortly before passage of the DMCA. *See* 144 CONG. REC. S12,972, 12,972-73 (daily ed. Oct. 21, 1998).

⁴¹ *See* Intellectual Property and Communications Omnibus Reform Act of 1999, Pub. L. No. 106-113, app. I, tit. V, § 5006, 113 Stat. 1501, 1501A-594 (1999); H.R. REP. NO. 106-464, at 149 (1999) (Conf. Rep.).

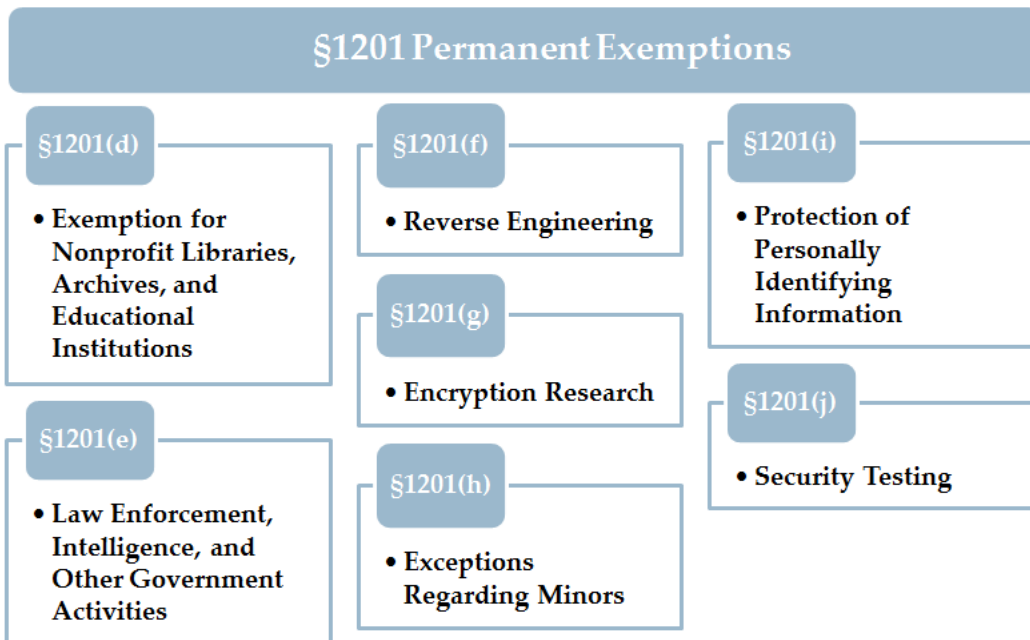
⁴² 17 U.S.C. § 1201(a)(1)(A).

⁴³ *Id.* § 1201(a)(2).

⁴⁴ *Id.* § 1201(b).

17 U.S.C. § 1201	Circumvention Prohibition?	Trafficking Prohibition?
Access Controls	Yes § 1201(a)(1)	Yes § 1201(a)(2)
Copy Controls	No	Yes § 1201(b)

Fourth, sections 1201(d)–(j) describe various permanent exemptions to one or more of these prohibitions, and subsection (k) prescribes conditions for the use of specific TPMs on analog video cassette recorders.⁴⁵



Fifth, section 1201(a)(1)(C) provides for a rulemaking proceeding whereby additional, temporary exemptions to the prohibition on circumventing access controls may be adopted by the Librarian of Congress, upon the recommendation of the Register of Copyrights in consultation with the Assistant Secretary for Communications and Information of the Department of Commerce.⁴⁶ Finally, section 1201(c) contains a savings clause that was “intended to ensure that none of the provisions in section 1201

⁴⁵ *Id.* § 1201(d)–(k).

⁴⁶ *Id.* § 1201(a)(1)(C); *see also id.* § 1201(a)(1)(B)–(D).

affect the existing legal regime established in the Copyright Act and case law interpreting that statute,” including the fair use doctrine.⁴⁷

1. Prohibition on Circumvention

Section 1201(a)(1)(A) mandates that “[n]o person shall circumvent a technological measure that effectively controls access to a work protected under this title.”⁴⁸ As used in section 1201(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.”⁴⁹ 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.”⁵⁰

Congress intended section 1201(a)(1)(A) to establish a new legal protection for copyright owners against the circumvention of TPMs controlling access to their works, as required by the WIPO Internet Treaties. Both the House and Senate Judiciary Committees

⁴⁷ SENATE JUDICIARY COMMITTEE REPORT at 30; HOUSE JUDICIARY COMMITTEE REPORT at 20 (same); *see also* COMMERCE COMMITTEE REPORT at 26 (“[F]air use principles certainly should not be extended beyond their current formulation.”). Section 1201(c) states that:

(1) Nothing in this section shall affect rights, remedies, limitations, or defenses to copyright infringement, including fair use, under this title.

(2) Nothing in this section shall enlarge or diminish vicarious or contributory liability for copyright infringement in connection with any technology, product, service, device, component, or part thereof.

(3) Nothing in this section shall require that the design of, or design and selection of parts and components for, a consumer electronics, telecommunications, or computing product provide for a response to any particular technological measure, so long as such part or component, or the product in which such part or component is integrated, does not otherwise fall within the prohibitions of subsection (a)(2) or (b)(1).

(4) Nothing in this section shall enlarge or diminish any rights of free speech or the press for activities using consumer electronics, telecommunications, or computing products.

The legislative history makes clear that a violation of section 1201(a) should be considered entirely separate from a violation of copyright law. *See infra* pp. 43–44.

⁴⁸ 17 U.S.C. § 1201(a)(1)(A).

⁴⁹ *Id.* § 1201(a)(3)(A).

⁵⁰ *Id.* § 1201(a)(3)(B).

concluded that the Treaties required a prohibition on circumvention, which was unavailable under then-existing U.S. law. The House Judiciary Committee Report explains that while “[t]he treaties do not require any change in the substance of copyright rights or exceptions in U.S. law[, t]hey do . . . require . . . technological adjuncts to the copyright law, intended to ensure a thriving electronic marketplace for copyrighted works on the Internet.”⁵¹ Thus, “[t]o comply with the treaties, the U.S. must make it unlawful to defeat technological protections used by copyright owners to protect their works.”⁵² The Senate Judiciary Committee agreed that “to adhere to the WIPO treaties,” anticircumvention legislation “is necessary,” noting that “prior to this Act, the conduct of circumvention was never before made unlawful.”⁵³ Congress described such conduct as “the electronic equivalent of breaking into a locked room in order to obtain a copy of a book.”⁵⁴

In enacting the new provision, Congress highlighted a key policy goal: facilitating the development of a lawful online marketplace for copyrighted works.⁵⁵ The Senate Judiciary Committee Report notes that “copyright owners will hesitate to make their works readily available on the Internet without reasonable assurance that they will be protected against massive piracy.”⁵⁶ By providing legal protection for access controls,

⁵¹ HOUSE JUDICIARY COMMITTEE REPORT at 9–10.

⁵² *Id.* at 10.

⁵³ SENATE JUDICIARY COMMITTEE REPORT at 11–12.

⁵⁴ HOUSE JUDICIARY COMMITTEE REPORT at 17. The Senate Judiciary Committee Report uses a similar analogy in describing the relationship between section 1201(a)(1) and the prohibition on the manufacture of circumvention tools under section 1201(a)(2):

For example, if unauthorized access to a copyrighted work is effectively prevented through use of a password, it would be a violation of this section to defeat or bypass the password and to make the means to do so, as long as the primary purpose of the means was to perform this kind of act. This is roughly analogous to making it illegal to break into a house using a tool, the primary purpose of which is to break into houses.

SENATE JUDICIARY COMMITTEE REPORT at 11.

⁵⁵ See COMMERCE COMMITTEE REPORT at 23 (“The debate on this legislation highlighted two important priorities: promoting the continued growth and development of electronic commerce; and protecting intellectual property rights. These goals are mutually supportive. A thriving electronic marketplace provides new and powerful ways for the creators of intellectual property to make their works available to legitimate consumers in the digital environment. And a plentiful supply of intellectual property . . . drives the demand for a more flexible and efficient electronic marketplace.”); SENATE JUDICIARY COMMITTEE REPORT at 1–2 (“The [DMCA] is designed to facilitate the robust development and world-wide expansion of electronic commerce, communications, research, development, and education in the digital age.”).

⁵⁶ SENATE JUDICIARY COMMITTEE REPORT at 8.

Congress hoped to encourage copyright owners to make their works available to consumers through flexible and cost-effective online platforms.⁵⁷ As the House Manager’s Report⁵⁸ observes, “[t]he technological measures—such as encryption, scrambling, and electronic envelopes—that this bill protects can be deployed, not only to prevent piracy and other economically harmful unauthorized uses of copyrighted materials, but also to support new ways of disseminating copyrighted materials to users”⁵⁹ Congress envisioned dissemination models that “allow access during a limited time period, such as during a period of library borrowing,” or that “allow[] a consumer to purchase a copy of a single article from an electronic database, rather than having to pay more for a subscription to a journal containing many articles the consumer does not want.”⁶⁰ Congress thus anticipated that the legislation would “creat[e] the legal platform for launching the global digital on-line marketplace for copyrighted works.”⁶¹

2. Prohibitions on Trafficking

Although the WIPO Internet Treaties do not contain express language regarding trafficking in products used for circumvention of TPMs, Congress concluded that the adoption of such prohibitions was required for U.S. compliance.⁶² This view accorded

⁵⁷ See HOUSE MANAGER’S REPORT at 2 (“[T]he law must adapt in order to make digital networks safe places to disseminate and exploit material in which American citizens have rights in an unregulated and beneficial environment.”); HOUSE JUDICIARY COMMITTEE REPORT at 10 (“When copyrighted material is adequately protected in the digital environment, a plethora of works will be distributed and performed over the Internet. To protect the owner, copyrighted works will most likely be encrypted and made available to consumers once payment is made for access to a copy of the work.”).

⁵⁸ The “House Manager’s Report” refers to the committee print issued by the House Judiciary Committee following passage by the House of Representatives of a Manager’s Amendment to the bill that would become the DMCA. See HOUSE MANAGER’S REPORT at 1–2.

⁵⁹ *Id.* at 6.

⁶⁰ *Id.* at 6–7 (“These technological measures may make more works more widely available, and the process of obtaining permissions easier.”); see also COMMERCE COMMITTEE REPORT at 23 (“[A]n increasing number of intellectual property works are being distributed using a ‘client-server’ model, where the work is effectively ‘borrowed’ by the user (e.g., infrequent users of expensive software purchase a certain number of uses, or viewers watch a movie on a pay-per-view basis).”).

⁶¹ SENATE JUDICIARY COMMITTEE REPORT at 8.

⁶² See HOUSE JUDICIARY COMMITTEE REPORT at 10 (“To comply with the treaties, the U.S. must make it unlawful to defeat technological protections used by copyright owners to protect their works. This would include preventing unauthorized access as well as the manufacture and sale of devices primarily designed to decode encrypted copyrighted material.”); *id.* (“There will be

with advice given by then-Register Marybeth Peters to the Committee.⁶³ Section 1201 contains two provisions prohibiting manufacturing of or trafficking in technologies, products, services, or devices that are primarily designed or produced for purposes of circumventing TPMs. Section 1201(a)(2) applies to access controls, while section 1201(b) applies to copy controls.⁶⁴

Section 1201(a)(2) provides:

No person shall manufacture, import, offer to the public, provide, or otherwise traffic in any technology, product, service, device, component, or part thereof, that—

those who will try to profit from the works of others by decoding the encrypted codes protecting copyrighted works, or engaging in the business of providing devices or services to enable others to do so. A new ‘Section 1201’ to the Copyright Act is required by both WIPO Treaties to make it unlawful to engage in such activity.”); SENATE JUDICIARY COMMITTEE REPORT at 28.

⁶³ *WIPO Copyright Treaties Implementation Act; and Online Copyright Liability Limitation Act: Hearing Before the Subcomm. on Courts and Intellectual Prop. of the H. Comm. on the Judiciary*, 105th Cong., 48 (1997) (statement of Marybeth Peters, Register of Copyrights, U.S. Copyright Office) (“Because of the difficulty involved in discovering and obtaining meaningful relief from individuals who engage in acts of circumvention, a broader protection extending to those in the business of providing the means of circumvention appears to be necessary to make the protection adequate and effective. It is the conduct of commercial suppliers that will enable and result in large-scale circumvention.”). The weight of academic authority agrees that the treaties require protections against trafficking. *See, e.g.,* JÖRG REINBOE & SILKE VON LEWINSKI, *THE WIPO TREATIES ON COPYRIGHT: A COMMENTARY ON THE WCT, THE WPPT, AND THE BTAP* 173, ¶ 7.11.36 (2d ed. 2015) (“[T]he obligation to provide for ‘adequate protection’ under the WCT would seem to require that rightsholders enjoy protection also against preparatory acts on top of protection against the acts of circumvention themselves. The domestic law of Contracting Parties would have to proscribe devices, products, components, or the provision of services which are produced or distributed for the purpose of circumventing protection technologies.”) (emphasis omitted); SAM RICKETSON & JANE C. GINSBURG, *INTERNATIONAL COPYRIGHT AND NEIGHBOURING RIGHTS: THE BERNE CONVENTION AND BEYOND*, ¶ 15.17, at 976–77 (2d ed. 2006) (“An interpretation that disfavors effective protection against circumvention by limiting the prohibited conduct to the sole act of circumvention, rather than encompassing the provision of devices as well, would be inconsistent with article 11’s direction that member states ‘shall provide adequate legal protection and effective legal remedies against the circumvention.’”); MIHALY FICSOR, *THE LAW OF COPYRIGHT AND THE INTERNET: THE 1996 WIPO INTERNET TREATIES, THEIR INTERPRETATION AND IMPLEMENTATION*, C11.12, at 549 (2002) (“[I]f legislation tries only to cover the acts of circumvention themselves, it cannot provide adequate legal protection and effective legal remedies against acts which, in spite of the treaty obligations, would continue uncontrolled.”).

⁶⁴ 17 U.S.C. § 1201(a)(2); *id.* § 1201(b)(1).

Trafficking in
Devices or Services
to Circumvent
Access Controls

(A) is primarily designed or produced for the purpose of circumventing a technological measure that effectively controls access to a work protected under this title;

(B) has only limited commercially significant purpose or use other than to circumvent a technological measure that effectively controls access to a work protected under this title; or

(C) is marketed by that person or another acting in concert with that person with that person's knowledge for use in circumventing a technological measure that effectively controls access to a work protected under this title.⁶⁵

Section 1201(b) contains similar language, but refers to circumventing "protection afforded by a technological measure that effectively protects a right of a copyright owner under this title in a work or a portion thereof."⁶⁶ It provides:

No person shall manufacture, import, offer to the public, provide, or otherwise traffic in any technology, product, service, device, component, or part thereof, that—

Trafficking in
Devices or Services
to Circumvent
Copy Controls

(A) is primarily designed or produced for the purpose of circumventing protection afforded by a technological measure that effectively protects a right of a copyright owner under this title in a work or a portion thereof;

(B) has only limited commercially significant purpose or use other than to circumvent protection afforded by a technological measure that effectively protects a right of a copyright owner under this title in a work or a portion thereof; or

(C) is marketed by that person or another acting in concert with that person with that person's knowledge for use in circumventing protection afforded by a

⁶⁵ *Id.* § 1201(a)(2).

⁶⁶ *Id.* § 1201(b)(1).

technological measure that effectively protects a right of a copyright owner under this title in a work or a portion thereof.⁶⁷

For purposes of section 1201(b), to “circumvent protection afforded by a technological measure” means “avoiding, bypassing, removing, deactivating, or otherwise impairing a technological measure.”⁶⁸ A technological measure “‘effectively protects a right of a copyright owner under this title’ if the measure, in the ordinary course of its operation, prevents, restricts, or otherwise limits the exercise of a right of a copyright owner under this title.”⁶⁹

The Senate Judiciary Committee Report emphasizes that the two anti-trafficking provisions “are designed to protect two distinct rights and to target two distinct classes of devices.”⁷⁰ It explains that “if an effective technological protection measure does nothing to prevent access to the plain text of the work, but is designed to prevent that work from being copied,” then a potential cause of action for trafficking in devices designed to circumvent the measure would be available under section 1201(b), but not under section 1201(a)(2).⁷¹ By contrast, if a TPM limits access to a work but does nothing to prevent unauthorized copying, display, performance, or distribution, a potential cause of action for trafficking in circumvention devices would be available under section 1201(a)(2), but not under section 1201(b).⁷²

The Senate Judiciary Committee Report further notes that, while section 1201(a) prohibits both circumventing an access control and related trafficking activity, “there is no prohibition on conduct in 1201(b) akin to the prohibition on circumvention conduct in 1201(a)(1).”⁷³ Prohibiting the act of circumventing a copy control was unnecessary, the Committee reasoned, because most such acts “will occur in the course of conduct which itself implicates the copyright owner[']s rights under title 17.”⁷⁴ Thus, the anti-trafficking provisions in section 1201(b) were intended to “enforce[] the longstanding prohibitions on infringements,” while those in section 1201(a)(2) were intended to “enforce[] [the] new prohibition on conduct” under section 1201(a)(1)(A).⁷⁵

⁶⁷ *Id.* § 1201(b)(1).

⁶⁸ *Id.* § 1201(b)(2)(A).

⁶⁹ *Id.* § 1201(b)(2)(B).

⁷⁰ SENATE JUDICIARY COMMITTEE REPORT at 12.

⁷¹ *Id.*

⁷² *Id.*

⁷³ *Id.*

⁷⁴ *Id.* at 29.

⁷⁵ *Id.* at 12.

In drafting the anti-trafficking provisions, Congress recognized the need to avoid prohibiting legitimate multipurpose devices designed for uses other than circumvention. The House Commerce Committee Report (“Commerce Committee Report”) specifically notes that section 1201(a)(2) “is aimed fundamentally at outlawing so-called ‘black boxes’ that are expressly intended to facilitate circumvention of technological protection measures for purposes of gaining access to a work,” rather than “products that are capable of commercially significant noninfringing uses, such as consumer electronics, telecommunications, and computer products.”⁷⁶

3. Permanent Exemptions

Congress established a discrete set of statutory exemptions to the prohibition on circumvention, generally out of recognition of the importance of these activities.⁷⁷ Unlike exemptions adopted through the triennial rulemaking, these exemptions are permanent. In some cases, these provisions also exempt activities from one or both of the prohibitions on trafficking.

a. 1201(d) Exemption for Nonprofit Libraries, Archives, and Educational Institutions

Section 1201(d), referred to in the legislative history as the “shopping privilege,”⁷⁸ establishes an exemption from anticircumvention liability for nonprofit libraries, archives, and educational institutions, allowing them, under specific circumstances, to circumvent technological protection measures to “make a good faith determination of whether to acquire a copy of [a] work for the sole purpose of engaging in conduct permitted under this title.”⁷⁹ Qualifying institutions may not keep a copy of the work “longer than necessary to make [the] good faith determination.”⁸⁰ The work cannot be used for any purpose other than to determine whether it will be acquired,⁸¹ and must not be “reasonably available in another form.”⁸² Finally, these institutions may not

⁷⁶ COMMERCE COMMITTEE REPORT at 38; *see also id.* at 39–40 (same language regarding paragraph (b)(1)); SENATE JUDICIARY COMMITTEE REPORT at 29 (paragraph (a)(2) “is drafted carefully to target ‘black boxes,’ and to ensure that legitimate multipurpose devices can continue to be made and sold”); HOUSE JUDICIARY COMMITTEE REPORT at 18 (similar); HOUSE MANAGER’S REPORT at 9 (similar).

⁷⁷ *See, e.g.*, COMMERCE COMMITTEE REPORT at 41–45; SENATE JUDICIARY COMMITTEE REPORT at 13–16, 31–34.

⁷⁸ 144 CONG. REC. E1207–08 (daily ed. June 23, 1998) (correspondence submitted by Rep. Coble).

⁷⁹ *Id.* § 1201(d).

⁸⁰ *Id.* § 1201(d)(1)(A).

⁸¹ *Id.* § 1201(d)(1)(B).

⁸² *Id.* § 1201(d)(2).

“manufacture, import, offer to the public, provide, or otherwise traffic in” circumvention tools.⁸³ An institution that willfully violates the exemption for purposes of commercial advantage or financial gain is subject to civil remedies for the first offense, and to forfeiture of the exemption for repeated or subsequent offenses.⁸⁴

b. 1201(e) Exemption for Law Enforcement, Intelligence, and Other Government Activities

Section 1201(e) exempts from both the anticircumvention and anti-trafficking provisions “any lawfully authorized investigative, protective, information security, or intelligence activity of an officer, agent, or employee of the United States, a state, or a political subdivision of a state, or of a person acting pursuant to a contract with” one of those entities.⁸⁵ This provision was intended to “permit the continuation of information security activities that protect the country against one of the greatest threats to our national security as well as to our economic security,” namely “cyber attacks against government computers, computer systems, and computer networks.”⁸⁶

c. 1201(f) Exemption for Reverse Engineering

Section 1201(f) exempts certain reverse engineering activities undertaken for the purpose of achieving software interoperability from liability under section 1201(a)(1)(A), (a)(2), and (b). While parts of section 1201(f) are limited to reverse engineering activities of identifying and analyzing parts of a computer program, the Commerce Committee Report notes more broadly that interoperability “is the touchstone of the exceptions contained in section [1201(f)].”⁸⁷ The House and Senate Judiciary Committee reports both suggest that the overall goal of section 1201(f) was to preserve the ability to engage in the activities found to be noninfringing by the Ninth Circuit in the *Sega Enterprises Ltd. v. Accolade, Inc.* decision.⁸⁸

⁸³ *Id.* § 1201(d)(4).

⁸⁴ *Id.* § 1201(d)(3).

⁸⁵ *Id.* § 1201(e).

⁸⁶ H.R. REP. NO. 105-796, at 65–66 (1998) (Conf. Rep.).

⁸⁷ COMMERCE COMMITTEE REPORT at 43.

⁸⁸ See SENATE JUDICIARY COMMITTEE REPORT at 13 (“The objective is to ensure that the effect of current case law interpreting the Copyright Act is not changed by enactment of this legislation for certain acts of identification and analysis done in respect of computer programs. See, *Sega Enterprises Ltd. v. Accolade, Inc.*, 977 F.2d 1510[] (9th Cir. 1992.).”); HOUSE MANAGER’S REPORT at 14 (same); see also COMMERCE COMMITTEE REPORT at 42 (“[T]he goal of this section is to ensure that current law is not changed, and not to encourage or permit infringement.”).

Section 1201(f)(1), which provides an exemption to subsection (a)(1)(A), allows a person to circumvent access controls “for the sole purpose of identifying and analyzing those elements of [a] program that are necessary to achieve interoperability of an independently created computer program with other programs.”⁸⁹ The legislative history notes that “[t]he resulting product must also be a new and original work” that does not infringe the original work.⁹⁰ The sole “objective of the analysis must be to identify and extract such elements as are necessary to achieve interoperability which are not otherwise available to the person.”⁹¹ “Interoperability” means “the ability of computer programs to exchange information, and of such programs mutually to use the information which has been exchanged.”⁹²

Section 1201(f)(2) provides an exemption to the trafficking prohibitions of subsections (a)(2) and (b), so that a person may “develop and employ technological means” to circumvent a TPM for the purpose of enabling the permitted identification and analysis, or, separately, for the purpose of enabling interoperability of an independently created computer program with other programs, provided that “such means are necessary to achieve such interoperability,” and that doing so does not constitute infringement.⁹³

Section 1201(f)(3) allows information acquired pursuant to these provisions, as well as the permitted circumvention tools, to be made available to third parties, so long as the sole purpose is to achieve interoperability of an independently created computer program with other programs and such acts do not constitute infringement or violate other applicable law.⁹⁴ Unlike the above provisions, section 1201(f)(3) does not explicitly specify whether it serves as a circumvention exemption, a trafficking exemption, or both.

d. 1201(g) Exemption for Encryption Research

Section 1201(g) exempts from section 1201(a)(1)(A) and (2)—but not section 1201(b)—certain circumvention activities done for purposes of “encryption research,” *i.e.*, “activities necessary to identify and analyze flaws and vulnerabilities of encryption technologies applied to copyrighted works, if these activities are conducted to advance the state of knowledge in the field of encryption technology or to assist in the development of encryption products.”⁹⁵ Congress adopted section 1201(g) to ensure that

⁸⁹ 17 U.S.C. § 1201(f)(1).

⁹⁰ COMMERCE COMMITTEE REPORT at 42.

⁹¹ *Id.*

⁹² 17 U.S.C. § 1201(f)(4).

⁹³ *Id.* § 1201(f)(2).

⁹⁴ *Id.* § 1201(f)(3).

⁹⁵ *Id.* § 1201(g)(1)(A).

the anticircumvention laws would not have “the undesirable and unintended consequence of chilling legitimate research activities in the area of encryption.”⁹⁶ The statute defines “encryption technology” as “the scrambling and descrambling of information using mathematical formulas or algorithms.”⁹⁷

The exemption to subsection (a)(1)(A) allows circumvention of a TPM “in the course of an act of good faith encryption research,” provided (1) the copy was lawfully obtained, (2) the act is “necessary to conduct” the research, (3) the researcher made a good faith effort to obtain authorization before the circumvention, and (4) the act does not constitute infringement or a violation of other applicable law.⁹⁸ The statute includes a “non-exhaustive list of factors a court shall consider in determining whether a person properly qualifies”⁹⁹ for this exemption, including whether and how the information derived from the encryption research was distributed, whether the researcher has been trained or experienced, or is engaged in a legitimate course of study, in the field of encryption technology, and whether the researcher provided the copyright owner with the results of the research.¹⁰⁰

With respect to subsection (a)(2), section 1201(g)(4) permits a person to develop and employ technological means to circumvent a TPM for the sole purpose of performing the permitted acts of encryption research.¹⁰¹ In addition, that person may provide such means “to another person with whom he or she is working collaboratively” for the purpose of conducting the permitted research, “or for the purpose of having that other person verify his or her acts of good faith encryption research.”¹⁰² The legislative history notes, however, that “generally available encryption testing tools” would not be prohibited in the first place by subsection (a)(2).¹⁰³

⁹⁶ COMMERCE COMMITTEE REPORT at 27.

⁹⁷ 17 U.S.C. § 1201(g)(1)(B).

⁹⁸ *Id.* § 1201(g)(2).

⁹⁹ COMMERCE COMMITTEE REPORT at 44.

¹⁰⁰ 17 U.S.C. § 1201(g)(3). Note that “[t]here is no requirement that legitimate encryption researchers disseminate their findings in order to qualify for” this exemption. H.R. REP. NO. 105-796, at 66 (1998) (Conf. Rep.).

¹⁰¹ 17 U.S.C. § 1201(g)(4)(A).

¹⁰² *Id.* § 1201(g)(4)(B).

¹⁰³ SENATE JUDICIARY COMMITTEE REPORT at 15–16 (providing as examples password-recovery utilities, commercial “key-cracker” products, and network and website management and security tools).

e. 1201(h) Exceptions Regarding Minors

Section 1201(h) permits courts, in applying section 1201(a)(1) and (2) to a “component or part,” to consider whether the component or part is needed to “prevent the access of minors to material on the Internet.”¹⁰⁴ It was added in response to concerns “that 1201(a) might inadvertently make it unlawful for parents to protect their children from pornography and other harmful material available on the Internet, or have unintended legal consequences for manufacturers of products designed solely to enable parents to protect their children in this fashion.”¹⁰⁵

f. 1201(i) Exemption for Protection of Personally Identifying Information

Congress recognized that “[d]igital technology is robust and versatile enough that it can surreptitiously gather consumers’ personal information, and do so through the use of software that is protected, or ‘cloaked,’ by a technological protection measure.”¹⁰⁶ To the extent copyright owners disclosed their “personal data gathering practices,” however, Congress concluded that consumers would feel confident that their personal privacy was protected and therefore not feel the need to disable TPMs.¹⁰⁷ Therefore, Congress developed a targeted exemption allowing consumers to protect their personally identifiable information by exempting from section 1201(a)(1)(A) certain limited acts of circumvention carried out “solely for the purpose of preventing the collection or dissemination of personally identifying information about a natural person who seeks to gain access to the work protected.”¹⁰⁸ This exemption, in section 1201(i), applies only when the copyright owner does not disclose to the user whether or not it is collecting his or her personally identifying information¹⁰⁹ and “where consumers are left without the capability to disable the gathering of personal information.”¹¹⁰ Further, an act of circumvention must have “the sole effect of identifying and disabling the capability” for collecting and distributing personally identifying information.¹¹¹

¹⁰⁴ 17 U.S.C. § 1201(h).

¹⁰⁵ SENATE JUDICIARY COMMITTEE REPORT at 32.

¹⁰⁶ COMMERCE COMMITTEE REPORT at 27.

¹⁰⁷ *Id.* at 27–28.

¹⁰⁸ 17 U.S.C. § 1201(i)(1)(D).

¹⁰⁹ *Id.* § 1201(i)(1)(B), (i)(2).

¹¹⁰ COMMERCE COMMITTEE REPORT at 45; *see also* 17 U.S.C. § 1201(i)(1)(B) (TPM or work must collect or disseminate personally identifying information “without providing . . . the capability to prevent or restrict such collection or dissemination”).

¹¹¹ 17 U.S.C. § 1201(i)(1)(C).

g. 1201(j) Exemption for Security Testing

Section 1201(j) exempts certain acts of “security testing” from section 1201(a)(1)(A) and (a)(2).¹¹² Security testing is defined as “accessing a computer, computer system, or computer network, solely for the purpose of good faith testing, investigating, or correcting, a security flaw or vulnerability, with the authorization of the owner or operator of such computer, computer system, or computer network.”¹¹³

Congress enacted section 1201(j) out of concern that “[s]ection 1201(a) could be construed to inhibit legitimate forms of security testing,”¹¹⁴ and intended this exemption to complement section 1201(g), as “[s]ection 1201(g)’s exclusive focus on encryption-related research does not encompass the entire range of legitimate information security activities.”¹¹⁵ Certain members of Congress recognized that security testing “strengthen[s] the nation’s] ability to keep [its] computer systems, digital networks and systems applications private, protected and secure.”¹¹⁶ The legislative history also states that:

the scope of permissible security testing under the Act should be the same as permissible testing of a simple door lock: a prospective buyer may test the lock at the store with the store’s consent, or may purchase the lock and test it at home in any manner that he or she sees fit—for example, by installing the lock on the front door and seeing if it can be picked. What that person may not do, however, is test the lock once it has been installed on someone else’s door, without the consent of the person whose property is protected by the lock.¹¹⁷

Section 1201(j)(2) provides that it is not a violation of subsection (a)(1)(A) “for a person to engage in an act of security testing, if such act does not constitute infringement under this title or a violation of applicable law other than this section, including section 1030 of title 18 and those provisions of title 18 amended by the Computer Fraud and Abuse Act

¹¹² *Id.* § 1201(j).

¹¹³ *Id.* § 1201(j)(1).

¹¹⁴ H.R. REP. NO. 105-796, at 67 (1998) (Conf. Rep.).

¹¹⁵ *Id.* at 66 (noting “an individual who is legitimately testing a security technology may be doing so not to advance the state of encryption research or to develop encryption products, but rather to ascertain the effectiveness of that particular security technology.”).

¹¹⁶ 144 Cong. Rec. E1640-02, 2 (daily ed. Aug. 4, 1998) (statement of Rep. Tauzin); *see also* 144 Cong. Rec. H10048-01, 59–60 (daily ed. Oct. 8, 1998) (statement of Rep. Coble) (discussing rationale for security testing exemption).

¹¹⁷ H.R. REP. NO. 105-706, at 67 (1998) (Conf. Rep.).

of 1986.”¹¹⁸ This exemption provides a list of non-exclusive factors to guide the eligibility analysis, related to the use of the results of the security testing, namely:¹¹⁹

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

(B) whether the information derived from the security testing was used or maintained in a manner that does not facilitate infringement under this title or a violation of applicable law other than this section, including a violation of privacy or breach of security.¹²⁰

Section 1201(j)'s trafficking exemption provides that, notwithstanding subsection (a)(2), a person may “develop, produce, distribute or employ technological means” to circumvent TPMs for the sole purpose of performing the permitted acts of security testing, “provided such technological means do not otherwise violate section (a)(2).”¹²¹

4. Certain Analog Devices and Technological Measures

Finally, section 1201(k) “deal[s] with a very specific situation” that is today somewhat moot, requiring that analog video cassette recorders prevalent in 1998 (*e.g.*, VHS, Beta, 8mm) “conform to the two forms of copy control technology that are in wide use in the market today” to ensure content protection while accommodating existing “recording capabilities of ordinary consumer analog video cassette recorders.”¹²² The legislative history emphasizes that distribution of circumvention tools for these TPMs would be in violation of section 1201(b)(2).¹²³

5. Triennial Rulemaking

In addition to the permanent exemptions, section 1201 includes a mechanism to provide limited temporary exemptions to the prohibition on circumvention. These exemptions are adopted by the Librarian of Congress upon the recommendation of the Register of

¹¹⁸ 17 U.S.C. § 1201(j)(2).

¹¹⁹ H.R. REP. NO. 105-706, at 67 (1998) (Conf. Rep.).

¹²⁰ 17 U.S.C. § 1201(j)(3).

¹²¹ *Id.* § 1201(j)(4).

¹²² H.R. REP. NO. 105-796, at 67–68, 70 (1998) (Conf. Rep.) (specifically referencing the automatic gain control and the colorstripe copy control technologies; suggesting these TPMs could be used to prevent making copies of pay-per-view or video-on-demand programming).

¹²³ *Id.* at 67–68.

Copyrights pursuant to a public rulemaking proceeding conducted every three years by the Register, in consultation with the National Telecommunications and Information Administration of the Department of Commerce (“NTIA”).¹²⁴ By statute, this triennial rulemaking process only addresses section 1201(a)(1)(A)’s prohibition on circumvention; the statute does not grant the authority to adopt exemptions to the anti-trafficking provisions of sections 1201(a)(2) and 1201(b).¹²⁵ Specifically, the statute provides:

(B) The prohibition contained in subparagraph (A) shall not apply to persons who are users of a copyrighted work which is in a particular class of works, if such persons are, or are likely to be in the succeeding 3-year period, adversely affected by virtue of such prohibition in their ability to make noninfringing uses of that particular class of works under this title, as determined under subparagraph (C).

(C) During the 2-year period described in subparagraph (A), and during each succeeding 3-year period, the Librarian of Congress, upon the recommendation of the Register of Copyrights, who shall consult with the Assistant Secretary for Communications and Information of the Department of Commerce and report and comment on his or her views in making such recommendation, shall make the determination in a rulemaking proceeding for purposes of subparagraph (B) of whether persons who are users of a copyrighted work are, or are likely to be in the succeeding 3-year period, adversely affected by the prohibition under subparagraph (A) in their ability to make noninfringing uses under this title of a particular class of copyrighted works. In conducting such rulemaking, the Librarian shall examine—

- (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;

¹²⁴ See 17 U.S.C. § 1201(a)(1)(C). The Assistant Secretary for Communications and Information of the Department of Commerce referenced in the statute is the head of NTIA.

¹²⁵ *Id.* § 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.”).

- (iv) the effect of circumvention of technological measures on the market for or value of copyrighted works; and
- (v) such other factors as the Librarian considers appropriate.¹²⁶

a. Legislative History

As originally introduced, section 1201 did not provide any avenue to adopt additional exemptions to the prohibition on circumvention.¹²⁷ The House Commerce Committee was concerned, however, that the lack of an ability to waive the prohibition “would undermine Congress’ longstanding commitment to the principle of fair use,” recognizing that “[t]hroughout our history, the ability of individual members of the public to access and to use copyrighted materials has been a vital factor in the advancement of America’s economic dynamism, social development, and educational achievement.”¹²⁸ Although the Commerce Committee acknowledged that the “growth and development of the Internet has already had a significant positive impact on the access of American students, researchers, consumers, and the public at large to informational resources,” the Committee, at the same time, was “concerned that marketplace realities may someday dictate a different outcome, resulting in less access, rather than more, to copyrighted materials that are important to education, scholarship, and other socially vital endeavors.”¹²⁹

The Commerce Committee determined that “a ‘fail-safe’ mechanism is required . . . [to] 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.”¹³⁰ It therefore created “a rulemaking proceeding in which the issue of whether enforcement of the [prohibition on circumvention] should be temporarily waived with regard to particular categories of works can be fully considered and fairly decided on the basis of real marketplace developments that may diminish otherwise lawful access to works.”¹³¹

¹²⁶ *Id.* § 1201(a)(1)(B)–(C); *see also id.* § 1201(a)(1)(D) (requiring Librarian to publish exempted classes of works).

¹²⁷ *See* WIPO Copyright Treaties Implementation Act, H.R. 2281, 105th Cong. (as introduced, July 29, 1997); WIPO Copyright and Performances and Phonograms Treaty Implementation Act of 1997, S. 1121, 105th Cong. (as introduced, July 31, 1997).

¹²⁸ COMMERCE COMMITTEE REPORT at 35–36.

¹²⁹ *Id.* at 35–36.

¹³⁰ *Id.*

¹³¹ *Id.*

As the Commerce Committee described it, the rulemaking proceeding's "primary goal" is to "assess whether the prevalence of . . . technological protections, with respect to particular categories of copyrighted materials, is diminishing the ability of individuals to use these works in ways that are otherwise lawful."¹³² The addition of 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."¹³³ Individual statements in the legislative history also make clear that the rulemaking "represents an agreed upon compromise by the content community and the fair use community."¹³⁴

In the version of the DMCA reported by the Commerce Committee, the rulemaking was to be conducted "on the record" every two years by the Secretary of Commerce, in consultation with the Assistant Secretary of Commerce for Communications and Information, the Commissioner of Patents and Trademarks, and the Register of Copyrights.¹³⁵ These provisions were subsequently modified by a House Manager's Amendment, which was the version contained in the bill passed by the House.¹³⁶ The Manager's Amendment, among other things, changed the biennial proceeding to a triennial one.¹³⁷

In conference between the House and Senate, the DMCA assumed its enacted form, and responsibility for the rulemaking shifted to the Librarian, based upon "the recommendation of the Register of Copyrights, who shall consult with the Assistant Secretary for Communications and Information of the Department of Commerce."¹³⁸ Although section 1201(a)(1)(C) calls only for the Register's "recommendation,"

¹³² *Id.* at 37.

¹³³ *Id.* at 26.

¹³⁴ 144 CONG. REC. S9935, 9935 (daily ed. Sept. 3, 1998) (statement of Sen. Ashcroft); *see also* 144 CONG. REC. H7074, 7099 (daily ed. Aug. 4, 1998) (statement of Rep. Dingell) ("This key compromise between content and 'fair use' communities is reflected in the bill on the floor today.").

¹³⁵ Digital Millennium Copyright Act of 1998, H.R. 2281, 105th Cong., tit. I, § 102(a) (as reported by H. Comm. on Commerce, July 22, 1998).

¹³⁶ Digital Millennium Copyright Act, H.R. 2281, 105th Cong. (as passed by H.R., Aug. 4, 1998); HOUSE MANAGER'S REPORT at 1.

¹³⁷ Digital Millennium Copyright Act, H.R. 2281, 105th Cong., tit. I, § 103(a) (as passed by H.R., Aug. 4, 1998) (making other adjustments to the rulemaking process that were ultimately reflected in the statute).

¹³⁸ Pub. L. No. 105-304, tit. I, § 103, 112 Stat. 2860, 2863-72 (1998) (codified as amended at 17 U.S.C. § 1201).

legislative history makes clear that, “as is typical with other rulemaking under title 17, and in recognition of the expertise of the Copyright Office,” the Office is tasked with conducting the rulemaking.¹³⁹ After Congress passed the bill, a technical correction was made to strike the phrase “on the record” to clarify Congress’ intent that the rulemaking be conducted as an informal rulemaking proceeding pursuant to the Administrative Procedure Act (“APA”).¹⁴⁰

b. Rulemaking Structure

The statute does not mandate specific processes that the Register must follow, but the legislative history states that Congress’ “intent is to permit interested persons an opportunity to participate through the submission of written statements, oral presentations at one or more of the public hearings, and the submission of written responses to the submissions or presentations of others.”¹⁴¹ Beyond this, the Copyright Office has implemented procedures to help ensure open, fair, and efficient proceedings. While each rulemaking has included written comments from interested parties in response to a notice of inquiry, followed by public hearings, as interest has grown over time, the Office has adjusted its rules regarding public participation in hearings and the timely submission of comments to improve the rulemaking process.

Most relevantly, in the sixth proceeding, the Office adjusted its procedures by inviting interested parties to submit petitions setting forth only the essential elements of proposed exemptions, rather than all pertinent factual and legal information in support of an exemption.¹⁴² To ensure a clear and definite administrative record, the Office grouped the proposed exemptions into proposed classes and required commenters to provide separate submissions for each proposed class. The Office divided these separate comment submissions into three rounds, where the first and third rounds were limited

¹³⁹ H.R. REP. NO. 105-796, at 64 (1998) (Conf. Rep.) (“It is the intention of the conferees that . . . the Register of Copyrights will conduct the rulemaking, including providing notice of the rulemaking, seeking comments from the public, consulting with the Assistant Secretary for Communications and Information of the Department of Commerce and any other agencies that are deemed appropriate, and recommending final regulations in the report to the Librarian.”); *see also* H.R. REP. NO. 106-464, at 149 (1999) (Conf. Rep.) (“[T]he Copyright Office shall conduct the rulemaking under section 1201(a)(1)(C) . . .”).

¹⁴⁰ Intellectual Property and Communications Omnibus Reform Act of 1999, Pub. L. No. 106-113, app. I, tit. V, § 5006, 113 Stat. 1501, 1501A–594 (1999); H.R. REP. NO. 106-464, at 149 (1999) (Conf. Rep.) (“[T]he Copyright Office shall conduct the rulemaking under section 1201(a)(1)(C) as an informal rulemaking proceeding pursuant to section 553 of Title 5.”).

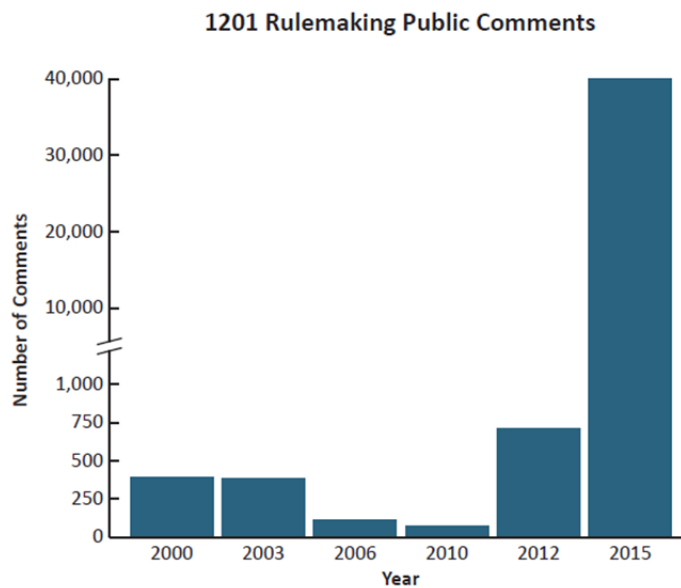
¹⁴¹ H.R. REP. NO. 106-464, at 149 (1999) (Conf. Rep.).

¹⁴² 2015 Recommendation at 19.

to those supporting an exemption (or neutral commenters sharing pertinent information about a specific proposal) and the second round to those opposing an exemption.¹⁴³

c. Public Interest in Rulemaking

Since the first rulemaking commenced in 1999, a wide variety of stakeholders have expressed continual interest in the triennial proceedings. While the first rulemaking garnered 392 comments, the number has increased exponentially in recent years to nearly 40,000 comments in the last rulemaking.



As public interest has grown, so too have the number of granted exemptions. In the first rulemaking, the Office recommended only two exemptions, for lists of websites blocked by filtering software applications, and literary works (including computer programs) protected by TPMs that fail to permit access due to malfunction, damage, or obsolescence.¹⁴⁴ In contrast, the most recent rulemaking yielded a set of exemptions covering 22 types of uses, ranging from use of motion pictures for educational, documentary, and noncommercial purposes and jailbreaking and unlocking smartphones, tablets, and other devices, to accessing computer programs controlling motorized land vehicles for purposes of diagnosis, repair, and modification and

¹⁴³ *Id.* at 21–22.

¹⁴⁴ Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, 65 Fed. Reg. 64,556, 64,574 (Oct. 27, 2000) (“2000 Recommendation and Final Rule”).

accessing computer programs operating medical devices for purposes of security research.¹⁴⁵

d. Evidentiary Standards

In conducting the triennial rulemaking, the Copyright Office has applied certain evidentiary standards that emanate from the statute itself, as well as the legislative history.

Classes of Works. Exemptions adopted through the triennial rulemaking only apply to “users of a copyrighted work which is in a particular class of works.”¹⁴⁶ As a starting point, each class of works must be a subset of one of the “broad categories of works . . . identified in section 102 [of title 17].”¹⁴⁷ The Office then further refines classes by other criteria, including TPMs used, distribution platforms, and, in particular, types of uses or users.¹⁴⁸ For example, in the most recent rulemaking, one proposed class was “software in 3D printers.”¹⁴⁹

Burden of Proof. The Office consistently has placed the burden of proof on the proponent of an exemption to make the case for why it should be granted.¹⁵⁰ This burden must be satisfied by a preponderance of the evidence (*i.e.*, that the harm alleged by an exemption proponent is more likely than not to be true).¹⁵¹

No Presumption of Renewal. The Commerce Committee Report states that “the assessment of adverse impacts on particular categories of works is to be determined *de novo*.”¹⁵² The Office has interpreted this statement to mean that “the fact that an exemption has been previously adopted creates no presumption that re adoption is

¹⁴⁵ 2015 Recommendation at 57.

¹⁴⁶ 17 U.S.C. § 1201(a)(1)(B); *see also id.* § 1201(a)(1)(C) (adverse effects inquiry should consider a user’s ability to make noninfringing uses of “a particular class of copyrighted works”).

¹⁴⁷ COMMERCE COMMITTEE REPORT at 38. Section 102(a) states that “[w]orks of authorship include the following categories: (1) literary works; (2) musical works, including any accompanying words; (3) dramatic works, including any accompanying music; (4) pantomimes and choreographic works; (5) pictorial, graphic, and sculptural works; (6) motion pictures and other audiovisual works; (7) sound recordings; and (8) architectural works.” 17 U.S.C. § 102(a).

¹⁴⁸ *See, e.g.*, 2015 Recommendation at 17–18.

¹⁴⁹ Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, 79 Fed. Reg. 73,856, 73,871 (Dec. 12, 2014) (“2015 NPRM”).

¹⁵⁰ *See, e.g.*, 2015 Recommendation at 13–14 & n.48; 2000 Recommendation and Final Rule at 64,558 (quoting COMMERCE COMMITTEE REPORT at 37).

¹⁵¹ *See, e.g.*, 2015 Recommendation at 13–14.

¹⁵² COMMERCE COMMITTEE REPORT at 37.

appropriate,” explaining that “a proponent may not simply rely on the fact that the Register has recommended an exemption in the past, but must instead produce relevant evidence in each rulemaking to justify the continuation of the exemption.”¹⁵³ On the other hand, the Office has noted that proponents “seeking the readoption of an existing exemption” may satisfy this burden “by demonstrating that the conditions that led to the adoption of the prior exemption continue to exist today.”¹⁵⁴ Additionally, the Office has stated that “where a legal analysis has previously been developed and no new law or arguments have been presented, the earlier legal determination can serve to support a renewed exemption, provided that the evidence in the present record supports it.”¹⁵⁵

Adverse Effects on Noninfringing Uses. To adopt an exemption, section 1201(a)(1)(C) requires a determination “[that] persons who are users of a copyrighted work are, or are likely to be in the succeeding 3-year period, adversely affected by the prohibition [on circumvention] in their ability to make noninfringing uses under [title 17] of a particular class of copyrighted works.”¹⁵⁶ The Office has viewed this as requiring exemption proponents to demonstrate two separate elements: “(1) that uses affected by the prohibition on circumvention are or are likely to be noninfringing; and (2) that as a result of a technological measure controlling access to a copyrighted work, the prohibition is causing, or in the next three years is likely to cause, an adverse impact on

¹⁵³ 2015 Recommendation at 14; *see also* Register of Copyrights, Section 1201 Rulemaking: Fifth Triennial Proceeding to Determine Exemptions to the Prohibition on Circumvention, Recommendation of the Register of Copyrights 2, 6 (2012) (“2012 Recommendation”); Recommendation of the Register of Copyrights in RM 2008-8, Rulemaking on Exemptions from Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, 18 (2010) (“2010 Recommendation”); Recommendation of the Register of Copyrights in RM 2005-11, Rulemaking on Exemptions from Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies 8–9 (2006) (“2006 Recommendation”); Recommendation of the Register of Copyrights in RM 2002-4, Rulemaking on Exemptions from Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies 11 (Oct. 27, 2003) (“2003 Recommendation”).

¹⁵⁴ 2015 Recommendation at 14 (“This could include, for instance, a showing that the cessation of an exemption will adversely impact users’ ability to make noninfringing uses of the class of works covered by the existing exemption.”).

¹⁵⁵ *Id.* at 188 (internal quotation marks omitted); *see also* 2010 Recommendation at 115 (“[T]he Register’s prior determinations have some precedential value and, unless persuaded otherwise, the Register is likely to reach a similar conclusion *when similar facts have been presented.*”).

¹⁵⁶ 17 U.S.C. § 1201(a)(1)(C); *see also id.* § 1201(a)(1)(B) (“The prohibition [on circumvention] shall not apply to persons who are users of a copyrighted work which is in a particular class of works, if such persons are, or are likely to be in the succeeding 3-year period, adversely affected by virtue of such prohibition in their ability to make noninfringing uses of that particular class of works under [title 17], as determined under subparagraph (C).”).

those uses.”¹⁵⁷ In determining whether a use is likely noninfringing, the Office has stated that “[t]he statutory language requires that the use *is* or *is likely* to be noninfringing, not merely that the use might plausibly be considered noninfringing.”¹⁵⁸ The Office “will look to the Copyright Act and relevant judicial precedents when analyzing whether a proposed use is likely to be noninfringing,” but the lack of any controlling precedent directly on point does not, in itself, require a finding that the use is not noninfringing.¹⁵⁹

The legislative history provides significant detail concerning how to determine whether a sufficient showing of adverse effects has been made.¹⁶⁰ Throughout the six rulemakings, the Office has equated the House Manager’s Report’s characterization of the necessary showing being one of “substantial adverse impact” or “substantial diminution of [the availability of works in the marketplace for noninfringing uses],” to the standard articulated by the Commerce Committee, that “the rulemaking proceeding should focus on distinct verifiable and measurable impacts” and “not . . . *de minimis* impacts.”¹⁶¹ The Office has explained that “[s]tating that there is a requirement of ‘substantial’ adverse impact is another way of saying that a showing of more than ‘*de minimis* impacts’ is required.”¹⁶² Likely adverse impacts must be more than speculative or theoretical harms, and the Office has noted the House Manager’s Report statement that “mere inconveniences, or individual cases . . . do not rise to the level of a substantial adverse impact.”¹⁶³ The Office has also noted the report’s statement that “the determination should be based upon anticipated, rather than actual, adverse impacts, only in extraordinary circumstances in which the evidence of likelihood of future adverse impact during that time period is highly specific, strong, and persuasive.”¹⁶⁴ Thus, the Office evaluates whether there are adverse effects on noninfringing uses based

¹⁵⁷ 2015 Recommendation at 14–15; 2012 Recommendation at 7.

¹⁵⁸ 2015 Recommendation at 15 (citing 17 U.S.C. § 1201(a)(1)(C)); *see also* 2012 Recommendation at 7; 2010 Recommendation at 11–12.

¹⁵⁹ 2015 Recommendation at 15; 2012 Recommendation at 7; 2010 Recommendation at 12.

¹⁶⁰ *See* COMMERCE COMMITTEE REPORT at 36–38; HOUSE MANAGER’S REPORT at 6–7.

¹⁶¹ COMMERCE COMMITTEE REPORT at 37; HOUSE MANAGER’S REPORT at 6; *see also* 2012 Recommendation at 7; 2010 Recommendation at 10; 2006 Recommendation at 8; 2003 Recommendation at 16–18; 2000 Recommendation and Final Rule at 64,558 n.4.

¹⁶² 2003 Recommendation at 16–17; *see also* 2012 Recommendation at 7; 2010 Recommendation at 10; 2006 Recommendation at 8.

¹⁶³ HOUSE MANAGER’S REPORT at 6; *see also* 2012 Recommendation at 8 & n.37; 2003 Recommendation at 17.

¹⁶⁴ HOUSE MANAGER’S REPORT at 6.

“on the totality of the evidence, including market alternatives to circumvention that enable noninfringing uses.”¹⁶⁵

Statutory Factors. The statute sets forth a list of factors that must be examined during the rulemaking,¹⁶⁶ and the Office has characterized these factors as delineating the “nature of the inquiry for the rulemaking process as a whole”¹⁶⁷ and “reflect[ing] some of the significant considerations that must be balanced” in reaching a determination to grant or deny an exemption.¹⁶⁸ As explained in the first proceeding, “[u]ltimately, the task [of the] rulemaking proceeding is to balance the benefits of technological measures that control access to copyrighted works against the harm caused to users of those works, and to determine, with respect to any particular class of works, whether an exemption is warranted because users of that class of works have suffered significant harm in their ability to engage in noninfringing uses.”¹⁶⁹

While the first four factors are more circumscribed and echo other provisions in the Copyright Act,¹⁷⁰ the fifth factor has been described as a “‘catchall’ provision.”¹⁷¹ By way of example, the Register, NTIA, and the Librarian have previously considered such additional issues as interoperability, consumer choice, competition, and cybersecurity under this factor.¹⁷² In the sixth rulemaking, in connection with petitions to exempt new circumvention activities relating to vehicles, security research, and medical and other consumer devices, participants submitted comments raising a wide variety of significant safety, security, environmental, and health concerns under the fifth factor.¹⁷³ While noting “this rulemaking is principally focused on the copyright concerns implicated by any proposed exemption,” due to the “serious policy concerns” raised in discussion of these classes, the Register recommended, and the Librarian adopted, a delayed

¹⁶⁵ 2010 Recommendation at 13.

¹⁶⁶ 17 U.S.C. § 1201(a)(1)(C).

¹⁶⁷ 2006 Recommendation at 5; 2003 Recommendation at 6.

¹⁶⁸ 2000 Recommendation and Final Rule at 64,563; *see also* 2012 Recommendation at 9; 2010 Recommendation at 7; 2003 Recommendation at 6.

¹⁶⁹ 2000 Recommendation and Final Rule at 64,563.

¹⁷⁰ *See, e.g.*, 17 U.S.C. § 108 (limitation on exclusive rights for uses by libraries or archives); *id.* § 107 (providing that the fair use of a work for “purposes such as criticism, comment, news reporting, teaching (including multiple copies for classroom use), scholarship, or research, is not an infringement of copyright” and directing consideration of “the effect of the use upon the potential market for or value of the copyrighted work”).

¹⁷¹ 2015 Recommendation at 311.

¹⁷² *See, e.g., id.* at 168; 2010 Recommendation at 205; 2006 Recommendation at 52.

¹⁷³ *See* 2015 Recommendation at 241–44, 311–15.

implementation of twelve months for these exemptions so that other regulatory agencies with expertise in these relevant areas could take action if necessary.¹⁷⁴

C. Case Law Developments

Several aspects of section 1201 have been the subject of litigation over the past two decades. Many of these cases have addressed the meaning and scope of the protections for access controls under section 1201(a), while others have considered the anti-trafficking provisions, permanent exemptions, and constitutional issues.

Although the United States has consistently interpreted section 1201 as creating a cause of action separate and independent from copyright infringement, courts construing the statute to date have divided over its relationship to the traditional rights of copyright owners. There currently is a circuit split as to whether a violation of the access-control provisions under section 1201(a) requires a “nexus” to infringement—*i.e.*, that the circumvention be done for the purpose of, or otherwise relate to, infringing an exclusive right under section 106 of the Copyright Act. This issue has particular significance in the context of copyrighted computer programs embedded in everyday consumer products.

In 2004, the Federal Circuit held in *Chamberlain Group, Inc. v. Skylink Technologies, Inc.* that there must be a “reasonable relationship” between the access gained by the circumvention and the protections conferred by section 106.¹⁷⁵ Chamberlain’s garage door openers contained copyrighted software controlling operation of the motor. The software included a “rolling code,” which prevented the system from activating unless it received a signal from an authorized transmitter.¹⁷⁶ Chamberlain alleged that Skylink’s manufacture and sale of “universal transmitters,” which circumvented the rolling code and accessed the copyrighted software, violated the anti-trafficking provisions of section 1201(a)(2).¹⁷⁷ The court, however, rejected that claim, holding that section 1201 did not create a new property right, but rather, “introduce[d] new grounds for liability in the context of the unauthorized access of copyrighted material.”¹⁷⁸ The court further stated that “circumvention is *not* a new form of infringement but rather a new violation prohibiting actions or products that facilitate infringement.”¹⁷⁹ The court also expressed

¹⁷⁴ *See id.* at 248, 317–18 (“The Register also recommends a delay of twelve months before the exemption goes into effect to allow other agencies with expertise in vehicle safety, environmental issues, and other relevant areas an opportunity to consider and react to the new rule.”).

¹⁷⁵ 381 F.3d 1178, 1202 (Fed. Cir. 2004).

¹⁷⁶ *Id.* at 1183.

¹⁷⁷ *Id.* at 1186–87.

¹⁷⁸ *Id.* at 1192, 1194.

¹⁷⁹ *Id.* at 1197.

policy concerns, including the view that without an infringement nexus requirement, section 1201(a) would result in anticompetitive conduct unrelated to copyright concerns.¹⁸⁰ The court ultimately held that the Copyright Act granted consumers “the right to use the copy of Chamberlain’s embedded software that they purchased” and, therefore, in the absence of copyright infringement or facilitating copyright infringement, the defendant could not be liable for a section 1201(a)(2) trafficking violation.¹⁸¹

In 2010, the Fifth Circuit in *MGE UPS Systems, Inc. v. GE Consumer & Industrial, Inc.*, relied on *Chamberlain* to conclude that “[t]he DMCA prohibits only forms of access that would violate or impinge on the protections that the Copyright Act otherwise affords copyright owners.”¹⁸² The United States, however, urged rehearing on the ground that that construction was “inconsistent with the text, structure, and legislative history of the DMCA.”¹⁸³ Such a reading, the United States argued, “threatens to frustrate Congress’s purpose in section 1201(a)(1), which was to provide a federal prohibition against bypassing passwords, encryption, and other technologies that regulate access to a copyrighted work in circumstances in which the copyright owner would *not* otherwise have a remedy under the Copyright Act.”¹⁸⁴ The court subsequently withdrew its opinion and substituted an opinion omitting the challenged portion of the original.¹⁸⁵

Later that year, the Ninth Circuit expressly declined to follow *Chamberlain* and instead rejected a nexus requirement as “contrary to the plain language of the statute.”¹⁸⁶ In *MDY Industries, LLC v. Blizzard Entertainment, Inc.*, the court held MDY liable under section 1201(a)(2) for trafficking in technology in the form of a self-playing bot, which was designed to circumvent a technological control on a video game sold by Blizzard.¹⁸⁷ In rejecting the reasoning of *Chamberlain*, the Ninth Circuit looked to both the statutory text and its legislative history. Among other textual considerations, the court noted that section 1201(a) refers to technological measures protecting access to “a work protected under this title,” while section 1201(b) refers to measures protecting “a right of a

¹⁸⁰ *Id.* at 1200–01.

¹⁸¹ *Id.* at 1203–04.

¹⁸² 612 F.3d 760, 765 (5th Cir. 2010) (citing *Chamberlain*, 381 F.3d at 1202).

¹⁸³ Brief for the United States as Amicus Curiae Supporting Rehearing at 3, *MGE UPS Sys., Inc. v. GE Consumer and Indus., Inc.*, 622 F.3d 361 (5th Cir. 2010) (No. 08-10521).

¹⁸⁴ *Id.*

¹⁸⁵ *MGE UPS Sys., Inc. v. GE Consumer and Indus., Inc.*, 622 F.3d 361, 363 (5th Cir. 2010).

¹⁸⁶ *MDY Indus., LLC v. Blizzard Entm’t, Inc.*, 629 F.3d 928, 950 (9th Cir. 2010).

¹⁸⁷ *Id.* at 954.

copyright owner under this title.”¹⁸⁸ The court read this distinction to indicate that Congress intended section 1201(a) to “extend[] a new form of protection, i.e., the right to prevent circumvention of access controls, broadly to . . . copyrighted works.”¹⁸⁹ Section 1201(b), meanwhile, was intended “to reinforce copyright owners’ traditional exclusive rights under § 106 by granting them an additional cause of action against those who traffic in circumventing devices that facilitate infringement.”¹⁹⁰

With respect to legislative history, the court highlighted the Senate Judiciary Committee’s statement that it would violate section 1201(a) to bypass a password to access a copyrighted work—an act that the court said “would not infringe on any of the copyright owner’s exclusive rights under § 106.”¹⁹¹ The court acknowledged the policy concerns that the *Chamberlain* court discussed, but found those concerns to be overstated and that, in any event, they could not trump the statute’s plain language and structure.¹⁹²

The Sixth Circuit also has considered section 1201(a), but resolved the case before it on a separate question, holding that a TPM on software controlling printer functionality was not an access control as contemplated by section 1201.¹⁹³ In *Lexmark International, Inc. v. Static Control Components, Inc.*, Lexmark brought section 1201(a)(2) claims against the manufacturer of a microchip used to make third-party toner cartridges compatible with Lexmark printers. The microchip accomplished this by satisfying an authentication sequence used to prevent the printer’s software from operating with non-authorized cartridges.¹⁹⁴ The court rejected Lexmark’s claims, holding that because a purchaser of the printer could read the relevant code directly from the printer memory without circumventing the authentication sequence, there was no effective technological measure controlling access to the program.¹⁹⁵ The court emphasized that its decision did not turn on “the *degree* to which a measure controls access to a work,” noting that an access control need not amount to an “impervious shield” to be “effective[]” under the statute.¹⁹⁶ Instead, its decision was based “on the textual requirement that the

¹⁸⁸ *Id.* at 944–45.

¹⁸⁹ *Id.* at 945.

¹⁹⁰ *Id.*

¹⁹¹ *Id.* at 947 (citing SENATE JUDICIARY COMMITTEE REPORT at 12).

¹⁹² *MDY*, 629 F.3d at 950–51.

¹⁹³ *Lexmark Int’l, Inc. v. Static Control Components, Inc.*, 387 F.3d 522, 546–47, 549 (6th Cir. 2004).

¹⁹⁴ *Id.* at 530–31.

¹⁹⁵ *Id.* at 547 (“Just as one would not say that a lock on the back door of a house ‘controls access’ to a house whose front door does not contain a lock . . . it does not make sense to say that this provision of the DMCA applies to otherwise-readily accessible copyrighted works.”).

¹⁹⁶ *Id.* at 549.

challenged circumvention device must indeed circumvent *something*, which did not happen with the Printer Engine Program.”¹⁹⁷

Turning to other enforcement efforts, in *Universal City Studios v. Reimerdes*, film studios brought suit to enjoin websites from posting or linking to a computer program, DeCSS, that circumvented an encryption system, CSS, employed to prohibit access to motion pictures contained on DVDs.¹⁹⁸ The district court examined a number of issues, including whether CSS effectively controlled access to copyrighted works,¹⁹⁹ whether DeCSS was designed primarily to circumvent CSS,²⁰⁰ whether linking could constitute trafficking,²⁰¹ whether any statutory exemptions or the fair use doctrine applied,²⁰² and whether section 1201, as applied to posting and linking to DeCSS, was in violation of the First Amendment.²⁰³ In the end, the court upheld the statute and found that the defendants’ activities violated the anti-trafficking provisions of section 1201.²⁰⁴ On appeal, the Second Circuit, focusing on the constitutional challenges, affirmed.²⁰⁵ Notably, in disposing of the defendants’ argument that section 1201 effectively eliminated fair use, the court, among other points, stated that “[f]air use has never been held to be a guarantee of access to copyrighted material in order to copy it by the fair user’s preferred technique or in the format of the original.”²⁰⁶

Additionally, after the Office commenced this study, past rulemaking participants including the Electronic Frontier Foundation (“EFF”) filed a lawsuit challenging the constitutionality of section 1201(a) and (b) on First Amendment grounds and under the

¹⁹⁷ *Id.* In a separate concurrence, Judge Merritt advocated a reading similar to that adopted in *Chamberlain*. Citing section 1201(a)(2)’s reference to circumvention technology “primarily designed or produced for the purpose of circumventing,” he argued that the statute was intended to reach only “those who circumvented protective measures ‘for the purpose’ of pirating works protected by the copyright statute” and that “[u]nless a plaintiff can show that a defendant circumvented protective measures for such a purpose, its claim should not be allowed to go forward.” *Id.* at 551–52 (Merritt, J., concurring) (citing 17 U.S.C. § 1201(a)(2)).

¹⁹⁸ *Universal City Studios, Inc. v. Reimerdes*, 111 F. Supp. 2d 294, 303 (S.D.N.Y. 2000), *judgment entered*, 111 F. Supp. 2d 346 (S.D.N.Y. 2000), *aff’d sub nom. Universal City Studios, Inc. v. Corley*, 273 F.3d 429 (2d Cir. 2001).

¹⁹⁹ *Reimerdes*, 111 F. Supp. 2d at 317–18.

²⁰⁰ *Id.* at 318–19.

²⁰¹ *Id.* at 324–25.

²⁰² *Id.* at 319–24.

²⁰³ *Id.* at 325–41.

²⁰⁴ *Id.* at 317–25, 346.

²⁰⁵ *Corley*, 273 F.3d at 434–35.

²⁰⁶ *Id.* at 459.

APA.²⁰⁷ That lawsuit remains pending as the court considers a motion to dismiss the complaint filed by the Department of Justice.

D. Unlocking Consumer Choice and Wireless Competition Act

In addition to case law, there also has been a recent legislative change to section 1201. In 2014, in response to public calls for a broader exemption to allow the circumvention of technological measures controlling access to computer programs that allow wireless telephone handsets to connect to wireless communication networks (“cellphone unlocking”),²⁰⁸ Congress passed the Unlocking Consumer Choice and Wireless Competition Act (“Unlocking Act”).²⁰⁹ The Unlocking Act reinstated the cellphone unlocking exemption adopted by the Librarian in 2010,²¹⁰ replacing the narrower version adopted in 2012,²¹¹ and directed the Librarian to consider in the 2015 rulemaking whether to “extend” the exemption “to include any other category of wireless devices in addition to wireless telephone handsets.”²¹²

The Unlocking Act also permanently established that circumvention under any exemption to permit a wireless telephone handset or other wireless device to connect to a different telecommunications network may be initiated by the owner of the handset or device, “by another person at the direction of the owner, or by a provider of a

²⁰⁷ See Compl. for Declaratory and Injunctive Relief, *Green v. Lynch*, No. 16-cv-1492 (D.D.C. July 21, 2016), ECF No. 1.

²⁰⁸ See Ezra Mechaber, *Here’s How Cell Phone Unlocking Became Legal*, THE WHITE HOUSE: PRESIDENT BARACK OBAMA (Aug. 15, 2014), <https://obamawhitehouse.archives.gov/blog/2014/08/15/heres-how-cell-phone-unlocking-became-legal>.

²⁰⁹ Pub. L. No. 113-144, 128 Stat. 1751 (2014). Subsequently, the Librarian adopted regulatory amendments to reflect the new legislation. Exemption to Prohibition on Circumvention of Copyright Protection Systems for Wireless Telephone Handsets, 79 Fed. Reg. 50,552 (Aug. 25, 2014).

²¹⁰ See Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, 75 Fed. Reg. 43,825, 43,828–32 (July 27, 2010) (“2010 Final Rule”).

²¹¹ See Unlocking Act § 2(a), 128 Stat. at 1751. Based on the insufficient record in the 2012 rulemaking proceeding, the Librarian permitted the unlocking of older, or “legacy” phones, but did not extend the exemption with respect to new phones acquired 90 days after the rule went into effect. Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, 77 Fed. Reg. 65,260, 65,264–66 (Oct. 26, 2012) (“2012 Final Rule”).

²¹² Unlocking Act § 2(b), 128 Stat. at 1751. On the Register’s recommendation, the Librarian granted additional exemptions for tablets and other types of wireless devices in the 2015 proceeding. See Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, 80 Fed. Reg. 65,944, 65,952, 65,962–63 (Oct. 28, 2015) (“2015 Final Rule”).

commercial mobile radio service or a commercial mobile data service at the direction of such owner or other person,” so long as the purpose is to enable the owner or a family member to connect to a wireless network in an authorized manner.²¹³

E. International Obligations

Beyond the WIPO Internet Treaties discussed above, multiple free trade agreements (“FTA”s) to which the United States is a party require signatory countries to provide legal protections against both circumvention conduct and trafficking.²¹⁴ Several of these agreements require that a violation of such a protection constitute a separate cause of action that is independent of any infringement that might occur under the party’s copyright law.²¹⁵ All but two address the adoption of exceptions and limitations to such protections, and most contain language providing that contracting parties “shall confine” exceptions and limitations to a list of specified activities. That list tracks the current U.S. statutory framework; it includes the categories covered by the permanent exemptions under section 1201(d)–(j), as well as temporary exemptions to the anticircumvention provision that are adopted in a legislative or administrative proceeding.²¹⁶

More recently, the Marrakesh Treaty to Facilitate Access to Published Works for Persons Who Are Blind, Visually Impaired, or Otherwise Print Disabled (“Marrakesh Treaty”) seeks to guarantee appropriate limitations on member states’ anticircumvention provisions. It requires contracting parties to “take appropriate measures, as necessary,” to ensure that any legal protection they establish for TPMs does not prevent enjoyment of the copyright exceptions and limitations provided for in the treaty, which include permitting the reproduction, distribution, and making available of works in formats accessible to print-disabled persons, as well as the cross-border exchange of such works.²¹⁷ The United States is a signatory to the treaty, which entered into force in September 2016,²¹⁸ but it has not yet been ratified by the Senate.

²¹³ Unlocking Act § 2(c), 128 Stat. at 1751–52; *see also* 37 C.F.R. § 201.40(b)(3) (2012).

²¹⁴ *See, e.g.*, United States-Korea Free Trade Agreement, U.S.-S. Kor., art. 18.4.7, June 30, 2007, 46 I.L.M. 642 (“KORUS FTA”); United States-Panama Trade Promotion Agreement, U.S.-Pan., art. 15.5.7, June 28, 2007 (“Panama TPA”).

²¹⁵ *See, e.g.*, KORUS FTA, art. 18.4.7(c); Panama TPA, art. 15.5.7(c).

²¹⁶ *See, e.g.*, KORUS FTA, art. 18.4.7(d), (e) (allowing temporary exemptions “when an actual or likely adverse impact on those noninfringing uses” is demonstrated in a proceeding).

²¹⁷ Marrakesh Treaty, art. 7, June 27, 2013, 52 I.L.M. 1312.

²¹⁸ *Marrakesh Notification No. 21*, WIPO (Sept. 30, 2016), http://www.wipo.int/treaties/en/notifications/marrakesh/treaty_marrakesh_21.html.

III. PROPOSED STATUTORY REFORM

Stakeholders suggested a number of potential statutory reforms to section 1201 relating to the overall scope of the protections for access controls, the anti-trafficking provisions, and the permanent exemptions. The Copyright Office has carefully considered these proposals, as discussed below. Issues relating to the triennial rulemaking, including potential statutory reforms relating to that process, are discussed separately in section IV.

A. Scope of Section 1201(a)

Section 1201(a) establishes the statute's protections for access controls, with section 1201(a)(1) barring the act of circumventing such measures and section 1201(a)(2) proscribing trafficking in circumvention devices and services. In the years since the DMCA's enactment, there has been substantial disagreement over whether the scope of these provisions is properly drawn. Pointing to the dramatic rise in the number and variety of internet-based content dissemination platforms, copyright owners have argued that section 1201(a) has succeeded in encouraging rightsholders to make their works available to consumers online, as Congress intended. At the same time, other stakeholders have contended that the statute sweeps in circumvention activities that do not implicate any legitimate copyright interest. In their view, the result of this overbreadth has been to chill numerous desirable activities, including market competition, free speech, and access to copyrighted works for preservation and educational purposes.

1. Policy Considerations

a. Effect on Marketplace

i. Development of New Dissemination Models

Commenters representing creative industries argued that section 1201 has contributed significantly to the explosive growth in legitimate digital content delivery services. In joint comments, the Association of American Publishers ("AAP"), the Motion Picture Association of America ("MPAA"), and the Recording Industry Association of America ("RIAA") provided several examples of business models developed after the enactment of section 1201 that provide consumers with a variety of flexible options for accessing creative works. For example, they noted that in the movie and television industries, consumers can now access content on a multitude of devices via services such as Amazon Prime, Hulu, iTunes, and Netflix.²¹⁹ They also cited the development of

²¹⁹ AAP, MPAA & RIAA Initial Comments at 4–6.

numerous services in the music industry—including Apple Music, AmazonMP3, Google Play, Pandora, and Spotify—that have resulted in a significant increase in digital dissemination of music through authorized platforms.²²⁰ Likewise, the Entertainment Software Association (“ESA”) observed that the video game industry has grown exponentially in recent years and that game publishers rely on TPMs to enable distribution through physical media, downloadable files, and live streaming while protecting against infringement.²²¹

Other commenters questioned whether section 1201 truly has had a meaningful impact on the copyright marketplace. Some argued that copyright owners who attribute market benefits to section 1201 “mistake[] correlation for causation” and suggested that “[j]ust because TPMs are important for a particular business model doesn’t mean that the TPMs would be ineffective absent legal protection for those TPMs.”²²² A few called into question the importance of TPMs themselves, citing examples of successful digital platforms that disseminate content without such protections.²²³ Some also suggested that section 1201’s purported effectiveness is questionable in light of copyright owners’ complaints that “online infringement is devastating their industries.”²²⁴

In response, copyright industries argued that the legal protections afforded by section 1201 have played a critical role in their decisions to enter emerging digital markets. As one entertainment company representative noted, “[w]hen we make decisions about what products to make available in the marketplace, either in the United States or in

²²⁰ *Id.* at 8–9; *see also* Tr. at 15:05–08 (May 25, 2016) (Chertkof, RIAA) (“It’s been well publicized in the music industry that the industry is shifting from an ownership model to an access model and that access is really kind of where all the growth is.”).

²²¹ ESA Initial Comments at 3–5.

²²² Library Copyright Alliance (“LCA”) Initial Comments at 2; *see also, e.g.*, Tr. at 20:10–12 (May 25, 2016) (Lerner, Int’l Documentary Ass’n, Film Indep. & Kartemquin Educ. Films (“Joint Filmmakers I”)) (“I don’t see a correlation between the legal protections of 1201 and the models that [the MPAA] and [RIAA are] talking about . . .”).

²²³ *See, e.g.*, EFF Initial Reply Comments at 4 (“For example, music downloads from Apple’s iTunes store are unencrypted, as are videos and music streamed from YouTube and Bandcamp. Humble Bundle and Vodo sell games, ebooks, fonts, and other creative content without TPMs.”); Tr. at 24:13–17 (May 25, 2016) (Riley, Mozilla) (noting that in the music industry, “user frustration with DRM [digital rights management] led to more and more non-DRM, non-encrypted downloads being made available subject to the same legal prohibitions on redistribution”).

²²⁴ Public Knowledge Initial Comments at 1–2; *see also* Tr. at 20:15–17 (May 25, 2016) (Lerner, Joint Filmmakers I) (“I think it’s important to look also at whether 1201 has created a dent in online infringement, and I would argue that it has not.”).

foreign countries, we're looking at not only the technology that's available . . . but also the efficacy of the legal regime in that space as well."²²⁵

ii. Consumer Issues

Notwithstanding these potential market benefits, many stakeholders expressed concern over section 1201's effect on competition and traditional consumer expectations. In their view, efforts to enforce access controls on products such as garage door openers and printer cartridges are aimed not at protecting any copyright interest in those products' operating software, but at excluding competitors from the market for compatible parts and repair services.²²⁶ Such uses, they argued, are far removed from the piracy concerns that Congress had in mind when it enacted section 1201.²²⁷ Some commenters further opined that the use of section 1201 for these purposes is of particular concern at a time when software has become a common feature in all manner of everyday products. As the Consumers Union opined, "[t]hese anti-consumer effects will take on a new, breathtaking order of magnitude as more and more consumer products become part of the Internet of Things."²²⁸

Other commenters expressed a related concern over the statute's effect on consumers' traditional expectation of control over their personal property. In the automotive

²²⁵ Tr. at 204:02–08 (May 25, 2016) (Reed, Fox Entm't Grp.); *see also, e.g.*, Tr. at 22:23–25 (May 19, 2016) (Dow, Walt Disney Co.) ("I can tell you that the availability of these legal tools has been directly relevant to the decisions to get into these markets, whether it was the development of AACs as a next-generation standard for the protection of high definition digital content, whether it's the willingness to get into the market for 4K, whether it's the willingness to get into the market for over-the-top television and authenticated television to allow people to do streaming, the DMCA has been a factor in the willingness to engage in all of those things.").

²²⁶ *See, e.g.*, Auto Care Ass'n ("Auto Care") Initial Comments at 2 (stating that *Chamberlain* and *Lexmark* plaintiffs "misue[d] Section 1201 . . . by invoking laws intended to protect copyrighted works for the purpose of locking out competition for non-copyrightable parts and services"); EFF Initial Comments at 6 ("Lawsuits, and the threat of lawsuits, under Section 1201 are often misused for anti-competitive purposes, such as to enforce incompatibility between electronic devices that must interact with one another . . ."); New America's Open Tech. Inst. ("OTI") Initial Comments at 3–4 ("There are numerous examples of companies using Section 1201 for this type of anti-competitive behavior . . .") (citing *Lexmark*, 387 F.3d 522, *Chamberlain*, 381 F.3d 1178, and *Datel Holdings, Ltd. v. Microsoft Corp.*, 2010–2 Trade Cas. (CCH) P77, 192 (N.D. Cal. 2010)).

²²⁷ Ctr. for Democracy and Tech. ("CDT") Initial Comments at 2–3; OTI Initial Comments at 3–4.

²²⁸ Consumers Union Initial Comments at 1; *see also* Kernochan Ctr. for Law, Media & the Arts ("Kernochan Center") Initial Comments at 3 ("[I]t is unlikely that [Congress] anticipated the vast range of products now governed by computer programs or the potential for products manufacturers to use the DMCA to control the markets for replacement parts or repair services.").

context, for example, consumer groups noted that a large and increasing number of functions in modern vehicles are controlled by onboard computer systems, making it necessary to access those programs to perform various diagnostic, repair, and modification activities.²²⁹ By prohibiting circumvention even for these purposes, they argued, section 1201(a)(1) deters consumers from engaging in activities long understood to be within the scope of their personal property rights.²³⁰

Few copyright owners disputed that applying section 1201 to activities like these could expand the statute's reach beyond the conduct that Congress intended to target. They argued, however, that this concern is overstated as a practical matter and does not justify legislative change. Several noted that the courts in *Chamberlain* and *Lexmark* ultimately rejected the plaintiffs' attempts to rely on section 1201 to control markets in consumer devices.²³¹ Beyond that, they argued, the permanent exemptions for reverse engineering, encryption research, and security testing, together with the triennial rulemaking process, adequately accommodate circumvention activities in which there is a substantial consumer interest.²³² One commenter further suggested that the market itself mitigates against anticompetitive uses, citing an example in which a manufacturer backed away

²²⁹ See 2015 Recommendation at 218 ("As modern vehicles have become more reliant on software to operate, a wide variety of diagnostic, repair and modification activities now require access to and sometimes alteration of those computer programs, including identifying malfunctions, installing replacement parts, and customizing vehicles for specialized uses.") (citing 2015 Rulemaking EFF Vehicle Software – Modification & Repair Pet. at 2, https://www.copyright.gov/1201/2014/petitions/Electronic_Frontier_Foundation_3_1201_Initial_Submission_2014.pdf).

²³⁰ See, e.g., Am. Auto. Ass'n ("AAA") Initial Reply Comments at 2 (contending section 1201 interferes with the "do-it-yourself repair and personalization" that is "a critical element of the American car culture"); iFixit Initial Comments at 1–2; Owners' Rights Initiative ("ORI") Initial Comments at 2; Tr. at 34:12–21 (May 19, 2016) (Band, LCA) ("[T]here's no policy reason within the confines of . . . Title 17 for there to be any restrictions on a person's ability to access their own property, their own copies."); see also Pamela Samuelson, *Freedom to Tinker* 23, THEORETICAL INQUIRES IN LAW (forthcoming), <https://ssrn.com/abstract=2800362> ("Oddly enough, tinkerers who plan to make non-infringing uses of technically protected works are more likely to be deterred by the anti-circumvention laws than those who tinker to infringe.").

²³¹ See ESA Initial Comments at 8 (noting that "the courts have found sufficient flexibility in Section 1201 to address competitive concerns expressed as to cases arising from factual scenarios outside the usual core of copyright protection"); Software & Info. Indus. Ass'n ("SIIA") Initial Comments at 6 (noting that "attempts to apply the DMCA to secondary markets in printer cartridges [*Lexmark*], garage door openers [*Chamberlain*], and similar devices have failed"); Tr. at 69:10–15 (May 25, 2016) (Chertkof, RIAA) ("[S]o far it seems like the courts have gotten it right and so a lot of the worry of the over-reaching seems a little bit like a solution in search of a problem because the courts are coming to the right answers so far.").

²³² See ESA Initial Comments at 7–8; SIIA Initial Comments at 6; AAP, MPAA & RIAA Initial Reply Comments at 1.

from efforts to use DRM in its coffee makers following “almost universal condemnation” of the proposal, including “consumer complaints and press scrutiny.”²³³

Others disagreed, contending that manufacturers continue to employ section 1201(a) as a tool to protect non-copyright-related business interests. Two commenters mentioned that the prepaid wireless service provider TracFone has brought section 1201 actions against companies engaged in the bulk unlocking and resale of its unused handsets.²³⁴ User groups also pointed to statements in the 2015 rulemaking by manufacturers in opposition to proposed exemptions for vehicle repair²³⁵ and the use of third-party feedstock for 3D printers.²³⁶ Such statements, EFF argued, “suggest that . . . anti-competitive misuse of the statute will continue.”²³⁷

b. Effect on Speech

Some commenters argued that section 1201(a) burdens their ability to utilize copyrighted works for purposes of criticism, commentary, or other speech protected under the fair use doctrine. They expressed particular concern over this effect in the context of “merged” access and copy controls, or TPMs that serve the dual function of restricting access to a work and preventing acts within the copyright owner’s exclusive rights, such as copying. For example, the Content Scramble System (“CSS”), which is used to encrypt material on DVDs, both controls access to works—by requiring the use of an appropriately configured player or computer drive to decrypt and play back the content—and prevents them from being copied.²³⁸

²³³ Tr. at 81:09–12 (May 25, 2016) (Sheffner, MPAA); *see also* Alex Hern, *Keurig Takes Steps Towards Abandoning Coffee-Pod DRM*, THE GUARDIAN (May 11, 2015), <https://www.theguardian.com/technology/2015/may/11/keurig-takes-steps-towards-abandoning-coffee-pod-drm>.

²³⁴ Inst. of Scrap Recycling Indus., Inc. (“ISRI”) Initial Comments at 5; EFF Additional Comments at 3–4 (citing *TracFone Wireless v. GSM Group*, 555 F. Supp. 2d 1331 (S.D. Fla. 2008)).

²³⁵ EFF Initial Comments at 6 & n.24 (citing 2015 Rulemaking Eaton Corp. Class 21 Opp’n at 2, https://www.copyright.gov/1201/2015/comments-032715/class%2021/Eaton_Corporation_Class21_1201_2014.pdf, 2015 Rulemaking Ass’n of Global Automakers Class 21 Opp’n at 7, and 2015 Rulemaking John Deere Class 21 Opp’n at 4, https://www.copyright.gov/1201/2015/comments-032715/class%2021/John_Deere_Class21_1201_2014.pdf).

²³⁶ Tr. at 75:23–76:05 (May 19, 2016) (Panjwani, Public Knowledge); *see also* 2015 Rulemaking Stratasy, Ltd., Class 25 Opp’n, https://www.copyright.gov/1201/2015/comments-032715/class%2026/STRATASYS_Class26_1201_2014.pdf.

²³⁷ EFF Initial Comments at 6.

²³⁸ *See, e.g., Reimerdes*, 111 F. Supp. 2d at 308 (“CSS . . . is an access control and copy prevention system for DVDs . . .”).

These commenters reported that copyright owners employ merged TPMs to make it unlawful for users to engage in circumvention for purposes of making copies of works to which they already have lawful access, even where the copying constitutes fair use. Documentary filmmakers, for example, noted that they “have sought not to circumvent access controls in the sense of a password or control that affects playback, but to make copies in order to engage in a lawful use.”²³⁹ In the view of these groups, the use of merged TPMs thwarts Congress’ determination that the act of circumventing a copy control should remain permissible.²⁴⁰

c. Effect on Library, Archival, and Educational Activities

Representatives of libraries, archives, and educational institutions contended that section 1201(a) impedes circumvention activities that are central to their public service missions, notwithstanding the express exemption of certain activities by such entities in section 1201(d). Library groups noted that their work increasingly involves the preservation of “born digital” materials (*e.g.*, video games) stored in older computer formats. MIT Libraries, MIT Press, and the MIT Office of Digital Learning (collectively, “MIT”) stated that “when using widely deployed tools for copying digital media” for use in such programs, “it is often very difficult to detect whether technological protection measures . . . exist, so it is not always clear when one could be violating the DMCA.”²⁴¹ Similarly, a group of higher education associations reported that this uncertainty has led online education providers to forego use of materials that they otherwise would have made available to students.²⁴²

²³⁹ Joint Filmmakers I Initial Comments at 16; *see also* Org. for Transformative Works (“OTW”) Initial Comments at 5 (“Remixers . . . don’t circumvent to get access they would otherwise lack; they circumvent so that they can make short clips for their communicative purposes . . .”).

²⁴⁰ *See, e.g.*, Joint Filmmakers I Initial Comments at 16 (“Such controls allow rightsholders to undermine Congress’s statutory scheme, because by simply combining use controls with access controls, they can prevent other users from making lawful use of a work.”); Tr. at 138:06–11 (May 19, 2016) (Tushnet, OTW) (“So I think we have to recognize that at this point, access and rights controls have been merged by actors making strategic use of 1201 so that the balance that Congress did intend in distinguishing access from rights controls is now gone.”); Tr. at 43:03–07 (May 19, 2016) (Panjwani, Public Knowledge).

²⁴¹ MIT Initial Comments at 3.

²⁴² Ass’n of Am. Univs., the Am. Council on Educ., the Ass’n of Pub. and Land-Grant Univs. & EDUCAUSE (“AAU, ACE, APLU & EDUCAUSE”) Initial Comments at 8; *see also* MIT Initial Comments at 3 (“Although it is difficult to quantify missed opportunities, at MIT we have had to set aside materials from educational sharing due to the ambiguities regarding the existence of TPMs and, for faculty and researchers, the threat of criminal penalty looming over even the best-intended and well-informed use of digital media.”).

2. Proposed Changes

a. Statutory Nexus Requirement

Many commenters argued that the simplest and most effective way to address the foregoing concerns would be for Congress to amend section 1201(a) to expressly require a nexus between circumvention of an access control and copyright infringement.²⁴³ This approach essentially would codify the Federal Circuit’s holding in *Chamberlain* — that the statute “prohibits only forms of access that bear a reasonable relationship to the protections that the Copyright Act otherwise affords copyright owners.”²⁴⁴ One specific proposal to implement such a requirement is the Unlocking Technology Act, a bill introduced in recent Congresses.²⁴⁵ It would provide that it is not a violation of section 1201 to circumvent an access control “if the purpose of such circumvention is to engage in a use that is not an infringement of copyright under this title.”²⁴⁶ Supporters contended that this categorical approach “would eliminate the need for” statutory or regulatory exemptions for specific lawful uses, “whether for repair, for security research, for fair uses, or for accessibility.”²⁴⁷

The Copyright Office shares the concern that section 1201(a)’s protections for access controls have the potential to implicate activities far outside the traditional scope of copyright law.²⁴⁸ The Office does not, however, believe enacting an infringement nexus requirement to be advisable, as it could severely weaken the right of copyright owners

²⁴³ See, e.g., AAU, ACE, APLU & EDUCAUSE Initial Comments at 13; EFF Initial Comments at 2–3; Public Knowledge Additional Comments at 1.

²⁴⁴ *Chamberlain*, 381 F.3d at 1202. As noted, the United States disagrees with that construction of section 1201(a). See *supra* p. 31.

²⁴⁵ Unlocking Technology Act of 2015, H.R. 1587, 114th Cong. (2015); Unlocking Technology Act of 2013, H.R. 1892, 113th Cong. (2013).

²⁴⁶ Unlocking Technology Act of 2015, H.R. 1587, 114th Cong. § 2(a)(1)(B) (2015); Unlocking Technology Act of 2013, H.R. 1892, 113th Cong. § 2(a)(1)(B) (2013).

²⁴⁷ Public Knowledge Additional Comments at 1; *accord* Univ. of Va. Libraries Initial Comments at 2; EFF Additional Comments at 2; Repair Ass’n & iFixit Additional Comments at 5.

²⁴⁸ See 2015 Recommendation at 2 (“While it is clear that section 1201 has played a critical role in the development of secure platforms for the digital distribution of copyrighted works, it is also the case that the prohibition on circumvention impacts a wide range of consumer activities that have little to do with the consumption of creative content or the core concerns of copyright.”); *Register’s Perspective on Copyright Review: Hearing Before the H. Comm. on the Judiciary*, 114th Cong. 29–30 (2015) (statement of Maria A. Pallante, Register of Copyrights and Dir., U.S. Copyright Office) (“[C]onsumers 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.”).

to exercise meaningful control over the terms of access to their works online—a right that both Congress and the Executive Branch have properly recognized as essential to the development of the digital marketplace for creative content.

In adopting section 1201(a), Congress intended to provide copyright owners with a new and independent right to prohibit the circumvention of TPMs used to prevent unauthorized access to their works. The legislative history explains that section 1201(a) was designed to protect “the copyright owner’s right to control access to his or her copyrighted work,”²⁴⁹ and that that right was meant to be “distinct” from “the traditional copyright rights of the copyright owner” under section 106.²⁵⁰ The latter rights received protection not from section 1201(a) but from section 1201(b)’s prohibition on trafficking in devices and services primarily designed to circumvent copy controls.²⁵¹ Underscoring this distinction, the House Judiciary Committee Report analogizes a section 1201(a)(1) violation to the act of “breaking into a locked room in order to obtain a copy of a book.”²⁵² As the Ninth Circuit in *MDY* correctly observed, “breaking into a locked room in order to read or view a copyrighted work would not infringe on any of the copyright owner’s exclusive rights under § 106,”²⁵³ as it would not necessarily involve an unauthorized reproduction, distribution, public performance or display, or derivative use of the work.²⁵⁴ The legislative history thus illustrates Congress’ deliberate decision to make a section 1201(a)(1) violation complete upon circumvention of an access control, regardless of whether the circumventing party has committed or intends to commit an act that would infringe copyright. In the words of the Department of Justice in opposing a nexus requirement on behalf of the United States, “[t]he entire point of that provision was to provide a federal prohibition against bypassing passwords, encryption, and other technologies that regulate access to a copyrighted work in circumstances in which the act of obtaining access would not by itself violate the copyright laws.”²⁵⁵

Congress created this independent anticircumvention right for two principal reasons. First, it determined that such a right was required by the WIPO Internet Treaties. The

²⁴⁹ SENATE JUDICIARY COMMITTEE REPORT at 28 (1998).

²⁵⁰ *Id.* at 12.

²⁵¹ *Id.*

²⁵² HOUSE JUDICIARY COMMITTEE REPORT at 17; *see also* SENATE JUDICIARY COMMITTEE REPORT at 11 (describing the prohibition as “roughly analogous to making it illegal to break into a house using a tool, the primary purpose of which is to break into houses”).

²⁵³ *MDY*, 629 F.3d at 947.

²⁵⁴ *See* 17 U.S.C. § 106.

²⁵⁵ Brief for the United States as Amicus Curiae Supporting Rehearing at 8–9, *MGE*, 622 F.3d 361 (No. 08–10521).

DMCA's legislative history clearly indicates Congress' view that compliance with the treaties would require adopting a prohibition on the act of circumventing access controls—conduct that was not previously unlawful under U.S. law.²⁵⁶ And as noted, Congress understood that activity to include circumventions lacking a nexus to infringement.

Second, as noted above, Congress recognized that the growth of the digital marketplace depends on copyright owners having the ability to enforce the terms they establish for online access to their works.²⁵⁷ In particular, Congress sought to facilitate the development of online content delivery platforms in which the consumer pays for *access* to copyrighted material rather than for possession of a copy.²⁵⁸ Section 1201(a) reflects Congress' understanding that such models will succeed only if copyright owners have the legal right to prohibit persons from evading electronic paywalls or other technical measures used to limit access to users who satisfy the rightsholder's specified terms.²⁵⁹ It also indicates Congress' recognition that in the online context, unauthorized access by itself poses a significant threat to the value of copyrighted works.

This understanding has been repeatedly endorsed by successive Administrations and subsequent Congresses. The United States has concluded—and Congress has ratified²⁶⁰—several FTAs with other nations expressly requiring that a violation of a TPM

²⁵⁶ See *supra* pp. 8–9.

²⁵⁷ SENATE JUDICIARY COMMITTEE REPORT at 8; see also Brief for the United States as Amicus Curiae Supporting Rehearing at 9, *MGE*, 622 F.3d 361 (No. 08-10521) (“Congress determined that by prohibiting unauthorized access—separate from and in addition to unauthorized copying—it could give copyright owners the confidence to distribute their works in new and powerful ways (e.g., streaming video over the internet, digital ‘rentals’ that expire after predetermined periods of time, music files playable only on certain devices, and so on).”).

²⁵⁸ See COMMERCE COMMITTEE REPORT at 23 (“[A]n increasing number of intellectual property works are being distributed using a ‘client-server’ model, where the work is effectively ‘borrowed’ by the user (e.g., infrequent users of expensive software purchase a certain number of uses, or viewers watch a movie on a pay-per-view basis). To operate in this environment, content providers will need both the technology to make new uses possible and the legal framework to ensure they can protect their work from piracy.”).

²⁵⁹ See HOUSE JUDICIARY COMMITTEE REPORT at 10 (“In order to protect the owner, copyrighted works will most likely be encrypted and made available to consumers once payment is made for access to a copy of the work. There will be those who will try to profit from the works of others by decoding the encrypted codes protecting copyrighted works, or engaging in the business of providing devices or services to enable others to do so.”).

²⁶⁰ See United States-Colombia Trade Promotion Agreement Implementation Act, Pub. L. No. 112-42, 125 Stat. 462 (2011); United States-Korea Free Trade Agreement Implementation Act, Pub. L. No. 112-41, 125 Stat. 428 (2011); United States-Panama Trade Promotion Agreement Implementation Act, Pub. L. No. 112-43, 125 Stat. 497 (2011); United States-Peru Trade Promotion

protection be treated as a separate cause of action independent of any infringement of copyright.²⁶¹ And as noted, the United States has also taken this position in litigation on this subject.²⁶² Thus, providing distinct legal protection for access controls not only reflects the consistent policy judgment of both the Legislative and Executive Branches, but also constitutes a longstanding requirement under U.S. international agreements.

The Office sees no basis for departing from this obligation through adoption of an infringement nexus requirement. Such a rule would substantially diminish copyright owners' ability to prevent widespread unauthorized access to their works. Again, the *MDY* opinion is instructive: "Descrambling or decrypting only enables someone to watch or listen to a work without authorization, which is not necessarily an infringement of a copyright owner's traditional exclusive rights under § 106."²⁶³ Yet this activity unquestionably harms the value of the work, and the damage compounds exponentially when the dissemination of circumvention tools enables it to occur on a vast scale. Limiting section 1201(a) to circumvention or trafficking activity undertaken for the purpose of infringing or facilitating infringement could place such conduct beyond the statute's reach.²⁶⁴

This outcome would seem especially ill-advised now that access-based platforms have come to represent a major component of the copyright marketplace. The dramatic growth of streaming services like Netflix, Spotify, Hulu, and many others suggests that

Agreement Implementation Act, Pub. L. No. 110-138, 121 Stat. 1455 (2007); United States-Oman Free Trade Agreement Implementation Act, Pub. L. No. 109-283, 120 Stat. 1191 (2006); United States-Bahrain Free Trade Agreement Implementation Act, Pub. L. No. 109-169, 119 Stat. 3581 (2006); Dominican Republic-Central America-United States Free Trade Agreement Implementation Act, Pub. L. No. 109-53, 119 Stat. 462 (2005); United States-Australia Free Trade Agreement Implementation Act, Pub. L. No. 108-286, 118 Stat. 919 (2004); United States-Morocco Free Trade Agreement Implementation Act, Pub. L. No. 108-302, 118 Stat. 1103 (2004); United States-Singapore Free Trade Agreement Implementation Act, Pub. L. No. 108-78, 117 Stat. 948 (2003).

²⁶¹ See *supra* note 215.

²⁶² See *supra* p. 31.

²⁶³ 629 F.3d at 945.

²⁶⁴ See, e.g., AAP, MPAA & RIAA Initial Comments at 10 ("Someone who circumvents access controls (such as password protection or other forms of authentication) to watch . . . movies for free violates section 1201(a)(1)—even if circumvention does not facilitate copying because, for example, copy controls remain in place to prevent reproducing the movie."); Copyright Alliance Initial Reply Comments at 2 ("Prohibiting the circumvention of access controls is necessary since, in many cases, circumventing access controls like encryption or password protection may not amount to copyright infringement itself, yet can lead to the same type of harm as infringement . . .").

for both copyright owners and consumers, the offering of access—whether through subscriptions, *à la carte* purchases, or ad-supported services—has become a preferred method of delivering copyrighted content. As a representative of mobile app developers recently testified to Congress, “[t]he explosive growth in technological innovations and content delivery options prove that the DMCA has created an environment in which these things are possible.”²⁶⁵ In the Office’s view, the law should continue to foster the development of such models. By reducing legal protection for the access controls upon which they rely, a nexus requirement could well have the opposite effect.

Some commenters responded to this concern by arguing that other laws would adequately protect copyright owners against circumvention for pure consumption purposes. The Office is not convinced, however, that these laws would fill the gap left by a narrowed section 1201(a). Some contended that circumvention for purposes of streaming a work might support a section 1201(a) claim even under a nexus requirement because the creation of a temporary RAM copy on the recipient’s computer or device may constitute an infringing reproduction under section 106(1).²⁶⁶ But while a RAM copy may qualify as a “copy” within the meaning of the Copyright Act, there are likely situations where no RAM copies are made.²⁶⁷ Others maintained that accessing copyrighted material on a computer server without authorization could be actionable under the Computer Fraud and Abuse Act (“CFAA”)—which provides a private right of action for unauthorized access to a computer—or state computer crime or commercial tort laws.²⁶⁸ The CFAA, however, requires a plaintiff to prove an annual loss aggregating at least \$5,000,²⁶⁹ which would exclude all but high-volume streaming activities; it also limits damages to economic damages.²⁷⁰ And it seems doubtful that a

²⁶⁵ *Chapter 12 of Title 17: Hearing Before the H. Comm. on the Judiciary*, 113th Cong. 21 (2014) (statement of Jonathan Zuck, President, ACT | The App Ass’n (“ACT”)).

²⁶⁶ Tr. at 38:16–39:05 (May 19, 2016) (Band, LCA) (suggesting a hypothetical where the creation of a RAM copy of an e-book on a device with a circumvented TPM could constitute a nexus to trigger section 1201(a) liability); Tr. at 62:10–18 (May 25, 2016) (Samuelson, Univ. of Cal. Berkeley Sch. of Law) (predicting that copyright owners would argue that access to a film beyond its authorized rental period would constitute infringement).

²⁶⁷ The Second Circuit has held that buffer copies of fleeting duration were not copies for purposes of the Act. *See Cartoon Network LP, LLLP v. CSC Holdings, Inc.*, 536 F.3d 121, 127–30 (2d Cir. 2008) (holding that buffer copy data that “is rapidly and automatically overwritten as soon as it is processed” does not constitute making a copy as defined in the Copyright Act).

²⁶⁸ LCA Reply Comments at 3 (citing 18 U.S.C. § 1030(a)(2)); Tr. at 31:08–16 (May 25, 2016) (Stoltz, EFF) (citing survey finding that 48 out of 50 cases under section 1201 involved other claims); Tr. at 13:17–22 (Band, LCA) (Mar. 19, 2016).

²⁶⁹ 18 U.S.C. § 1030 (a)(5)(A)(B), (c)(4)(A)(i)(I), (g).

²⁷⁰ *Id.* § 1030(g).

patchwork of state laws can offer the certainty currently provided by section 1201(a), particularly given the interstate nature of transactions in this area.

b. Exclusion of Device- or Machine-Enabling Computer Programs

As a narrower alternative, ORI suggested that Congress could exclude from the scope of section 1201(a) “computer programs that enable the operation of a device or machine.”²⁷¹ Although recognizing that in practical terms, this outcome could also be achieved through a new permanent exemption, ORI suggested it may be better to revise the language of section 1201(a).²⁷² It argued that circumventing access controls on such programs presents a “low probability of infringing activity” and that excluding them categorically is preferable to adopting piecemeal statutory exemptions because they “inevitably will be under-inclusive.”²⁷³

ORI’s recommendation presents a more targeted approach than a nexus requirement in that it aims to address the specific concern regarding section 1201(a)’s application to everyday products. The Office, however, does not recommend this model because we agree with the commenters who argued that it would present considerable line-drawing problems.²⁷⁴ In particular, creative industry representatives questioned whether such legislation could be drawn to exclude operating software in devices like garage door

²⁷¹ ORI Additional Comments at 3.

²⁷² Compare *id.* at 3 (“ORI believes the better approach would be to categorically exclude computer programs that enable the operation of a device or machine from the scope of Section 1201.”), with ORI Initial Comments at 3 (Congress “could adopt a permanent exception for the circumvention of TPMs on software essential to the operation of hardware.”).

²⁷³ ORI Additional Comments at 3.

²⁷⁴ Tr. at 50:07–12 (May 19, 2016) (Zuck, ACT) (“It would have to be a much more complicated wording in order to get at the distinctions that people want to make so that you are excluding, you know, printer cartridges but you’re including the ability to have flexible hardware subsidy models, et cetera, that are pretty prevalent in this market.”); Tr. at 51:13–24 (May 19, 2016) (Panjwani, Public Knowledge) (“[A]ny attempt to create a permanent exemption on software-enabled devices would instead turn into a fight over what exactly is a software-enabled device. . . . The end result of litigation would be not whether a copyright interest has been violated but is the thing at dispute in this particular litigation a device within the meaning of the statute. And that opens up a whole can of worms, I think.”); see also Author Services, Inc. Additional Comments at 1; Alliance of Auto. Mfrs. (“Auto Alliance”) Initial Comments at 3 (suggesting that “access controls [that] are ‘outside of core copyright concerns’” is “itself a label whose boundaries would be difficult to define”); Copyright Alliance Initial Comments at 10 (“[P]hrases like ‘core copyright concerns’ may be associated with efforts to undermine protection for copyrighted works by casting certain forms of access controls as falling outside the realm of what Section 1201 was designed to protect.”).

openers and printer cartridges from section 1201's reach, but to retain anticircumvention protection for software in devices that communicate expressive content, such as DVD players and video game consoles. In the latter devices, they noted, operating software often includes authentication systems that prevent the playing of material from unauthorized sources.²⁷⁵ Therefore, any legislation excluding device-enabling software runs the risk of allowing bad actors to circumvent access controls on those systems, and thus could significantly weaken legal protections against piracy.

The Office reached substantially the same conclusion in its recent report on *Software-Enabled Consumer Products*. There, the Office considered several potential options to distinguish device-embedded software from software generally, and found each of them unworkable in practice, particularly given "the very real concern that definitions based on an understanding of the current ecosystem would become quickly obsolete."²⁷⁶

* * *

The Copyright Office recognizes and shares the concern that section 1201 should not be used to deter legitimate consumer activities unrelated to Congress' goal of facilitating secure platforms for the digital dissemination of copyrighted works. While the legislative history, as discussed, demonstrates that Congress did not intend for section 1201(a) to be limited to a copyright owner's traditional exclusive rights under section 106, it also does not show an expectation that section 1201 would serve as a sword to inhibit market entrants from offering competing consumer products.²⁷⁷ Nor does it seem

²⁷⁵ AAP, ESA, MPAA & RIAA Additional Reply Comments at 6–7 ("For example, manufacturers of video game consoles use access controls to prevent piracy not only by restricting access to computer programs that render video games perceptible, but also by restricting access to the software that operates the consoles and authenticates games. Circumvention of such access controls leads to play of pirated games."); Tr. at 52:19–23 (May 19, 2016) (Pierre-Louis, ESA) ("So we have to tread very carefully as we think about what that means because it implicates more than just thinking about a tractor. We're talking about the very devices that consumers are using to consume the content that we're making."); Tr. at 56:14–16 (May 19, 2016) (Dow, Walt Disney Co.) ("If you want to use a DVD player, that drive has to authenticate itself to ensure that it's playing by the rules before you access the content.").

²⁷⁶ U.S. COPYRIGHT OFFICE, SOFTWARE-ENABLED CONSUMER PRODUCTS 9–11 (2016) ("SOFTWARE STUDY"), <https://www.copyright.gov/policy/software/software-full-report.pdf> ("[D]rawing a legislative distinction [between software and software embedded in devices] would be unworkable in practice. . . . Any such attempt inevitably would be based on software-enabled devices currently existing in the marketplace, and based on Congress's understanding of the current state of the art.").

²⁷⁷ See Kernochan Center Initial Comments at 3 (noting "it is unlikely that [Congress] anticipated the vast range of products now governed by computer programs"); see also Letter from Chairman Chuck Grassley and Ranking Member Patrick Leahy, S. Comm. on the Judiciary, to Maria A.

likely that Congress expected issues concerning the repair and modification of such products to be a focus of the rulemaking to the degree they have been in recent years.²⁷⁸

The Office is not persuaded, however, that the answer to these concerns is a fundamental alteration of section 1201(a)'s scope. Although the case law on this question is neither harmonized nor voluminous, opinions to date indicate that the statute in its current form does not leave courts powerless to consider issues of competition where appropriate. Even the *MDY* opinion, in rejecting an infringement nexus requirement, explicitly noted that there was “no clear issue of anti-competitive behavior” in that case and suggested that consideration of such issues would be proper where “a § 1201(a)(2) defendant . . . claims that a plaintiff is attempting to enforce its DMCA anti-circumvention right in a manner that violates antitrust law.”²⁷⁹ Indeed, principles underlying existing doctrines of antitrust law or misuse, and the permanent exemptions, such as section 1201(f)'s exception for interoperability, may accommodate many anti-competitive concerns. Further, the Office also notes that at least two manufacturers have recently backed away from some proposed uses of DRM in consumer devices in the face of consumer pressure.²⁸⁰

Accordingly, the Office concludes that the preferable approach is to address these issues through the application of existing legal doctrines, and through targeted updates to the permanent exemption framework and to the triennial rulemaking process. These recommended changes are discussed below.

Pallante, Register of Copyrights and Dir., U.S. Copyright Office 1 (Oct. 22, 2015), http://www.copyright.gov/policy/software/grassley_leahy-software-study-request-10222015.pdf (“One result of recent technological developments is that copyrighted software is ubiquitous in our daily lives . . . [and] many questions are being asked about how consumers can lawfully use products that rely on software to function.”).

²⁷⁸ See SIIA Initial Comments at 6 (“During the last rulemaking, disputes arose over software in tractors, automobiles, and the like—situations that Congress did not envision when passing the law eighteen years ago.”); Tr. at 53:18–55:01 (May 19, 2016) (Band, LCA) (“Congress, when it was talking about 1201 . . . [was] not thinking about tractors. And the fact that we’re talking about tractors and . . . automobiles and that’s where it’s gone to, does suggest that there is a serious problem here.”).

²⁷⁹ *MDY*, 629 F.3d at 951.

²⁸⁰ See Alex Hern, *Keurig Takes Steps Towards Abandoning Coffee-Pod DRM*, THE GUARDIAN (May 11, 2015), <https://www.theguardian.com/technology/2015/may/11/keurig-takes-steps-towards-abandoning-coffee-pod-drm> (noting that consumer complaints and consumer advocacy efforts led Keurig to back away from efforts to enforce digital rights management in its coffee machines); Cory Doctorow, *Tell HP: Still a long way to go to make up for breaking our printers* (Oct. 3, 2016), <https://www.eff.org/deeplinks/2016/09/hps-run-keep-pressure> (noting that Hewlett-Packard issued an update removing a feature that configured its printers to accept only proprietary ink).

B. Anti-Trafficking Provisions

The anti-trafficking provisions in section 1201(a)(2) and (b) were the subject of much disagreement among study participants. While some championed these provisions as incentivizing the creation of new avenues for content distribution and providing an essential enforcement mechanism, others argued that the trafficking prohibitions have had little meaningful impact on preventing infringement, and instead have served to restrict legitimate uses of copyrighted works, including activities exempted under the triennial rulemaking.

1. Overall Effectiveness

As discussed above, Congress enacted the anti-trafficking provisions “to provide meaningful protection and enforcement of the copyright owner’s rights to control access to his or her copyrighted work.”²⁸¹ Many stakeholders argued that these provisions have been effective in stemming the development of a marketplace for circumvention tools and in minimizing mass piracy.²⁸²

Several commenters indicated that these provisions are effective in large part because they provide a more efficient enforcement mechanism than the anticircumvention bar under section 1201(a)(1). For example, ESA observed that “the actions of distributors of circumvention technology are comparatively easy to detect, and targeting them is the

²⁸¹ SENATE JUDICIARY COMMITTEE REPORT at 28; HOUSE JUDICIARY COMMITTEE REPORT at 18; COMMERCE COMMITTEE REPORT at 38; HOUSE MANAGER’S REPORT at 8.

²⁸² See, e.g., BSA | The Software Alliance (“BSA”) Initial Comments at 1; Copyright Alliance Initial Comments at 13 (without anti-trafficking protections, rightsholders would be forced to engage in an “‘arms race’ of encryption and circumvention technologies, diverting resources away from more beneficial uses like the creation and dissemination of copyrighted works”); Kernochan Center Initial Comments at 6 (“[W]ithout the ban against trafficking, circumvention devices useable by even the most technolog[ically]-challenged of consumers would undoubtedly be readily available, and TPMs would be largely ineffective.”); SIIA Initial Comments at 4 (“In the United States, [section 1201] has prevented capital formation around ‘black box’ businesses dedicated to circumvention or the sale of circumvention devices”); Tr. at 165:13–17 (May 25, 2016) (Reed, Fox Entm’t Grp.) (“[T]he anti-trafficking provisions have prevented the tools to engage in . . . piracy from becoming mainstream in a way that we think is beneficial ultimately to maintaining a robust market for creative content.”); Tr. at 169:21–170:02 (May 25, 2016) (Wolfe, Authors Alliance) (“[T]he anti-trafficking provisions have at least had some measure of success in keeping the tools out of end user hands that enable those kinds of infringements.”); Tr. at 26:20–27:04 (May 25, 2016) (Samuelson, Univ. of Cal. Berkeley Sch. of Law) (“[T]he thing that [section] 1201 has done most effectively is kill any market for circumvention tools.”).

most effective and efficient way to protect the rights provided by Section 1201.”²⁸³ Absent the ability to target traffickers, these commenters argued, the need to identify and pursue claims against individual circumventers would dramatically increase the cost of enforcement.²⁸⁴

Copyright owners also emphasized the anti-trafficking provisions’ role in preventing circumvention tools from becoming available in legitimate outlets such as Best Buy or Amazon. In their view, even if some tools remain accessible through illicit sources, the anticircumvention provisions have prevented such tools from acquiring the legitimacy in the public mind that would result from their availability in mainstream markets.²⁸⁵ The Copyright Alliance argued that this “reduces the attractiveness of commercial business models that are based on enabling access to infringing works” and “helps prevent . . . capital formation around the black box business dedicated to . . . sales of circumvention devices.”²⁸⁶

Other commenters, however, expressed doubt as to whether the anti-trafficking provisions in fact prevent any unauthorized circumvention or infringement from

²⁸³ ESA Initial Comments at 14; *see also* DVD Copy Control Ass’n & Access Content Sys. Licensing Adm’r, LLC (“DVD CCA & AACLS LA”) Initial Comments at 4 (stating that their litigation efforts are spent “enforcing the anti-trafficking prohibitions as those products posed the greatest harm”).

²⁸⁴ *See, e.g.*, Tr. at 205:16–206:08 (May 25, 2016) (Metalitz, AAP, MPAA & RIAA) (noting that the “vast majority of enforcement” efforts are based on 1201(a)(2) violations, and “the fact that a person may be committing an act of circumvention that only affects their access to a particular copyrighted work, it’s got to be a much lower priority.”); Tr. at 14:17–15:01, 81:13–20 (May 20, 2016) (Kupferschmid, Copyright Alliance) (“Being able to target trafficking is also important because actions of distributors . . . of circumvention technologies is . . . comparatively easy to detect and targeting them is the most efficient and effective way to actually enforce 1201”; also noting the important role the anti-trafficking provisions play in deterring piracy for small business owners).

²⁸⁵ *See, e.g.*, AAP, MPAA & RIAA Initial Comments at 14 (“If the distribution of hacking tools . . . becomes legal and widespread, the public’s perception of what these products can legitimately be used for could become confused, resulting in frustration and abuse.”); Tr. at 21:08–20 (May 20, 2016) (Besek, Kernochan Center) (“You can’t argue a system isn’t effective just because some people can bypass it. There’s always been some degree of infringement. There always will be. The real goal is to reduce it to the level where you still have a viable market. . . . [Y]ou don’t want it just available at Best Buy. . . . And so, it’s really important that . . . the circumvention means not be so generally available.”); Tr. at 14:05–12 (May 20, 2016) (Kupferschmid, Copyright Alliance) (“[T]he ultimate purpose is to keep this hacking software out of the mainstream and limit its availability to the infringers so you can’t just walk into Best Buy, for instance, and get a copy.”).

²⁸⁶ Tr. at 14:15–17, 15:02–05 (May 20, 2016) (Kupferschmid, Copyright Alliance).

occurring.²⁸⁷ Several pointed to the large-scale proliferation of illegal circumvention tools online, arguing that the statute has done little to slow the dissemination of such devices.²⁸⁸ OTW contended that “[c]lear copies of almost any work are available through unauthorized sources, in significant part because, once copy protection is broken once, that copy can seed other copies with no further need for anticircumvention [*sic*] tools.”²⁸⁹

2. Proposed Changes

Several user groups expressed concern regarding the effect of the anti-trafficking provisions on their ability to engage in circumvention activity authorized through the triennial rulemaking. They proposed legislative changes to enable exemption beneficiaries to make or obtain necessary circumvention tools for that purpose, and to allow third parties to assist users in carrying out the exempted activity.

a. Manufacture and Distribution of Tools

Subsections (a)(2) and (b) make it unlawful to “manufacture” a circumvention device.²⁹⁰ Some commenters noted that that language could be read to prohibit the beneficiary of an exemption from making a tool for his or her own use in engaging in the exempted circumvention activity.²⁹¹ Most user groups believed such a reading would be erroneous: as Public Knowledge contended, “[t]o suggest that exemptions come with no right to create or acquire tools to effectuate those exemptions would render them superfluous, a flatly illogical outcome to be avoided as a matter of statutory

²⁸⁷ See, e.g., Public Knowledge Initial Comments at 7 (“[R]eports of massive online infringement by copyright owners, if they are to be believed, suggests that § 1201 has failed at curbing infringement.”); Soc’y of Am. Archivists (“SAA”) Initial Comments at 4 (“SAA is not aware that the anti-trafficking provisions of section 1201(a)(2) and 1201(b) have had any impact in deterring copyright infringement.”).

²⁸⁸ LCA Initial Reply Comments at 2 (“[Rightsholders] overlook the fact that TPMs remain effective notwithstanding the widespread availability of circumvention tools on the Internet (and the relative dearth of section 1201 enforcement actions.)”; see also AAU, ACE, APLU & EDUCAUSE Initial Comments at 12 (“[T]he technology necessary to circumvent the TPMs on DVDs and other storage media is widely available via the Internet and simple to use.”).

²⁸⁹ OTW Initial Comments at 6.

²⁹⁰ 17 U.S.C. § 1201(a)(2), (b).

²⁹¹ See, e.g., LCA Additional Comments at 4 (“On the face of the statute, a person granted an exemption to circumvent would not be able to manufacture a circumvention tool, and could not obtain such a tool from a third party. This makes no sense.”); ORI Additional Comments at 5 (similar).

construction.”²⁹² Nevertheless, a few users suggested that the uncertainty on this issue has dissuaded them from exercising exemptions granted via the rulemaking. In the words of a group of college and university associations, “[n]o educational institution granted an exemption wants to assume that a temporary exemption implicitly includes the right to develop the necessary circumvention tools to take advantage of that exemption.”²⁹³

Several participants supported legislative change to explicitly allow the making of necessary circumvention tools in these circumstances.²⁹⁴ In considering this proposal, the Office notes at the outset that many tools that can be used for circumvention are not subject to section 1201’s prohibitions: in addition to programs specifically designed for circumvention, which section 1201 is aimed at, common software can also be employed for circumvention purposes.²⁹⁵ The legislative history of section 1201 explicitly demonstrates Congress’ intent to exclude such generally available software tools, including compilers, disassemblers, password-recovery utilities, and commercial “key-cracker” products, from the reach of the prohibition.²⁹⁶

To a large and increasing degree, however, circumvention requires the use of specialized software, such as code to convert protected e-books into formats usable with assistive technologies²⁹⁷ or to bypass encryption on DVDs.²⁹⁸ To the extent the law prohibits the development of such software, many users would be unable to engage in activities expressly permitted by the relevant exemption, unless they rely on circumvention programs produced unlawfully. The Office accordingly agrees that exemption

²⁹² Public Knowledge Additional Comments at 4–5; *accord* Authors Alliance Additional Comments at 4–5 (“[A]ny reading of Section 1201 that would prohibit beneficiaries of exemptions from creating the tools necessary in order to exercise these exemptions is an absurd result that renders the entirety of the Section 1201(a)(1) exemption process futile.”).

²⁹³ AAU, ACE, APLU & EDUCAUSE Initial Comments at 12.

²⁹⁴ *See, e.g.*, ISRI Additional Comments at 6; ORI Additional Comments at 5; LCA Additional Comments at 4.

²⁹⁵ In addition, some TPMs can be defeated without using software. *See, e.g.*, Jamie Condliffe, *You Can Hack Keurig’s DRM With Scotch Tape to Use Knock-Off Coffee Pods*, GIZMODO (Dec. 11, 2014), <http://gizmodo.com/you-can-hack-keurigs-drm-with-scotch-tape-to-use-knock-1669713772>; *CD Crack: Magic Marker Indeed*, WIRED (May 20, 2002), <http://archive.wired.com/science/discoveries/news/2002/05/52665>.

²⁹⁶ COMMERCE COMMITTEE REPORT at 42–43 (referencing compilers, trace analyzers, and disassemblers); SENATE JUDICIARY COMMITTEE REPORT at 16 (referencing password utilities and “key-cracker products,” . . . for the purpose of quick data recovery of encrypted data”).

²⁹⁷ *See* 2012 Rulemaking at 20.

²⁹⁸ *See* 2015 Rulemaking at 29.

beneficiaries should be able to make necessary tools solely for their own use in carrying out exempted circumventions.

The Office is not convinced, however, that statutory change is necessary to effectuate this right. To begin with, legislation may be premature. The scope of the “manufactur[ing]” language in section 1201(a)(2) and (b) has yet to be resolved by the courts; in fact, the Office is aware of no case in which a court has considered whether the manufacturing bar applies to exemption beneficiaries making a tool for personal use. Nor is it clear that these provisions are, as a practical matter, preventing beneficiaries from creating or utilizing circumvention tools to a significant degree. While the dearth of case law and enforcement actions is not determinative—indeed, we recognize that statutory ambiguity itself can have a deterrent effect²⁹⁹—it does suggest that there is not yet a pressing need for legislative action.

Second, there are strong reasons to conclude that Congress did not intend to apply the manufacturing bar to exemption beneficiaries from producing their own circumvention tools for personal use. As several commenters noted, such a reading would render the rulemaking process effectively meaningless for many users.³⁰⁰ Moreover, the term “manufacture” appears in a list of activities defined as forms of trafficking: “No person shall manufacture, import, offer to the public, provide, or otherwise traffic in”³⁰¹ “Traffic” is not defined in the statute, but it is commonly associated with trade or commercial activity.³⁰² Under the interpretive canon of *noscitur a sociis*, manufacture should be understood by reference to surrounding words, suggesting that Congress intended the prohibition to apply to activities involving a wider distribution of circumvention tools, and not to activities done solely for purposes of self-help.³⁰³

²⁹⁹ See AAU, ACE, APLU & EDUCAUSE Initial Comments at 12.

³⁰⁰ See Authors Alliance Additional Comments at 4–5; Repair Ass’n & iFixit Additional Comments at 16.

³⁰¹ 17 U.S.C. § 1201(a)(2), (b). The legislative history contains no relevant discussion of the term “manufacture.”

³⁰² See, e.g., *Traffic*, MERRIAM-WEBSTER, <https://www.merriam-webster.com/dictionary/traffic> (“a: import and export trade[;] b: the business of bartering or buying and selling[;] c: illegal or disreputable usually commercial activity[;] . . . to carry on traffic”); *Traffic*, BLACK’S LAW DICTIONARY 1725 (10th ed.) (“To trade or deal in (goods, esp. illicit drugs or other contraband) <trafficking in heroin>”).

³⁰³ See Authors Alliance Additional Comments at 5 (“[A] plain reading of the statute clearly demonstrates the provisions are about the provision of tools and services *to others*, and not about the self-help that is the baseline necessity of an effective exemption process.”); Repair Ass’n & iFixit Additional Comments at 15–16 (“[T]he phrase ‘or otherwise traffic’ in 1201(a)(2) clearly

It is true, as some copyright owners noted, that the presence of explicit authorization for the making of tools in some of the permanent exemptions—specifically, those for encryption research, reverse engineering, and security testing—could be read to suggest that there is no corresponding right appurtenant to the other exemptions, including those adopted through the rulemaking.³⁰⁴ But the Office is not persuaded that this inconsistency is determinative. By including the ability to develop means for circumvention within these permanent exemptions, Congress may simply have wished to avoid any ambiguity as to whether such activity is permitted, particularly since encryption research, reverse engineering, and security testing in at least some cases may involve distribution activity more commonly associated with trafficking. Indeed, each of these exemptions expressly contemplates a user sharing circumvention means with others.³⁰⁵ Given that the alternative reading could undermine much of the statute’s overall design, the Office believes that this is the preferred construction.

For these reasons, the Office does not believe any legislative change to the manufacturing provision is currently necessary and that section 1201 should not be interpreted to prohibit permitted beneficiaries from creating a circumvention tool for personal use. In the event, however, that Congress wishes to provide clarification, it could consider adding language to the statute providing that, notwithstanding subsections (a)(2) and (b), a person entitled to an exemption to subsection (a)(1) may develop a circumvention tool solely for his or her own use in engaging in the exempted activity.

indicates that ‘manufacture’ should be interpreted as large-scale production for the purposes of *trafficking* to the public, not mere creation of a tool for personal use.”).

³⁰⁴ See Copyright Alliance Additional Comments at 4 (“If Congress intended such a right, it would have included it expressly as it did in the provisions for permanent exemptions for reverse engineering, encryption research, and security testing.”) (citations omitted). The Copyright Alliance also noted that section 1201(a)(1)(E) expressly bars any exemption granted under the triennial rulemaking from serving as a defense to the anti-trafficking provisions, and thus argued that the rulemaking cannot excuse any activity to the extent it is deemed “manufacturing.” *Id.* at 3–4.

³⁰⁵ 17 U.S.C. § 1201(f)(3) (“[T]he means permitted under paragraph (2), may be made available to others” under certain conditions), § 1201(g)(4) (“Notwithstanding the provisions of subsection (a)(2), it is not a violation of that subsection for a person to . . . provide the technological means to another person with whom he or she is working collaboratively for the purpose of conducting the acts of good faith encryption research described in paragraph (2) or for the purpose of having that other person verify his or her acts of good faith encryption research described in paragraph (2).”), § 1201(j)(4) (“Notwithstanding the provisions of subsection (a)(2), it is not a violation of that subsection for a person to develop, produce, distribute or employ technological means for the sole purpose of performing the acts of security testing described in subsection (2), provided such technological means does not otherwise violate section (a)(2).”).

Should Congress pursue statutory amendment, the Office does not recommend that it take the additional step of allowing the *distribution* of necessary tools to exemption beneficiaries.³⁰⁶ As an initial matter, the Office does not understand such activity to be permitted under current law. Moreover, the Office agrees with the commenters who argued that it would be impossible to control the downstream uses of any circumvention tools once distributed, even if they were produced with the intent that they be used only to assist authorized circumvention.³⁰⁷ Proponents responded that circumvention tools are already widely available online and that other laws would adequately protect against illicit uses.³⁰⁸ But, as several commenters noted, perhaps the primary value of the anti-trafficking provisions has been to prevent the development of mainstream business models based around the production and sale of circumvention tools.³⁰⁹ Permitting the distribution of such tools could significantly erode that important benefit.

b. Third-Party Assistance

Subsections (a)(2) and (b) make it unlawful to “offer to the public, provide, or otherwise traffic in any . . . service . . . or part thereof” that is primarily designed for the purpose of circumvention, has only limited commercially significant purpose other than circumvention, or is marketed for use in circumvention.³¹⁰ The Librarian is not authorized to adopt exemptions to those provisions. Many commenters expressed concern that these prohibitions may prevent third parties from offering assistance to those entitled to engage in exempted circumvention activities. They noted that ordinary consumers often lack the skills or technical knowledge to circumvent independently.³¹¹

³⁰⁶ See, e.g., Mozilla Initial Comments at 5; Rico Robbins Initial Comments at 1–2; Auto Care Additional Reply Comments at 8; Public Knowledge Additional Reply Comments at 4–5; Tr. at 56:02–07 (May 20, 2016) (Greenstein, Auto Care) (noting that consumers “need to rely on others who can create the tools that make [circumvention] possible” and agreeing that there needs to be a market for those tools).

³⁰⁷ See, e.g., AAP, MPAA & RIAA Initial Comments at 14; Alliance of Auto. Mfrs. (“Auto Alliance”) Initial Comments at 9; Copyright Alliance Initial Comments at 13; Kernochan Center Initial Comments at 7.

³⁰⁸ See, e.g., LCA Additional Comments at 4 (“Circumvention tools already are widely available on the internet.”); Mozilla Additional Comments at 4 (“Some commenters oppose allowing technical assistance on the grounds that such tools could be misused for illicit purposes. . . . Copyright law and law enforcement have the authority and ability to penalize those who act illegally, including those who misuse circumvention technologies.”).

³⁰⁹ See *supra* pp. 51–52 and notes 285–86.

³¹⁰ 17 U.S.C. § 1201(a)(2), (b)(1).

³¹¹ See, e.g., ACM U.S. Pub. Policy Council (“USACM”) Initial Comments at 3 (“[M]any consumers lack the knowledge and expertise to develop tools that would enable them to benefit from

Others pointed to the difficulty of obtaining or developing one's own tools for circumventing (assuming that is itself legal, as discussed above).³¹² Commenters also noted the disproportionate impact a ban on third-party assistance has on beneficiaries with disabilities.³¹³

While most participants recognized some need for such assistance, a few suggested that this concern may be overstated. The Kernochan Center stated, “[w]e suspect that this occurs less frequently than it might appear on the surface, as in many cases circumvention tools are available (e.g., for DVDs) and in other cases, it can be assumed that the beneficiaries of the exception have the technical expertise to circumvent (e.g., where the underlying work is sought for the purpose of reverse engineering).”³¹⁴ The American Intellectual Property Law Association (“AIPLA”) requested a study into whether third-party assistance is, in fact, needed.³¹⁵

The Copyright Office has previously suggested that exemption beneficiaries may have a legitimate interest in circumvention assistance in at least some circumstances, and has said that Congress may wish to consider legislative clarification in this area.³¹⁶ In this proceeding, many commenters supported amending section 1201 to explicitly authorize

granted exemptions.”); Jay Freeman Initial Comments at 1 (“The reality is that modifying an iPhone to strip away the software encryption locks that prevent this kind of functionality is extremely complex.”); iFixit Initial Comments at 3 (“Without third-party assistance, many of these exemptions are useless in the real world.”); Mozilla Initial Comments at 5 (“In practice, omitting [third-party assistance], as currently happens, risks worsening a social divide—technically savvy users would have even more advantages over non-savvy users, as they are the only ones who have the skills to engage in the socially beneficial exempted action without help.”); Int'l Imaging Tech. Council & Static Control Components, Inc. Additional Comments at 5–6.

³¹² See, e.g., Authors Alliance Initial Comments at 3; Auto Care Initial Comments at 9.

³¹³ See DIYAbility Initial Comments at 7; Learning Disabilities Ass'n of Am. (“LDAA”) Initial Comments at 2; Marjorie Anderson Initial Comments at 1.

³¹⁴ Kernochan Center Initial Comments at 6–7; see also ESA Initial Comments at 15; Tr. at 33:17–34:02 (May 20, 2016) (Sheffner, MPAA).

³¹⁵ AIPLA Initial Comments at 2–3.

³¹⁶ See *Register's Perspective on Copyright Review: Hearing Before the H. Comm. on the Judiciary*, 114th Cong. 29–30 (2015) (statement of Maria A. Pallante, Register of Copyrights and Dir., U.S. Copyright Office); 2015 Recommendation at 4–5.

such assistance.³¹⁷ Others advocated a narrower change to allow the Librarian to adopt exemptions for third-party assistance through the rulemaking on a case-by-case basis.³¹⁸

To assess the need for legislation, the Office first addresses the threshold question of whether, or to what extent, third-party assistance is prohibited under current law. Case law to date offers little guidance on this question, and commenters were sharply divided. Some user groups argued that a service whose “primary purpose” is something other than circumvention falls outside the scope of the service bar, even if it incidentally involves circumvention. EFF explained:

For example, a comprehensive auto repair service may incidentally require circumvention of access controls on vehicle software in order to access diagnostic data or adjust settings. Such a service would not be “primarily designed or produced for the purpose of circumventing a technological measure,” as the primary purpose of the service is the repair, not the circumvention. Likewise, such a service would have a “commercially significant purpose” other than circumvention and would not likely be “marketed . . . for use in circumvention.”³¹⁹

While acknowledging that auto repair may be a unique circumstance, copyright owners generally disagreed, pointing out that the ultimate purpose of any circumvention service will always be something beyond circumvention itself.³²⁰ They further argued that any implied right to third-party assistance for exemption beneficiaries is expressly precluded by section 1201(a)(1)(E), which prohibits an exemption granted in the rulemaking from serving as a defense in an action to enforce any other provision of title 17.³²¹ Some also suggested that the prohibition on the trafficking of “any . . . service . . . or part thereof, that . . . is primarily designed or produced for the purpose of circumventing”³²²

³¹⁷ See, e.g., ISRI Initial Comments at 15; Am. Ass’n of Law Libraries (“AALL”) Additional Comments at 3; Mozilla Additional Comments at 4.

³¹⁸ See, e.g., Authors Alliance Initial Comments at 3–4; Maryna Koberidze Initial Comments at 3.

³¹⁹ EFF Initial Comments at 10–11 (citations omitted); see also Consumer Tech. Ass’n (“CTA”) Initial Comments at 3–6 (suggesting that Congress did not intend the DMCA “to in any way limit the authority of manufacturers and retailers to address the legitimate concerns of their customers”).

³²⁰ See AAP, ESA, MPAA & RIAA Additional Reply Comments at 14 (“[V]ery few people engage in circumvention for its own sake. If a customer is attracted to a service not because she is interested in circumvention, but because she wants to create copies of Blu-ray Discs or play pirated copies of video games on a console, that service is of course prohibited by Section 1201 (as it should be).”).

³²¹ AAP, ESA, MPAA & RIAA Additional Reply Comments at 13.

³²² 17 U.S.C. § 1201(a)(2), (b)(1) (emphasis added).

demonstrates that the statute covers services involving only incidental circumvention.³²³ Others noted that some of the permanent exemptions extend to the anti-trafficking provisions, arguing that where Congress intended to create an exception to those provisions, it did so expressly.³²⁴

There is also some question concerning the relevance, if any, of the Unlocking Act to this analysis. As discussed, that legislation provides that circumvention under any exemption granted by the Librarian to permit cellphone unlocking may “be initiated . . . by another person at the direction of the [device] 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.”³²⁵ In the sixth triennial rulemaking recommendation, the Office read that language to indicate that Congress did not understand third-party assistance to be permitted outside that specific context: “The fact that Congress felt compelled to take this action in connection with unlocking indicates that Congress believed it was necessary to amend the law to permit circumvention ‘at the direction of the owner.’”³²⁶ Some commenters however, disputed that the Unlocking Act created a negative inference against the lawfulness of third-party assistance generally.³²⁷

Ultimately, the Office concludes that there 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. The Office appreciates that amending the anti-trafficking provisions themselves to address third-party assistance might prove to be a difficult exercise in line-drawing, while posing risk to the digital platforms incentivized by the statute. But the legal doubt on whether users can seek out assistance presents a legitimate concern for exemption beneficiaries, many of whom may be increasingly frustrated by a lack of access to the tools or skills required to make use of exemptions, particularly when trying to engage in activities, such as automobile repair, that simply did not implicate copyright in the analog world. The Office believes it is important that intended users of

³²³ Tr. at 190:08–18 (May 25, 2016) (Metalitz, AAP, MPAA & RIAA). This echoes a holding in *321 Studios v. Metro Goldwyn Mayer Studios, Inc.*, which found DVD copying software to be an illicit circumvention tool because one feature of the software was to unlock CSS protected DVDs, in violation of the “part thereof” aspect of the prohibition. 307 F. Supp. 2d 1085, 1098 (N.D. Cal. 2004). The court also found that the software at issue was expressly marketed as a circumvention tool. *Id.* at 1098–99.

³²⁴ SIIA Initial Comments at 3; Copyright Alliance Additional Comments at 4.

³²⁵ Unlocking Act § 2(c), 128 Stat. at 1751–52.

³²⁶ 2015 Recommendation at 247.

³²⁷ *See, e.g.*, CTA Initial Comments at 9 (“[I]n reporting out the final version of the bill that reversed the Librarian’s denial, the Senate Judiciary Committee was emphatic that it intended *no positive or negative inference* with respect to the Librarian’s authority in other exemption proceedings.”) (citations omitted); EFF Initial Comments at 11.

exemptions can take full advantage of them even if this requires aid from third parties. Accordingly, the Office believes that a targeted statutory amendment authorizing the provision of assistance to exemption beneficiaries in appropriate circumstances is advisable.³²⁸

As the Office has suggested previously,³²⁹ one approach would be for Congress to adopt legislation giving the Librarian the discretion, as part of the triennial rulemaking, to explicitly permit circumvention performed “at the direction of” intended beneficiaries of a temporary regulatory exemption.³³⁰ This limited amendment, focused on service providers, may avoid concerns over downstream control issues associated with authorizing the distribution of circumvention tools. The Office acknowledges that some commenters opposed even this expansion of the rulemaking. But most of these concerns appear primarily directed at the development and distribution of tools, and not the ability to use a service technician to engage in an otherwise exempted activity on behalf of an exemption beneficiary.³³¹ While the Office does not recommend amending the anti-trafficking provisions to allow the broad provision of circumvention services outside the scope of the rulemaking, it remains optimistic that a targeted amendment to section 1201(a)(1)(C), based on the language in the Unlocking Act, might be worthwhile to facilitate the usability of exemptions supported by the rulemaking record. To

³²⁸ See 2015 Recommendation at 4 (“Congress may wish to consider clarifications to section 1201 to ensure that the beneficiaries of exemptions are able to take full advantage of them even if they need assistance from third parties.”).

³²⁹ See *id.* at 5 (“Congress may wish to consider [an] amendment to section 1201 to address these sorts of situations, for example, by expressly allowing the Librarian to adopt exemptions that permit third-party assistance when justified by the record.”).

³³⁰ Because allowing circumvention “at the direction” of a user may not be necessary for all exemptions, the Office recommends a narrow statutory change permitting individual consideration of such exemptions as part of the triennial rulemaking, rather than a broader statutory change establishing a blanket exemption.

³³¹ See, e.g., AAP, MPAA & RIAA Initial Comments at 14 (“AAP, MPAA, and RIAA oppose amending the statute to allow the Librarian to grant exemptions to the anti-trafficking prohibitions. As stated above, tools designed to enable lawful uses would inevitably also enable unlawful uses as there is no way to effectively control the application of such tools once they are in the stream of commerce.”); Copyright Alliance Initial Comments at 13 (“There is no justification for amending Section 1201 to allow the adoption of exemptions to the prohibition on circumvention that can extend to exemptions to the anti-trafficking prohibitions. . . . Once [circumvention] tools are available in the marketplace, even for ostensibly lawful purposes, they will inevitably become useful for unlawful purposes, making them virtually impossible to police, and very likely leading to an even more aggressive ‘arms race’ as described above.”); DVD CCA & AACS LA Initial Comments at 16 (“DVD CCA and AACS LA object to any proposal that would encourage the development of a legitimate marketplace for circumvention tools or circumventing products.”).

effectuate this authority, Congress may need to consider the amendment's interaction with the anti-trafficking provisions.³³² Additionally, and as discussed further below, consideration of such a change would need to take into account any potential interactions with U.S. trade obligations.

In the meantime, the Office will consider changes to the administration of the rulemaking that could lead to clarification of the law in this area. In the past, the Office has declined to recommend exemptions allowing circumvention on behalf of another person, noting that such exemptions "may implicate the anti-trafficking provision set forth in section 1201(a)(2) and (b)."³³³ For example, in the most recent rulemaking, the Office did not recommend an exemption for circumvention for vehicle repair or modification activity done "on behalf of" the vehicle owner.³³⁴ Even if such circumvention might itself qualify as a noninfringing use, the Office declined to recommend an exemption because it might separately constitute an unlawful service under subsections (a)(2) and (b).

Given the uncertain scope of the service bar, one approach may be for the Office in the future to consider exemptions that define the class of eligible users less restrictively.³³⁵ The Office has previously taken this approach in other instances. For example, the current regulatory exemption for assistive technology requires that a blind person or other person with disabilities, as defined under section 121, must lawfully acquire a literary work, but does not specify who may engage in the actual circumvention.³³⁶ This practice need not alter the Office's decision that it could not endorse circumvention "on behalf of" the vehicle owner, or other phrasing that could implicate the statutory prohibition on services; the Office continues to believe that it cannot affirmatively recommend exemption language that is likely to be read to authorize unlawful

³³² 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.").

³³³ 2015 Recommendation at 246–47.

³³⁴ *Id.*

³³⁵ This approach appears supported by section 1201(a)(1)(C)'s reference to permitting "users of a copyrighted work" to engage in circumvention, as opposed to "owners" of a work. 17 U.S.C. § 1201(a)(1)(C).

³³⁶ 37 C.F.R. § 201.40(b)(2) (2015) (referring to works "lawfully obtained by a blind or other person with a disability, as such a person is defined in 17 U.S.C. 121," while not specifying the parties able to engage in the underlying circumvention); *see also* DVD CCA & AACCS LA Additional Reply Comments at 5 (suggesting that prior exemptions "at least implicitly authorized librarians to assist professors and other exemption beneficiaries" in circumventing access controls on DVDs for instructional purposes).

trafficking activity.³³⁷ Nor is the Office expressing a view on the legal question of whether there are certain forms of third-party assistance that may not rise to the level of prohibited “service[s].” But because that question is both untested and outside the scope of the rulemaking, the Office, where appropriate, will seek to avoid recommending unduly narrow definitions of exemption beneficiaries. This may provide greater opportunity for the courts to provide guidance on the proper construction of the anti-trafficking provisions.³³⁸

The Office also considered additional approaches raised in this proceeding, including the use of voluntary initiatives to facilitate cooperation between rightsholders and end users,³³⁹ and the establishment of a regulatory scheme for the licensing of circumvention service providers (the so-called “locksmith” system).³⁴⁰ At this time, however, the Office finds the record on these proposals insufficient to issue a specific recommendation. The Office encourages discussion between stakeholders on these proposals and will continue to monitor any developments.

C. Permanent Exemptions

As explained above, the circumvention and anti-trafficking prohibitions exist in concert with a list of activities that are permanently exempted from these prohibitions. In the written comments and during the roundtables, there was considerable discussion about whether the existing permanent exemptions have kept up with evolving technologies, or

³³⁷ Thus, the Office does not agree with commenters to the extent they argued that the Librarian is authorized to adopt such language. *See, e.g.*, EFF Initial Comments at 11; USC Intellectual Prop. & Tech. Law Clinic (“IPT USC”) Initial Comments at 11; AAA Initial Reply Comments at 4.

³³⁸ *See* Tr. at 68:20–69:19 (May 20, 2016) (Schwartz, CTA) (stating that courts will not hesitate to allow actions against parties violating the trafficking provisions even if the Copyright Office grants exemptions that arguably extend to certain prohibited trafficking activities).

³³⁹ *See* Auto Alliance Initial Comments at 8–9 (citing the Memorandum of Understanding used in the auto industry to facilitate the distribution of circumvention tools and the provision of services and parts by third-party repair shops and aftermarket producers); DVD CCA & AACS Initial Comments at 15 (“DVD CCA and AACS LA have repeatedly stated a willingness to discuss issues with bona fide proponents to ascertain whether a voluntary solution could be reached.”); Tr. at 60:09–62:19 (May 20, 2016) (Kupferschmid, Copyright Alliance) (suggesting that voluntary initiatives are more flexible than legislation).

³⁴⁰ *See* Tr. at 23:08–24:15 (May 20, 2016) (Adler, AAP); Tr. at 41:15–42:13 (May 20, 2016) (Love, Knowledge Ecology Int’l (“KEI”). For an example of a voluntary initiative, see Jason Koebler, *Apple Has Quietly Made its Secretive ‘iPhone Calibration Machine’ Available to Repair Shops*, MOTHERBOARD (June 5, 2017), https://motherboard.vice.com/en_us/article/apple-has-quietly-made-its-secretive-iphone-calibration-machine-available-to-repair-shops (reporting that Apple recently initiated a pilot program to provide some authorized, independent repair companies a proprietary tool that is necessary to repair newer iPhone home buttons).

whether legislative reform is warranted to update the existing exemptions or to add new categories of permitted activities. While most commenters favored some reform of the permanent exemption framework, others opposed any statutory change, arguing that changes in technology are best addressed in the triennial rulemaking, which, they stated, was created for just that purpose.³⁴¹ In the following section, the Office analyzes these viewpoints and provides interpretative guidance regarding the operation of the statute. It also offers legislative recommendations in those cases where there is evidence that the current statute is not achieving Congress' objectives, or where it appears that legislative reform may be preferable to evaluating new or expanded temporary exemptions through the triennial rulemaking.

1. Existing Permanent Exemptions

a. 1201(f) Exemption for Reverse Engineering

The Copyright Office studied whether section 1201(f), which exempts certain reverse engineering activities from the anti-trafficking prohibitions as well as the anticircumvention ban, is sufficiently robust to accommodate emerging technology. As explained above, section 1201(f) has three interconnected parts:

- 1201(f)(1) provides an exemption to section 1201(a)(1) under which a person may circumvent an access control on a computer program “for the sole purpose of identifying and analyzing those elements of the program that are necessary to achieve interoperability of an independently created computer program with other programs.”³⁴²
- 1201(f)(2) provides that a person may “develop and employ” circumvention tools for either of two purposes: “[1] in order to enable the identification and analysis under paragraph (1), or [2] for the purpose of enabling operability of an independently created computer program with other programs.”³⁴³
- 1201(f)(3) provides that the information and tools referred to in the preceding paragraphs “may be made available to others . . . solely for the purpose of

³⁴¹ See, e.g., AAP, MPAA & RIAA Initial Comments at 15 (stating that the joint commenters “are not aware of any circumstances that would rise to the level of justifying legislative revision of section 1201,” that “[v]ery little litigation has touched on the scope and interpretation of the existing statutory exceptions to the anti-circumvention and anti-trafficking prohibitions,” and “[i]f they were not serving their purpose, litigation in the areas addressed by the statute likely would be more common”); see also BSA Initial Comments at 1–2; Copyright Alliance Initial Comments at 13–14; ESA Reply Comments at 2; SIIA Additional Comments at 3.

³⁴² 17 U.S.C. § 1201(f)(1).

³⁴³ *Id.* § 1201(f)(2) (numbers in brackets added).

enabling interoperability of an independently created computer program with other programs” so long as doing so does not constitute infringement or violate other applicable law.³⁴⁴

The main question is the extent to which section 1201(f) allows the circumvention of access controls to achieve interoperability generally, with many expressing concern that section 1201(f) is too restrictive and overly limited to circumvention for purposes of conducting identification and analysis related to interoperability.³⁴⁵ Conversely, many copyright owners opined that limiting circumvention to purposes of identification and analysis of programmatic elements necessary to achieve interoperability is consistent with congressional intent, and suggested that concerns are “overstated,” particularly as the triennial rulemaking is available as a failsafe to address additional uses.³⁴⁶ ORI, however, argued that paragraphs (f)(2) and (f)(3) “make clear that software that enables interoperability can be developed and distributed to users, who can then use that software.”³⁴⁷

The few cases in which courts have addressed section 1201(f) have not resolved this ambiguity. In *Lexmark*, the Sixth Circuit reversed the dismissal of a section 1201(f)-based interoperability defense by a competitor who allegedly circumvented TPMs to enable interoperability with its own printing cartridges.³⁴⁸ The Eighth Circuit subsequently

³⁴⁴ *Id.* § 1201(f)(3).

³⁴⁵ See, e.g., Consumers Union Additional Reply Comments at 4 (proposing an amendment to “cover not only analyzing the software in a product that would enable interoperability with other products, but also adapting the software to enable interoperability”); EFF Initial Comments at 12 (proposing expanding the exemption to codify the Office’s conclusions in recent rulemakings that “modifying software as necessary to render it compatible with other software is likely to be non-infringing”); Mozilla Initial Comments at 3.

³⁴⁶ AAP, ESA, MPAA & RIAA Additional Reply Comments at 12 (“By limiting the scope of the exemption to identification and analysis, Congress conveyed that circumvention to gain access to software for the purpose of copying and adapting it and including it in a new product, or merely for the purpose of obtaining access to a work beyond that which has been purchased or licensed, is not necessarily fair use.”); see also SIIA Initial Reply Comments at 5 (“[T]he exemption in 1201(f), combined with the rulemaking function, sufficiently handles any needs of interoperability.”).

³⁴⁷ ORI Additional Comments at 3–4; see also CTA Additional Comments at 4 (stating that section 1201 “was not meant to restrict interoperability in a post-sale, aftermarket environment”).

³⁴⁸ *Lexmark*, 387 F.3d at 550–51. While the Sixth Circuit dismissed *Lexmark*’s section 1201(a) claim on the ground that Static Control had not circumvented an effective TPM, thus eliminating the need for a section 1201(f) defense, it also explained its disagreement with the district court’s dismissal of that defense, reasoning that “the issue could become relevant at the permanent injunction stage.” *Id.*

identified four elements required to prevail on a section 1201(f) defense.³⁴⁹ Neither opinion, however, addressed whether section 1201(f) could more generally be read to permit circumvention for the purpose of *enabling* interoperability, or whether it is limited to identification and analysis of elements necessary to achieve interoperability. In another case, the Southern District of New York rejected a section 1201(f) defense, finding that code developed to circumvent technological measures protecting DVDs was not developed “for the sole purpose” of achieving interoperability and that the defendants did not engage in reverse engineering themselves, but only disseminated the code after the fact.³⁵⁰ While that court did not also address whether section 1201(f) could exempt activities for interoperability that did not involve identification and analysis, in an earlier opinion, the court stated that, “[s]ection 1201(f) permits reverse engineering of copyrighted computer programs only and does not authorize circumvention of technological systems that control access to other copyrighted works, such as movies.”³⁵¹ Some copyright owners relied upon this litigation to express concern that a broader exemption could enable bad actors to exploit the exemption for piracy purposes.³⁵²

The Copyright Office has noted “the importance of preserving the ability to develop products and services that can interoperate with software-enabled consumer products.”³⁵³ The Office’s recent study on *Software-Enabled Consumer Products* (which expressly did not address section 1201) concluded that “statutory change [to the Copyright Act] is not warranted” because, *inter alia*, courts have regularly applied the fair use doctrine to permit uses of software ensuring interoperability with new products and devices.³⁵⁴

³⁴⁹ *Davidson & Assocs. v. Jung*, 422 F.3d 630, 641–42 (8th Cir. 2005) (“To successfully prove the interoperability defense under § 1201(f), [defendants] must show: (1) they lawfully obtained the right to use a copy of a computer program; (2) the information gathered as a result of the reverse engineering was not previously readily available to the person engaging in the circumvention; (3) the sole purpose of the reverse engineering was to identify and analyze those elements of the program that were necessary to achieve interoperability of an independently created computer program with other programs; and (4) the alleged circumvention did not constitute infringement.”).

³⁵⁰ *Reimerdes*, 111 F. Supp. 2d at 320.

³⁵¹ *Universal City Studios, Inc. v. Reimerdes*, 82 F. Supp. 2d 211, 218 (S.D.N.Y. 2000).

³⁵² See Tr. at 133:16–135:02 (May 20, 2016) (Dow, Walt Disney Co.) (citing *Corley*, 273 F.3d 429).

³⁵³ SOFTWARE STUDY at 52; see also 2015 Recommendation at 159–64 (recommending unlocking exemption and noting “interoperability is favored under the law”).

³⁵⁴ SOFTWARE STUDY at 51–52, 59–60 (citing *Sega*, 977 F.2d at 1527–28 (holding that reverse engineering to make a video game console interoperable with defendant’s video games was a fair use) and *Sony Comput. Entm’t, Inc. v. Connectix Corp.*, 203 F.3d 596, 608 (9th Cir. 2000) (holding

As explained above, however, violations of section 1201(a) must be evaluated separately from questions of copyright infringement. In prior rulemakings, the Office has suggested that section 1201(f) is unclear whether a person may circumvent for interoperability purposes if that person does not also perform an identification and analysis of the programmatic elements necessary to achieve interoperability. In other words, even though paragraphs (f)(2) and (f)(3) contemplate the creation and distribution of information or circumvention tools to others “for the purpose of enabling interoperability,” they do not provide an express exemption to the circumvention bar under section 1201(a)(1).³⁵⁵ Paragraph (f)(1), however, does provide an express exemption from liability under paragraph (a)(1), but only if circumvention is “for the sole purpose” of performing identification and analysis.³⁵⁶ For example, when recommending an exemption for jailbreaking smartphones in 2010, the Register remarked that

[i]n enacting Section 1201(f), Congress provided that one who created a circumvention tool (a “means”) to enable an independently created computer program to interoperate with a computer program (including a bootloader or an operating system) would be permitted to provide that circumvention tool to others so that they may use the tool to enable an independently created computer program to interoperate with another computer program when such activity is noninfringing. Since Congress determined that it is lawful to make such tools and provide them to others for such purposes, it is difficult to imagine why Congress would nevertheless have wished to make it unlawful for others to use the tools for the purposes for which they were lawfully provided.³⁵⁷

The Register continued to note ambiguity in the statutory language when recommending multiple exemptions related to interoperability purposes, including cellphone unlocking and jailbreaking, in 2012³⁵⁸ and 2015.³⁵⁹

that reverse engineering to allow playing of PlayStation video games on a desktop computer was a fair use)).

³⁵⁵ 17 U.S.C. § 1201(f)(2)–(3).

³⁵⁶ *Id.* § 1201(f)(1).

³⁵⁷ 2010 Recommendation at 92.

³⁵⁸ 2012 Recommendation at 71, 92 (noting that the Register was “confronted with an arguably ambiguous statute, the apparent purpose of which does not appear precisely to match its language”).

³⁵⁹ 2015 Recommendation at 337 n.2295 (recommending exemption for preserving video games and noting that ambiguity creates “significant doubt” regarding the applicability of section 1201(f)); *id.* at 206 n.1339 (jailbreaking smart televisions); *id.* at 368 n.2481 (3D printers); *id.* at 160

After considering the legislative history and purpose of the exemption, however, the Office now believes that section 1201(f)'s meaning is fairly clear. In establishing an exemption for reverse engineering,³⁶⁰ Congress aimed to “foster competition and innovation in the computer and software industry”³⁶¹ by allowing “legitimate software developers to continue engaging in certain activities for the purpose of achieving interoperability” to the extent permitted by prior law.³⁶² Multiple legislative history reports state that section 1201(f) was intended to preserve the effect of existing case law in this area, including specifically the Ninth Circuit’s decision in *Sega Enterprises Ltd. v. Accolade, Inc.*³⁶³ In that case, Sega, a video game manufacturer, brought copyright and trademark claims against Accolade, a manufacturer of games compatible with Sega’s Genesis console. Accolade used a device called a decompiler to “transform[] the machine-readable object code contained in . . . Sega’s game cartridges into human-readable source code,” which it used to determine the interface specifications for the Genesis.³⁶⁴ Then, Accolade copied into its game cartridges a small segment of initialization code contained in Sega cartridges used to prevent the playing of pirated games. By doing so, Accolade enabled its games to interoperate with the Genesis console.

The Ninth Circuit rejected Sega’s claims. As to its copyright claim, the court held that because “disassembly is the only means of gaining access to those unprotected aspects of the program, and because Accolade has a legitimate interest in gaining such access (in order to determine how to make its cartridges compatible with the Genesis console),” Accolade’s use of Sega’s code, including “the code which ‘unlocks’ the . . . console,” was

n.1028 (unlocking smartphones); *id.* at 307–08 (security research); *see also id.* at 192 (jailbreaking smartphones).

³⁶⁰ In a separate context, the Supreme Court has defined reverse engineering as “starting with the known product and working backward to divine the process which aided in its development or manufacture.” *Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470, 476 (1974).

³⁶¹ SENATE JUDICIARY COMMITTEE REPORT at 13; *see also* HOUSE MANAGER’S REPORT at 13 (stating that section 1201(f) is intended to “avoid hindering competition and innovation in the computer and software industry”).

³⁶² SENATE JUDICIARY COMMITTEE REPORT at 13; HOUSE MANAGER’S REPORT at 14.

³⁶³ *See* SENATE JUDICIARY COMMITTEE REPORT at 13 (“The objective is to ensure that the effect of current case law interpreting the Copyright Act is not changed by enactment of this legislation for certain acts of identification and analysis done in respect of computer programs. *See, Sega Enterprises Ltd. v. Accolade, Inc.*, 977 F.2d 1510[] (9th Cir. 1992).”); HOUSE MANAGER’S REPORT at 14 (“[T]he goal of this section is to ensure that current law is not changed, and not to encourage or permit infringement.”); COMMERCE COMMITTEE REPORT at 42 (same).

³⁶⁴ *Sega*, 977 F.2d at 1514.

a fair use.³⁶⁵ The court also rejected Sega's Lanham Act-based challenges to Accolade's use of code to bypass Sega's authentication sequence—an act which, if considered through the lens of section 1201, might reasonably be considered a circumvention of Sega's access control. The court held that although Accolade's use of the initialization code resulted in the display of Sega's trademark on the user's screen, Sega could not prevail on its claims of trademark infringement and false designation of origin. Because the initialization code had "the effect of regulating access to" the Genesis console, and because there was no industry awareness of "any feasible alternate method of gaining access," the court held that Sega was primarily responsible for any resulting consumer confusion and that Accolade should be permitted to continue its activities.³⁶⁶ In reaching that conclusion, the court noted that Accolade's objective—"to make its video game programs compatible with" the Genesis—"was a legitimate and a lawful one."³⁶⁷

Section 1201(f) reflects Congress' determination that activities such as Accolade's would continue to be permissible notwithstanding the new protections for TPMs. First, section 1201(f)(1) preserves the court's holding that reverse engineering for legitimate interoperability analysis is a noninfringing use. In *Sega*, the Ninth Circuit held that "disassembly of copyrighted object code is, as a matter of law, a fair use of the copyrighted work if such disassembly provides the only means of access to those elements of the code that are not protected by copyright and the copier has a legitimate reason for seeking such access."³⁶⁸ Accordingly, section 1201(f)(1) permits circumvention "for the sole purpose of identifying and analyzing those elements of the program that are necessary to achieve interoperability of an independently created computer program with other programs, and that have not previously been readily available to the person engaging in the circumvention."³⁶⁹

Second, section 1201(f)(2) reflects Congress' acknowledgement that reverse engineering activities similar to Accolade's may require the development and use of circumvention tools. Although the legislative history states that decompilers and other "generally available" computer-programming tools are not covered by the anti-trafficking provisions, it notes that "[i]n certain instances, it is possible that a person may have to develop special tools to achieve the permitted purpose of interoperability."³⁷⁰ Section 1201(f)(2) thus creates an exemption to the anti-trafficking provisions allowing a person to "develop and employ technological means to circumvent a technological measure . . .

³⁶⁵ *Id.* at 1520, 1524 n.7.

³⁶⁶ *Id.* at 1528.

³⁶⁷ *Id.* at 1529.

³⁶⁸ *Id.* at 1518.

³⁶⁹ 17 U.S.C. § 1201(f)(1).

³⁷⁰ HOUSE MANAGER'S REPORT at 15.

in order to enable the identification and analysis” set out in paragraph (f)(1).³⁷¹ In addition, Accolade included code in its games to render them interoperable with Sega’s console.³⁷² The second clause of section 1201(f)(2) accommodates this scenario, permitting the development and use of circumvention tools “for the purpose of enabling interoperability of an independently created computer program with other programs.”³⁷³

Third, section 1201(f)(3)—which, unlike the earlier subparts of section 1201(f), is not limited to either the anticircumvention or the anti-trafficking provisions—recognizes that the effect of the *Accolade* decision, in protecting Accolade’s inclusion of circumvention code in games offered to consumers,³⁷⁴ also implicitly authorized consumers to use this code to play Accolade games on Sega consoles. As noted, Accolade “added the [initialization] code to . . . all games,”³⁷⁵ thus giving consumers the means to circumvent the access control on the Genesis console. Congress codified this result in section 1201(f)(3), which authorizes persons qualifying under sections 1201(f)(1) or (f)(2) to make “available to others” the information acquired during the reverse engineering process and the “means” for enabling interoperability “solely for the purpose of enabling interoperability of an independently created computer program with other programs.”³⁷⁶ Thus, while the statute is not free from ambiguity, the Office believes that section 1201(f)(3)’s authorization to make circumvention tools and information available to others for the purpose of achieving interoperability must be read to correspondingly authorize recipients—including individual consumers—to use the tools for that purpose, provided the other statutory requirements are satisfied. The

³⁷¹ 17 U.S.C. § 1201(f)(2); *see also* COMMERCE COMMITTEE REPORT at 42–43 (discussing the need to “develop special tools to achieve the permitted interoperability”).

³⁷² *Sega*, 977 F.2d at 1515–16.

³⁷³ 17 U.S.C. § 1201(f)(2).

³⁷⁴ As noted, the relevant code included the SEGA trademark, and, in disposing of Lanham Act claims, the court noted that the code “has the effect of regulating access to the Genesis III console,” which “serves to limit competition in the market for Genesis-compatible games.” *Sega*, 977 F.2d at 1528–30.

³⁷⁵ *Id.* at 1516.

³⁷⁶ 17 U.S.C. § 1201(f)(3). The Senate Judiciary Committee Report refers to section 1201(f)(3) as a means to allow third parties to assist reverse engineers in their efforts. *See* SENATE JUDICIARY COMMITTEE REPORT at 33 (“This subsection allows developers of independently created software to rely on third parties either to develop the necessary circumvention tools or to identify the necessary information to achieve interoperability.”). But the statutory language does not limit that provision to sharing information with third-party developers. Moreover, the *Sega* opinion—which the same report describes as unaffected by the statute, *see id.* at 13—contemplates use of the relevant tools by consumers.

Office therefore agrees that under certain circumstances sections 1201(f)(2) and (3) already allow “circumvention after reverse engineering has been performed.”³⁷⁷

While section 1201(f) therefore permits legitimate user acts of creating, distributing, and using circumvention tools for interoperability purposes, it also contains a series of important safeguards to protect the legitimate interests of copyright owners.³⁷⁸ To start, the exempted activities may not constitute infringement or, with respect to section 1201(f)(3), violate other applicable law.³⁷⁹ Next, circumvention must be “solely for the purpose of enabling interoperability.”³⁸⁰ Both case law and past rulemakings suggest that evidence of market alternatives to circumvention can be used to infer that a purpose is for reasons other than interoperability.³⁸¹ In addition, the statute requires that “an independently created computer program” be made interoperable with other computer programs.³⁸² Thus, in the 2015 rulemaking, the Register concluded that section 1201(f) would not cover cellphone unlocking, because circumvention in that context is done “to allow a device to connect to an alternate wireless network,” not to make the device interoperable with an independently created computer program.³⁸³ Finally,

³⁷⁷ ORI Additional Comments at 4. An example may be remanufacturing print cartridges to make them interoperable with a competitor’s printers, which the Office previously noted “could have been lawfully achieved by taking advantage of the defense found in §1201(f).” 2003 Recommendation at 176. It may also allow jailbreaking smartphones, for example, “in order to make the operating system on that phone interoperable with an independently created application . . . [when] the modifications . . . are made purely for the purpose of such interoperability.” 2010 Recommendation at 100 (citations omitted). That being said, the Office will continue to grant exemptions where there is a sufficient evidentiary record in cases where there may be reasonable disagreement as to whether section 1201(f) applies.

³⁷⁸ See HOUSE MANAGER’S REPORT at 15 (“[T]he goal of this section is to ensure that current law is not changed, and not to encourage or permit infringement. Thus, each of the acts undertaken must fall within the scope of fair use o[r] otherwise avoid infringing the copyright of the author of the underlying computer program.”).

³⁷⁹ 17 U.S.C. § 1201(f)(1)–(3); see also 2015 Recommendation at 197–201 (noting that jailbreaking of video consoles was highly correlated to piracy of games).

³⁸⁰ 17 U.S.C. § 1201(f)(3).

³⁸¹ See, e.g., *Reimerdes*, 111 F. Supp. 2d at 320 (rejecting argument that DVD decryption was created to achieve interoperability); 2015 Recommendation at 197–201 (declining to recommend exemption for jailbreaking of video game consoles in part due to existence of market alternatives); 2000 Recommendation and Final Rule at 64,569 (discussing *Reimerdes* and noting “evidence that Linux players are currently being developed” under license).

³⁸² 17 U.S.C. § 1201(f)(1)–(3).

³⁸³ 2015 Recommendation at 160 n.1028.

circumvention under section 1201(f)(3) requires there to have been antecedent acts of reverse engineering under section 1201(f)(1) or 1201(f)(2).³⁸⁴

In light of this construction, the Office is not convinced that amendment of section 1201(f) is currently necessary to allow software engineers or consumers to engage in the legitimate activities to enable the interoperability that Congress intended. The Office hopes that the interpretive guidance provided in this Report will be helpful to some users otherwise hesitant to rely upon the exemption absent clear case law. That said, if Congress wishes to do so, the Office would also welcome legislative clarification of the circumstances under which persons may (or may not) engage in circumvention for interoperability purposes, apart from analyzing elements necessary to achieve interoperability.³⁸⁵ In the meantime, stakeholders can continue to rely on the triennial rulemaking process to obtain exemptions for activities that arguably may fall outside of those covered by section 1201(f).

Finally, the Copyright Office considered requests to expand section 1201(f) to permit reverse engineering for purposes of security research, unrelated to interoperability concerns.³⁸⁶ Although prior rulemakings have addressed the need to engage in reverse engineering for security research,³⁸⁷ as discussed below, the Office concludes that that need is better addressed through the separate exemption for security testing set out in section 1201(j), or the triennial rulemaking, rather than through reform to section 1201(f).

b. 1201(j) Exemption for Security Testing

Since passage of the DMCA in 1998, the unprecedented reliance upon software and digital networks in all facets of American life has brought with it a corresponding explosion of cybersecurity challenges. The statutory exemption for security testing is both a testament to Congress' foresight in accommodating the relationship between

³⁸⁴ 17 U.S.C. § 1201(f)(3); *see also Reimerdes*, 111 F. Supp. 2d at 320 (“Section 1201(f)(3) permits information acquired through reverse engineering to be made available to others only by the person who acquired the information. But these defendants did not do any reverse engineering. They simply took DeCSS off someone else’s web site and posted it on their own.”).

³⁸⁵ One such model is provided in the Breaking Down Barriers to Innovation Act of 2015, which, among other changes, would broaden paragraph (f)(1) to permit circumvention for the purpose of “undertaking activities aimed at achieving interoperability.” H.R. 1883, 114th Cong. § 3(b)(1) (2015); S. 990, 114th Cong. § 3(b)(1) (2015).

³⁸⁶ *See, e.g.,* Rapid7, Bugcrowd & HackerOne Initial Comments at 4 (suggesting that paragraph (f)(1)’s “sole purpose” language “hinders security research” because “interoperability is not necessarily the purpose of security research”); *see also* Timothy Pearson Initial Comments at 1.

³⁸⁷ *See, e.g.,* 2015 Recommendation at 307 (citing 2015 Rulemaking Green Class 25 Supp. at 19–20, https://www.copyright.gov/1201/2015/comments-020615/InitialComments_LongForm_Green_Class25.pdf).

copyright and good-faith security research, and the product of a time when the current digital landscape could not possibly have been anticipated.

As the Office has repeatedly noted, “rules governing security research ‘hardly seem the province of copyright, since the considerations of how safely to encourage such investigation are fairly far afield from copyright’s core purpose of promoting the creation and dissemination of creative works.’”³⁸⁸ Moreover, “[t]here are significant benefits to allowing security researchers to study software-enabled consumer products for potential vulnerabilities and to share their findings with the general public.”³⁸⁹ Indeed, many parts of the government have a vested interest in improving the nation’s cybersecurity, including the Department of Commerce’s Internet Policy Task Force, which “is conducting a comprehensive review of the nexus between cybersecurity challenges in the commercial sector and innovation in the Internet economy.”³⁹⁰ Most recently, the Office’s 2016 report on *Software-Enabled Consumer Products* examined “whether existing copyright law enables or frustrates the public’s ability to engage in security research involving software-enabled consumer products.”³⁹¹ While the study did not examine section 1201, it concluded that “existing copyright law doctrines, properly interpreted, should protect this legitimate activity from infringement liability.”³⁹²

While the Office concluded that existing copyright law doctrines are likely to immunize researchers from infringement concerns, it is less clear that the framework of chapter 12 is similarly accommodating. The constraints of section 1201(j) flow from its original purpose. As noted above, and as the Register explained in 2010, in enacting 1201(j), “Congress appeared to be addressing firewalls and antivirus software that were used on computers, computer systems and networks to protect their respective contents” and “wanted to encourage independent evaluation of such security systems.”³⁹³ But, as past rulemakings, congressional testimony, and comments received in this study reveal, there is a growing need for independent security research that falls outside these bounds. Since 1998, three temporary exemptions have been granted for various security research activities.³⁹⁴ As a result, the two former Registers who have issued recommendations in

³⁸⁸ SOFTWARE STUDY at 44 (quoting 2015 Recommendation at 316).

³⁸⁹ *Id.*; see also 2010 Recommendation at 205.

³⁹⁰ *Cybersecurity*, NTIA, U.S. DEP’T OF COMMERCE, <https://www.ntia.doc.gov/category/cybersecurity> (last visited June 8, 2017).

³⁹¹ SOFTWARE STUDY at 42.

³⁹² *Id.* at 45; see also *id.* at 45–51 (analyzing the idea/expression dichotomy, merger, and *scènes à faire* doctrines, *de minimis* uses, section 117 of title 17, and fair use).

³⁹³ 2010 Recommendation at 196; see also 2015 Recommendation at 308 (quoting same).

³⁹⁴ See Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, 71 Fed. Reg. 68,472, 68,477 (Nov. 27, 2006) (“2006 Final Rule”) (sound

the 1201 rulemakings since section 1201's enactment in 1998 have supported congressional review of 1201(j).³⁹⁵ Others echoed this recommendation, including NTIA³⁹⁶ and a stakeholder who testified in the recent copyright review hearing on chapter 12.³⁹⁷

Against this backdrop, several commenters called for an overhaul of the permanent exemption for security testing under section 1201(j), characterizing the statutory language as insufficient to insulate good-faith security researchers from the reach of the circumvention and trafficking prohibitions. Some noted that security researchers have petitioned for exemptions in the past several rulemakings due to uncertainty over whether section 1201(j) would cover their activities, arguing, for instance, “[t]he fact that it was necessary to petition for exemptions covering security research of medical devices and automobiles, even though security research is already a hardcoded exemption in Section 1201, shows why a much more definitive solution . . . is needed.”³⁹⁸ Comments received were not uniform, however, with others arguing that the statutory language generally strikes an appropriate balance between the interests of researchers and

recordings and audiovisual works); 2010 Final Rule at 43,832–33 (video games); 2015 Final Rule at 65,955–56 (computer programs on a device or machine designed for use by individual consumers).

³⁹⁵ See *Register's Perspective on Copyright Review: Hearing Before H. Comm. on the Judiciary*, 114th Cong. 29 (2015) (statement of Maria A. Pallante, Register of Copyrights and Dir., U.S. Copyright Office); 2010 Recommendation at 205–06.

³⁹⁶ NTIA, Recommendations of the National Telecommunications and Information Administration to the Register of Copyrights 76 (Sept. 18, 2015) (“2015 NTIA Letter”), https://www.copyright.gov/1201/2015/2015_NTIA_Letter.pdf (expressing support for a “broad good faith security exemption”); see also Letter from Lawrence E. Strickling, NTIA, to Marybeth Peters, Register of Copyrights 12 (Nov. 4, 2009), <https://www.copyright.gov/1201/2010/NTIA.pdf> (supporting a “limited exemption that permits research by academic, government, and private entities and individuals”).

³⁹⁷ *Chapter 12 of Title 17: Hearing Before the Subcomm. on Courts, Intellectual Prop. & the Internet of the H. Comm. on the Judiciary*, 113th Cong. 80–81 (2014) (statement of Corynne McSherry, EFF) (“[T]he problem with 1201 is that it has inhibited things like security testing which is all the more important with the proliferation of DRM.”).

³⁹⁸ R Street Institute Initial Comments at 7; see also CDT Initial Comments at 10 (“[R]esearchers have asked for triennial exemptions to allow security research three times, each time citing uncertainty as to the applicability of 1201(j) to their proposed areas of research.”); Tr. at 27:12–19 (May 25, 2016) (Samuelson, Univ. of Cal. Berkeley Sch. of Law) (“[C]omputer security researchers . . . made an effort this year to get exemptions and . . . we were all happy, those of us who care about cyber security, to see that the Office did recognize that there are some legitimate reasons to circumvent that the Office might recognize.”).

copyright owners,³⁹⁹ and suggesting that additional activities are more properly considered through the triennial rulemaking, which can more flexibly respond to marketplace changes.⁴⁰⁰ But the majority supported making 1201(j) more useful, and even some stakeholders content with the current statute acknowledged the legitimate interests of good-faith security researchers.⁴⁰¹

In light of stakeholder comments and the past experiences of the triennial rulemaking, the Copyright Office recommends that Congress consider reforming this exemption to better accommodate a broader range of legitimate security research, without compromising copyright's core objectives. Specifically, as described below, the Office recommends that Congress consider expanding the reach of this exemption, easing the strict authorization requirement for researchers and restrictions on the use of information generated from the research, and abandoning or clarifying the multifactor test. The Office believes that this measured approach will help accommodate critical cybersecurity concerns while preserving the copyright objectives in the anticircumvention provisions. While the Office is not at this time proposing statutory language for reform, it continues to believe that the exemption adopted in 2015 can be a useful starting point, and notes that most of the security researchers who petitioned for that exemption, as well as other commenters, agree.⁴⁰²

³⁹⁹ See, e.g., AAP, ESA, MPAA & RIAA Additional Comments at 2; Copyright Alliance Additional Comments at 2; SIIA Additional Comments at 3.

⁴⁰⁰ See AAP, ESA, MPAA & RIAA Additional Reply Comments at 9–10; DVD CCA & AACS LA Additional Comments at 4.

⁴⁰¹ See SIIA Initial Comments at 3 (noting that the security testing exemption was the result of “careful negotiation” which “successfully balance[d the] legitimate interest [in security testing] against risks of infringement”); BSA Additional Comments at 2–3 (endorsing a “measured approach . . . with respect to existing security research exemptions”). While AAP, ESA, MPAA, and RIAA, filing jointly, oppose legislative reform and suggest that the failure to renew past exemptions allowing for research on TPMs protecting copyrighted works suggests that “those circumstances changed,” it is not clear that as a general rule they oppose otherwise appropriate exemptions, such as to allow for security research on access controls themselves. AAP, ESA, MPAA & RIAA Additional Reply Comments at 9.

⁴⁰² See Prof. Andrea M. Matwyshyn on behalf of Profs. Steven Bellovin, Matt Blaze, Alex Halderman & Nadia Heninger (“Security Researchers”) Additional Comments at 1 (“[T]he language of the granted exemption is suitable for adoption as a permanent exemption”); BSA Additional Comments at 2–3 (“The [2015] security research language . . . reflects the careful consideration that is necessary in evaluating potential changes to Section 1201(j).”); Repair Ass’n & iFixit Additional Comments at 11 (“[W]e urge the Copyright Office and the Congress to make this exemption permanent, while expanding it to cover any goods which contain a computer program.”); see also Tr. at 109:16–19 (May 20, 2016) (Geiger, Rapid7) (“The temporary exemption is a big deal for us. It is extremely helpful.”); Tr. at 27:11–19 (May 25, 2016) (Samuelson, Univ. of

1. *Definition of security testing.* One area for reform that has repeatedly surfaced in the last three rulemakings is the definition of security testing, which the statute limits to “accessing a computer, computer system, or computer network.”⁴⁰³ The issue is that modern security research may involve testing software or the actual access controls protecting a copyrighted work, and it is not clear that the exemption covers such research. For that reason, Register Peters twice recommended an exemption for security research related to TPMs themselves.⁴⁰⁴ She further noted that the rulemaking structure limited the nature of the exemptions that could be granted: “While it may be socially beneficial to permit security testing and research in relation to all classes of works, neither the record nor the statute provide the Librarian with any basis to do so.”⁴⁰⁵ More recently, in 2015, Register Pallante recommended an exemption for security research on computer programs, finding “there is some uncertainty regarding whether section 1201(j) encompasses security research that is primarily focused on testing and identifying flaws in computer programs rather than security systems that protect computer systems.”⁴⁰⁶ Because it has become clear that there is a need for good-faith security researchers to access computer programs and TPMs protecting copyrighted works, the Office recommends that Congress expand the kinds of activities that a security researcher is permitted to perform under sections 1201(j)(1) and 1201(j)(3)(A).

The Office believes that the current temporary exemption for good-faith security research is a good starting point for discussion.⁴⁰⁷ To be sure, some commenters found the scope of even this exemption—which limits the scope of security research to certain devices or machines, namely consumer-facing devices like voting machines, motorized land vehicles, and medical devices—too narrow,⁴⁰⁸ while others characterized it as overbroad.⁴⁰⁹ But as noted above, a group of professors in computer science and related

Cal. Berkeley Sch. of Law) (stating that at a recent “all day workshop with computer security researchers” she learned that they “were all happy . . . to see that [in the 2015 rulemaking] the Office did recognize that there are some legitimate reasons to circumvent”).

⁴⁰³ 17 U.S.C. § 1201(j)(1).

⁴⁰⁴ See 2010 Recommendation at 196 (“Had Congress foreseen the problem, it is reasonable to conclude that it might have addressed the issue in more precise terms. But it appears that Congress did not envision protection measures themselves becoming the source of a security flaw or vulnerability.”); *id.* at 203 n.666 (similar); 2006 Recommendation at 59 (similar).

⁴⁰⁵ 2010 Recommendation at 205.

⁴⁰⁶ 2015 Recommendation at 308.

⁴⁰⁷ See 2015 Final Rule at 65,956; 2015 Recommendation at 319–20.

⁴⁰⁸ See, e.g., Rapid7, Bugcrowd, HackerOne & Luta Security Additional Comments at 4–5; CERT Coordination Ctr. (“CERT”) Additional Comments at 2; EFF Additional Comments at 6–7.

⁴⁰⁹ See, e.g., AAP, ESA, MPAA & RIAA Additional Reply Comments at 9 (“[T]he record before the Copyright Office at that time had focused on cars, medical devices, and voting machines, not on

fields, many of whom had participated in the rulemaking process, opined that the adoption of this exemption “would further buttress security researchers’ ability to engage in good-faith testing, investigation and/or correction of security flaws and vulnerabilities aimed at consumer protection and national security enhancement.”⁴¹⁰

2. *Authorization.* Section 1201(j) requires researchers to obtain “authorization of the owner or operator of [the] computer, computer system, or computer network.”⁴¹¹ Independent security testing, however, appears to be an important component of current cybersecurity practices; a recent NTIA report found that a little more than fifty percent of security researchers work independently.⁴¹² In fact, the Copyright Office recently noted that a growing number of copyright owners, including Google, Facebook, Microsoft, Mozilla, Oracle, and Apple, encourage users to conduct security research, in many cases providing monetary incentives for those who identify problems and potential solutions.⁴¹³

While growing industry practices may encourage independent security research, some companies see value in the authorization requirement in preventing “compromised systems” and the release of proprietary material.⁴¹⁴ But a greater number of commenters urged reform of this requirement, noting that research could be chilled if the owner cannot be located, does not respond, or refuses permission when located.⁴¹⁵ In the past

devices used by consumers to view and listen to expressive works. Thus, the exemption should have been tailored accordingly.”); DVD CCA & AACCS LA Additional Comments at 4–5.

⁴¹⁰ Security Researchers Additional Comments at 1.

⁴¹¹ 17 U.S.C. § 1201(j)(1).

⁴¹² See NTIA, VULNERABILITY DISCLOSURE ATTITUDES AND ACTIONS: A RESEARCH REPORT FROM THE NTIA AWARENESS AND ADOPTION GROUP 4 (2016) (“NTIA VULNERABILITY DISCLOSURE REPORT”).

⁴¹³ SOFTWARE STUDY at 45.

⁴¹⁴ BSA Additional Comments at 2–3 (recognizing that “it may be helpful to provide greater clarity in situations with multiple owners,” but opposing eliminating this provision entirely, because “[u]nsanctioned, unauthorized system access under the guise of ‘security research’ can not only result in compromised systems, but also risks revealing to malefactors sensitive trade secrets, private consumer data, and other proprietary material”).

⁴¹⁵ See, e.g., CDT Initial Comments at 11 (“Due to the interconnected nature of many devices, systems, and networks, . . . determining *which* owner or owners must authorize the research is an increasingly complex task that may not always be possible.”); Rapid7, Bugcrowd & HackerOne Initial Comments at 5 (arguing that “[i]f security research only takes place under circumstances dictated by the owner of the software, it may be difficult for the research to remain impartial, and the owner may prevent or delay publication of research that reflects negatively on the owner’s software,” which “can chill independent security research”); Yifan Lu Additional Reply Comments at 1 (stating that repeated attempts to gain authorization go unacknowledged); Tr. at 110:08–111:09 (May 20, 2016) (Geiger, Rapid7) (noting that “a lot of independent security

rulemaking, the Office recognized that “[i]n some cases, it may be difficult to identify the relevant owner, such as when the focus of the research is on general-purpose software that runs on a wide range of devices, or where the owner of software on a particular device is not known. Moreover, it may not be feasible to obtain authorization even where there is an identifiable owner.”⁴¹⁶ In part due to these concerns, the Register has recommended, and the Librarian granted, multiple exemptions for security research that do not require the researcher to first obtain authorization of the owner of the object being studied.⁴¹⁷

For these reasons, the Copyright Office recommends that Congress add greater flexibility to the current authorization requirement, such as an exception in cases where the owner cannot be reached or is unresponsive, or remove it entirely, similar to the current temporary exemption. While concerns over compromised systems and disclosure of sensitive information should not be minimized, these fears may be already accommodated through other parts of the exemption, including, but not limited to, requirements that research be conducted in good faith, and that information be disclosed without facilitating infringement, impairing security, disclosing trade secrets or business confidential information, or contravening privacy laws.⁴¹⁸ Again, the Office believes that past rulemaking exemptions can be helpful in demonstrating alternate ways to address these concerns without imposing a blanket authorization requirement that may stymie the public policy goal of promoting security research.

3. *Multifactor test.* Section 1201(j)(3) conditions eligibility upon “factors to be considered,” including whether the information derived from the testing is “used solely to promote the security of the owner or operator” or “used or maintained in a manner that does not facilitate infringement under this title or a violation of applicable law other than this section, including a violation of privacy or breach of security.”⁴¹⁹ Many commenters found these provisions confusing because, as CDT put it, the statute “gives

researchers . . . actually receive cease-and-desist letters that reference the DMCA” and stating that the authorization requirement “means that manufacturers themselves get to control completely how the security research takes place and what the publication is like”); Tr. at 128:07–09, 129:01–02 (May 20, 2016) (Geiger, Rapid7) (stating that some manufacturers are difficult to contact); Tr. at 220:17–19 (May 25, 2016) (Samuelson, Univ. of Cal. Berkeley Sch. of Law) (noting “there are . . . times where the firm whose software is being tested is somebody that has reason to not want you to do it”).

⁴¹⁶ 2015 Recommendation at 309 (citing 2015 Rulemaking Green Class 25 Supp. at 21–22, https://www.copyright.gov/1201/2015/comments-020615/InitialComments_LongForm_Green_Class25.pdf).

⁴¹⁷ See, e.g., 2015 Final Rule at 65,963; 2010 Final Rule at 43,839; 2006 Final Rule at 68,480.

⁴¹⁸ 17 U.S.C. § 1201(j)(1)–(3).

⁴¹⁹ *Id.* § 1201(j)(3).

no signal as to how those factors should be weighed.”⁴²⁰ SIIA, a group representing many rightsholders in this space, noted that these factors are intended to be “non-exclusive,” and urged the Office to suggest that industry custom and trade usages could also be considered in determining eligibility for the exemption.⁴²¹

Others objected to the specific language of one or both factors. Rapid7, Bugcrowd, and HackerOne argued, in joint comments, that the first factor—which looks to “whether the information derived from the security testing was used solely to promote the security” of the relevant owner or operator⁴²²—is overly restrictive because “security research may appropriately be undertaken for the benefit of software users or the broader public.”⁴²³ As to the second factor—which considers “whether the information derived from the security testing was used or maintained in a manner that does not facilitate infringement under this title or a violation of applicable law other than this section”⁴²⁴—EFF suggested that it provides inadequate protection because it “threaten[s] liability based upon the actions of third parties outside of the researcher’s control.”⁴²⁵ More generally, CDT observed that regulating the disclosure of security information can implicate First Amendment concerns.⁴²⁶ It noted that disclosure norms “are still evolving” and urged that any statutory changes “leave room for these efforts to comprehensively address disclosure practices.”⁴²⁷

In rulemakings, the Register has acknowledged concerns over these requirements, stating “the multifactor standard in section 1201(j) may be difficult to apply [in cases where] . . . the security research sought would be aimed in part at advancing the state of knowledge in the field, and not ‘solely’ aimed at promoting the security of the owner or operator of the computer, computer system, or computer network (assuming such an

⁴²⁰ CDT Initial Comments at 11; *accord* Repair Ass’n & iFixit Additional Comments at 13.

⁴²¹ SIIA Additional Reply Comments at 2–3 (quoting H.R. REP. NO. 105-796, at 67 (1998) (Conf. Rep.)).

⁴²² 17 U.S.C. § 1201(j)(3)(A).

⁴²³ Rapid7, Bugcrowd & HackerOne Initial Comments at 4.

⁴²⁴ 17 U.S.C. § 1201(j)(3)(B).

⁴²⁵ EFF Additional Comments at 6.

⁴²⁶ CDT Initial Comments at 11 (citing 2015 Recommendation at 311); *see also* Tr. at 228:01–18 (May 25, 2016) (Samuelson, Univ. of Cal. Berkeley Sch. of Law).

⁴²⁷ CDT Initial Comments at 11; *see also* *Multistakeholder Process: Cybersecurity Vulnerabilities*, NTIA, <https://www.ntia.doc.gov/other-publication/2016/multistakeholder-process-cybersecurity-vulnerabilities>; Tr. at 128:03–20 (May 20, 2016) (Geiger, Rapid7) (referencing the multistakeholder process and noting that disclosure “is not really the norm among industries right now”).

owner could be identified),” and that “determining the relevant ‘developer’ to whom information must be disclosed could be difficult if not impossible in some instances.”⁴²⁸

The Office recommends amending the statute to remove the “sole purpose” language and minimize uncertainty created by the multifactor test. The Office agrees that the two factors may be intended to be non-exclusive and have commonsense applications in many cases.⁴²⁹ But in light of emerging industry practices, marketplace reality, and the lack of case law, these two factors are not always the only considerations relevant in evaluating responsible security research, and at any rate, it is not always feasible to consider *ex ante* how these factors will be applied to research. One option would be to replace these factors with language similar to that of the 2015 security research rulemaking exemption: “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”⁴³⁰ An alternative proposed by the Breaking Down Barriers to Innovation Act of 2015, and endorsed by some commenters, would simply eliminate this provision entirely.⁴³¹ Absent legislative reform, the Office agrees with SIIA that it may be helpful to interpret the current provision to also require consideration of industry custom and trade usages, such as the National Institute of Standards and Technology’s (NIST’s) indices or ISO/IEC standards regarding disclosure of security vulnerabilities.⁴³²

4. *Compliance with other applicable laws.* Section 1201(j) exempts security testing only “if such act does not constitute infringement under this title or a violation of applicable law other than this section, including section 1030 of title 18 and those provisions of title 18 amended by the Computer Fraud and Abuse Act of 1986.”⁴³³ Some commenters suggested this clause should be removed because it “compounds both uncertainty and

⁴²⁸ 2015 Recommendation at 309 (citations omitted).

⁴²⁹ See SIIA Additional Reply Comments at 2–3 (citing H.R. REP. NO. 106-464, at 67 (1999) (Conf. Rep.)); AAP, ESA, MPAA & RIAA Additional Reply Comments at 11.

⁴³⁰ 2015 Final Rule at 65,944.

⁴³¹ H.R. 1883, 114th Cong. § 3(a)(1)(F)(iii), (2015); S. 990, 114th Cong. § 3(a)(1)(F)(iii) (2015); see CDT Initial Comments at 11; EFF Initial Comments at 11–12; OTI Initial Comments at 13–15; Repair Ass’n & iFixit Additional Comments at 13 & n.18.

⁴³² SIIA Additional Reply Comments at 3; see also *Common Vulnerabilities and Exposures*, MITRE, <https://cve.mitre.org> (last visited June 9, 2017); 2015 Recommendation at 250 n.1667 (citing comments of Bellovin et al.) (suggesting that a temporary exemption should allow researchers to publicly disclose research results when “a copyright holder fails to comply with the standards set forth in ISO 29147 and 30111”); Rapid7, Bugcrowd, HackerOne & Luta Security Additional Comments at 5 (referencing NIST NVD/CVE); NTIA VULNERABILITY DISCLOSURE REPORT at 4.

⁴³³ 17 U.S.C. § 1201(j)(2).

risk without changing researchers' legal obligations," in light of ambiguity regarding liability standards under the CFAA.⁴³⁴ Similarly, commenters questioned the adoption of similar language in the 2015 temporary exemption.⁴³⁵ While the Copyright Office welcomes further discussion regarding whether a similar clause should continue to be included in an exemption granted through the triennial rulemaking,⁴³⁶ it was not clear from this study that the requirement to comply with other laws impedes legitimate security research; other laws still apply even if the activity is permitted under section 1201. Therefore, the Office does not recommend legislative reform of this provision.

c. 1201(g) Exemption for Encryption Research

Congress adopted section 1201(g), which provides exemptions to both the circumvention and trafficking prohibitions for certain acts of encryption research, to ensure that the anticircumvention laws would not have "the undesirable and unintended consequence of chilling legitimate research activities in the area of encryption."⁴³⁷ Some commenters contended that section 1201(g) does not adequately serve the needs of persons engaged in good-faith encryption research,⁴³⁸ while copyright industry representatives generally disagreed that section 1201(g) warrants legislative change.⁴³⁹ For the reasons outlined below, the Copyright Office suggests that this exemption, like the exemption for security testing, might benefit from revision, specifically the current authorization requirement and multifactor test. In addition, further study, including by involving a broader range of participants, may be worthwhile in formulating concrete legislative proposals.

1. *Authorization.* While section 1201(g)'s requirement of a "a good faith effort to obtain authorization" is more forgiving than the authorization requirement under the security testing exemption, there is a similar concern that it is not always possible to locate and

⁴³⁴ EFF Initial Comments at 6–7; CDT Additional Comments at 4–5; *see also* CDT Initial Comments at 11 ("Alternately, CDT supports simply striking the portions of the statute requiring compliance with other laws and the unspecified consideration of factors, as proposed by the Breaking Down Barriers to Innovation Act."); Rapid7, Bugcrowd & HackerOne Initial Comments at 5 (stating that this requirement "creates additional ambiguity and risks for researchers" because the CFAA has been applied inconsistently by courts in different jurisdictions).

⁴³⁵ *See* Rapid7, Bugcrowd, HackerOne & Luta Security Additional Comments at 4; CDT Additional Comments at 4–5; CERT Additional Comments at 1; EFF Additional Comments at 7.

⁴³⁶ *See* 37 C.F.R. § 201.40(b)(7)(i).

⁴³⁷ COMMERCE COMMITTEE REPORT at 27.

⁴³⁸ *See, e.g.,* USACM Initial Comments at 3–4; Public Knowledge Additional Reply Comments at 1; OTI Initial Comments at 12–15.

⁴³⁹ *See* DVD CCA & AACLS LA Additional Comments at 6; SIIA Additional Comments at 3; AAP, ESA, MPAA & RIAA Additional Reply Comments at 11.

request permission before engaging in fruitful research, and that projects are abandoned out of fear that efforts will be found to fall short of the good-faith requirement.⁴⁴⁰ While AAP, ESA, MPAA, and RIAA emphasized that “[a]ll that is required is a good faith effort to obtain permission”⁴⁴¹—a burden that they regard as reasonable given the expressed willingness of some TPM owners to consider license requests from researchers—others shared instances where security researchers were denied permission to engage in encryption research.⁴⁴² In the 2015 rulemaking, the Office found that, for cryptologists, “obtain[ing] authorization from copyright holders . . . may not always be feasible.”⁴⁴³ In light of these comments, and the growing industry customs and practices described above, the Office recommends removing or amending the authorization requirement.

2. *Multifactor Test.* As is true of section 1201(j), the encryption research exemption includes a list of statutory factors to be considered in determining whether a person qualifies for the circumvention exemption, which include whether and in what manner information derived from the research was disseminated; whether the person is engaged in a legitimate course of study, is employed, or is appropriately trained or experienced, in the field; and whether the person provides the copyright owner with notice of the findings and documentation of the research.⁴⁴⁴ The comments for this study revealed concern that this list creates uncertainty among researchers as to whether their actions would be protected, including concerns that researchers lack sufficient control over the downstream distribution of information derived from the encryption research.⁴⁴⁵ Commenters pointed out that the second factor unfairly penalizes researchers outside of the “field of encryption technology,”⁴⁴⁶ and that the third factor, concerning whether the researcher provides notice to the “copyright owner of the work to which the

⁴⁴⁰ See, e.g., EFF Additional Comments at 6 (arguing that this “means the researcher must invite a potentially negative response from the manufacturer at an early stage, without being given any guarantee that their conduct will be considered lawful”); CDT Additional Comments at 6.

⁴⁴¹ AAP, ESA, MPAA & RIAA Additional Reply Comments at 11; see also DVD CCA & AACCS LA Additional Comments at 6 (“DVD CCA and AACCS LA . . . remain open to the possibility of licensing any reasonable non-infringing use such as security research, security testing, encryption research, and interoperability.”).

⁴⁴² See, e.g., Tr. at 220:17–19 (May 25, 2016) (Samuelson, Univ. of Cal. Berkeley Sch. of Law); Tr. at 110:04–18 (May 20, 2016) (Geiger, Rapid7).

⁴⁴³ 2015 Recommendation at 307.

⁴⁴⁴ See 17 U.S.C. § 1201(g)(3).

⁴⁴⁵ EFF Additional Comments at 6.

⁴⁴⁶ 17 U.S.C. § 1201(g); see EFF Additional Comments at 6.

technological measure is applied” does not apply in all situations.⁴⁴⁷ For many of the same reasons discussed in connection with section 1201(j), the Office believes it is advisable to amend the statute to minimize uncertainty.

3. *Limited definition of encryption research.* One academic commenter expressed concern that the current exemption does not cover other types of research, including circumventing encryption to study a computer virus, detect infringement, or determine whether an item is child pornography.⁴⁴⁸ While the Office agrees that these other activities may be socially beneficial, it is not clear that circumvention aimed at detecting infringement, for example, is best addressed within the confines of an exemption directed at fostering encryption research, rather than through a separate exemption, and so the Office does not see a current need to amend this definition.

4. *Need for study.* Some commenters suggested that it might be beneficial for additional security and encryption researchers to opine as to ways the current exemption may be modernized.⁴⁴⁹ While the Copyright Office believes that the issues identified above, regarding the authorization requirement and multifactor test, are sufficiently ripe for legislative consideration, it agrees that further input that takes into account additional viewpoints as to the needs of modern research could be beneficial when moving forward with concrete legislative proposals.

d. 1201(i) Exemption for Protection of Personally Identifying Information

Despite commenters expressing non-specific concerns regarding section 1201’s relationship to technologies involving the collection of consumer information,⁴⁵⁰ the

⁴⁴⁷ See NTIA VULNERABILITY DISCLOSURE REPORT 6 (“Though . . . fear of legal action is not a barrier per se, it may cause researchers to deviate from their default choices on disclosure. Increasing legal certainty, therefore, is a method that may improve adoption of best practices.”); see also Mozilla Initial Comments at 3–4 (noting a case where a researcher was “threatened with legal action under Section 1201 for attempting to engage with the device manufacturers to report and resolve [discovered security concerns]”); EFF Additional Comments at 6 (stating that, under the current exemption for encryption research, “[a] researcher may be penalized . . . if they publish information in a way that can be used by independent third parties to violate copyright or other laws, or if they fail to communicate with the copyright owner”).

⁴⁴⁸ Pamela Samuelson, *Towards More Sensible Anti-Circumvention Regulations*, 5 NO. 5 CYBERSPACE LAW. 2, 5–6 (2000); see Tr. at 221:14–222:05 (May 25, 2016) (Samuelson, Univ. of Cal. Berkeley Sch. of Law).

⁴⁴⁹ See Tr. at 227:01–12 (May 25, 2016) (Samuelson, Univ. of Cal. Berkeley Sch. of Law); see also Tr. at 232:18–233:01 (May 25, 2016) (Stoltz, EFF).

⁴⁵⁰ See Tr. at 240:21–241:06 (May 25, 2016) (Samuelson, Univ. of Cal. Berkeley Sch. of Law) (“I think it is time to rethink [section 1201(i)] and see whether we can make it something that’s

Office received few substantive comments on section 1201(i), which exempts certain acts of circumvention “solely for the purpose of preventing the collection or dissemination of personally identifying information about a natural person who seeks to gain access to the work protected,” provided that the circumvention does not violate any other law.⁴⁵¹ Practically speaking, one commenter suggested that consumers may lack incentive to use this exemption because this kind of circumvention is “fairly technically challenging” and “device specific.”⁴⁵²

The Office notes that the growing prevalence of internet-connected devices in all facets of life may give rise to privacy concerns far beyond those contemplated at the time of the DMCA’s enactment.⁴⁵³ However, in light of the lack of discussion and the dearth of case law regarding section 1201(i), this provision appears premature for legislative reform. That being said, the Office notes that section 1201(i) includes language requiring that circumvention be “solely for the purpose of” and have the “sole effect” of disabling the collection or dissemination of personally identifying information. As noted above, the Office has recommended amending similar clauses in the security testing and reverse engineering exemptions, based on concerns that this language inhibits circumvention that has other purposes or effects, such as increasing security or promoting research; further study may reveal whether similar reform is advisable for this exemption.⁴⁵⁴

meaningful in this era when we’re all scared about our private information leaking out there and we don’t want people to have access to some of our information and hide it behind some sort of encryption wall that then means that we can’t get our own information.”); Tr. at 158:08–12 (May 20, 2016) (Koberidze) (“All those devices, smartphones, TVs and medical devices. Now we will have Amazon Alexa and then we will have smart homes. And everything will be connected. . . . A lot of privacy issues will arise.”).

⁴⁵¹ 17 U.S.C. § 1201(i)(1)(D). While one commenter suggested that this exemption should be amended to allow for circumvention of access controls on game consoles “to determine if [his or her] personal and non-personal data is being tracked or transmitted to third parties,” *see* starelikemckeehen poker club Initial Comments at 1, ESA responded that this request appears already to be covered under section 1201(i). ESA Reply Comments at 7.

⁴⁵² Tr. at 241:07–21 (May 25, 2016) (Wiens, iFixit).

⁴⁵³ For example, the Federal Trade Commission recently settled a lawsuit with a smart TV manufacturer alleged to have surreptitiously transmitted and sold data related to individual user viewing habits. *See* Lesley Fair, *What Vizio was doing behind the TV screen*, FTC BUS. BLOG (Feb. 6, 2017, 11:05 AM), <https://www.ftc.gov/news-events/blogs/business-blog/2017/02/what-vizio-was-doing-behind-tv-screen>; *see also* Andrew Meola, *How the Internet of Things will affect security & privacy*, BUS. INSIDER (Dec. 19, 2016, 2:43 PM), <http://www.businessinsider.com/internet-of-things-security-privacy-2016-8>.

⁴⁵⁴ The Breaking Down Barriers to Innovation Act would broaden section 1201(i) by removing the requirement that the circumvention be “solely” for the authorized purpose, as well as the requirement that it not violate another law. It also would allow circumvention to protect

2. Proposed New Permanent Exemptions

a. Assistive Technologies

One broadly endorsed potential new exemption was to make permanent an exemption to facilitate access to literary works (*e.g.*, e-books, digital textbooks, and PDF articles) by persons who are blind, visually-impaired, or print-disabled. As adopted in 2015, this exemption permits circumvention of TPMs applied to literary works distributed electronically, where the access controls “either prevent the enabling of read-aloud functionality or interfere with screen readers or other applications or assistive technologies.”⁴⁵⁵ It applies in the following circumstances:

- (i) When a copy of such a work is lawfully obtained by a blind or other person with a disability, as such a person is defined in 17 U.S.C. 121; provided, however, that the rights owner is remunerated, as appropriate, for the price of the mainstream copy of the work as made available to the general public through customary channels, or
- (ii) When such work is a nondramatic literary work, lawfully obtained and used by an authorized entity pursuant to 17 U.S.C. 121.⁴⁵⁶

An assistive technologies exemption has been adopted as a temporary exemption in the past five triennial rulemakings.⁴⁵⁷ Stakeholders testified that the repeated participation in the rulemaking process has become especially burdensome and time-consuming for the blind and print-disabled community, who must rely upon this exemption to access much printed material, without certainty that it will remain in place.⁴⁵⁸ AALL contended that “absent legislation mandating accessible versions of every work, there will always be a gap between the works available for those with and those without print

information about *any* natural person, not just one who seeks to gain access to the work protected. H.R. 1883, 114th Cong. § 3(d); S. 990, 114th Cong. § 3(d).

⁴⁵⁵ 2015 Final Rule at 65,950.

⁴⁵⁶ *Id.*

⁴⁵⁷ 2015 Final Rule at 65,950; 2012 Final Rule, at 65,262; 2010 Final Rule at 43,839; 2006 Final Rule at 68,475; Copyright Office, Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, 68 Fed. Reg. 62,011, 62,014 (Oct. 31, 2003) (“2003 Final Rule”). This exemption has been virtually unchanged, except for 2012, when it was slightly altered, including to encompass literary works that are not in e-book format.

⁴⁵⁸ AFB Initial Comments at 9 (estimating that law students spent 527.2 hours supporting its petition for a renewed exemption); LDAA Initial Comments at 1–2 (“[H]aving to repeat the regulatory process every three years represents an unfair burdening of disability advocacy organizations who must submit comments . . .”).

disabilities.”⁴⁵⁹ This gap, the American Foundation for the Blind (“AFB”) noted, “can make it more difficult for [blind, visually impaired, and print-disabled] individuals to meaningfully participate in all aspects of social and democratic dialogue.”⁴⁶⁰ In joint comments, AFB, the American Council of the Blind, the National Federation of the Blind, Learning Ally, and the Samuelson-Glushko Technology Law & Policy Clinic noted that “[t]he record has consistently supported the need for the exemption to help people who are blind, visually impaired, or print disabled access e-books on equal terms” and argued that this exemption “is the quintessential example of an exemption category that should be made permanent.”⁴⁶¹

The study record did not reveal a substantive value to keeping this exemption in the rulemaking cycle, particularly in light of the burdens placed upon proponents. While a limited number of commenters suggested that an assistive technologies exemption should remain subject to the rulemaking in case emerging technology lessens the need for an exemption,⁴⁶² overall, there was widespread support for the adoption of a permanent exemption. The Office also notes that in past cycles, the temporary exemption has received no opposition and that even some rightsholders supported a permanent amendment.⁴⁶³ Further, even those commenters opposing the addition of a new permanent exemption endorsed the importance of accessibility.⁴⁶⁴

While some copyright owners predicted that the widespread adoption of EPUB 3.0 and HTML5 formats—both released in recent years—“could result in an amelioration or disappearance of the concerns related to disabled read-aloud functionality,”⁴⁶⁵ these

⁴⁵⁹ AALL Additional Comments at 2.

⁴⁶⁰ AFB Initial Comments at 11.

⁴⁶¹ AFB, the Am. Council of the Blind, the Nat’l Fed’n of the Blind, Learning Ally & Samuelson-Glushko Tech. Law & Policy Clinic Additional Comments at 2.

⁴⁶² AAP, ESA, MPAA & RIAA Additional Reply Comments at 4–5 (opining that although they “support in principle that the marketplace must provide accessibility to copyrighted materials for the blind, visually impaired and print disabled,” this exemption should remain a part of the rulemaking process); *see also* DVD CAA & AACS LA Initial Comments at 18 (stating they “are not aware of any additional categories of permanent exemptions that Congress should consider establishing”).

⁴⁶³ *See* Microsoft Corp. (“Microsoft”) Initial Comments at 7–8.

⁴⁶⁴ AAP, ESA, MPAA & RIAA Additional Reply Comments at 4 (“[W]hile AAP, ESA, MPAA and RIAA support in principle that the marketplace must provide accessibility to copyrighted materials for the blind, visually impaired and print disabled, they do not support amending Section 1201 to add a permanent exemption.”).

⁴⁶⁵ *Id.* *But cf.* Microsoft Initial Comments at 7 (expressing support for making exemption permanent and stating, “Microsoft and other technology companies have taken some steps to facilitate the creation of accessible electronic content, but we know we need to do more.”).

industry efforts have not yet staved off the need for a dependable exemption. Indeed, groups representing individuals making use of the temporary exemptions argued that such measures are not a substitute for a permanent exemption. AFB argued that “[i]mposing further civic burdens on disabled individuals and requiring them or their representatives to repeatedly apply for exemptions as a precondition for equal access is deeply insensitive and harmful.”⁴⁶⁶ Further, it was noted that although the rulemaking has granted an assistive technologies exemption since 2003, over 90 percent of books remain unavailable in formats for the print-disabled.⁴⁶⁷

The Copyright Office has previously stated that it “continues to support congressional attention aimed at crafting a digital age update to exceptions in copyright law for persons who are blind or visually impaired.”⁴⁶⁸ In light of the repeated granting of the temporary exemption and the underling public policy of reducing burdens on people who are blind or print-disabled,⁴⁶⁹ the Office believes that it would be appropriate to make this exemption permanent.

This exemption also would be appropriate in light of the recent adoption of the Marrakesh Treaty.⁴⁷⁰ Under that agreement, contracting parties must provide “a limitation or exception to the right of reproduction, the right of distribution, and the right of making available . . . to facilitate the availability of works in accessible format copies for [the blind, visually impaired, or otherwise print disabled].”⁴⁷¹ Further, any protection against circumvention of TPMs may not prevent beneficiaries from enjoyment of such exceptions or limitations.⁴⁷² While the United States can satisfy these requirements through continued adoption of an exemption via the rulemaking, the Office agrees with some commenters that enactment on a permanent basis would advance the Treaty’s goals.⁴⁷³

⁴⁶⁶ AFB Initial Comments at 12; *see also, e.g.*, LDAA Initial Comments at 2–3; Microsoft Initial Comments at 7–8; Victoria Maciulski Additional Comments at 2.

⁴⁶⁷ Tr. at 184:01–10 (May 20, 2016) (Koberidze).

⁴⁶⁸ *Register’s Perspective on Copyright Review: Hearing Before H. Comm. on the Judiciary*, 114th Cong. 26 (2015) (statement of Maria A. Pallante, Register of Copyrights and Dir., U.S. Copyright Office).

⁴⁶⁹ *See* USACM Initial Comments at 4.

⁴⁷⁰ As noted, the United States has not yet ratified the Marrakesh Treaty.

⁴⁷¹ Marrakesh Treaty, art. 4(1)(a).

⁴⁷² *Id.* art. 7.

⁴⁷³ *See, e.g.*, AALL Additional Comments at 1–2 (suggesting that a permanent exemption would be beneficial in demonstrating compliance with the Marrakesh Treaty, rather than relying on the triennial rulemaking to grant continued exemptions); AFB Initial Comments at 11; KEI Initial Comments at 9; *see also* Univ. of Ill. at Urbana-Champaign Additional Comments at 2 (noting 57 other nations have adopted an exception for assistive technologies). *But see* Tr. at 177:17–22 (May

Should Congress move forward in this area, the Office believes that the 2015 exemption could serve as an appropriate model.⁴⁷⁴ The Office acknowledges, however, that there may be some merit to commenters' concerns that the remuneration requirement may cause confusion in some circumstances. This provision, which requires that the owner of the copyright in the accessed work be "remunerated, as appropriate . . . through customary channels,"⁴⁷⁵ was added in 2012 out of proponents' recognition that "it was not their intent to create a situation where publishers are not getting paid for their works."⁴⁷⁶ Some commenters suggested that this requirement causes confusion because the exemption separately requires that the copy of the relevant work be "lawfully obtained," and suggested its removal.⁴⁷⁷ The Office recommends that any consideration of legislation include an assessment whether such a requirement is necessary.

The Office does not currently recommend a broader exemption to facilitate the use of assistive technology for non-literary works, an approach advocated by Public Knowledge, due to the lack of evidence that the triennial rulemaking cannot adequately accommodate the needs for such an exemption.⁴⁷⁸ The Office agrees with some commenters that "outside the narrow context of literary works" there has been "very

20, 2016) (Adler, AAP) (suggesting that the United States already complies with this aspect of the Marrakesh Treaty based in part on the adoption of the exemption via repeated rulemakings coupled with the Chafee Amendment). The Chafee Amendment consists of exceptions and limitations for the blind or other people with disabilities, as well as "authorized entities," and is found in section 121 of the Copyright Act. It does not include exceptions to the anticircumvention provisions of section 1201. *See* 17 U.S.C. § 121.

⁴⁷⁴ *See, e.g.*, Kernochan Center Additional Reply Comments at 2 (noting the 2015 exemption "is an appropriate formulation" for any new permanent exemption); EFF Additional Comments at 2–3 (supporting 2015 exemption language as "an improvement over the status quo," while also supporting a broader exemption).

⁴⁷⁵ 37 C.F.R. § 201.40(b)(2).

⁴⁷⁶ 2012 Final Rule at 65,263.

⁴⁷⁷ LCA Additional Comments at 2–3 ("[I]f a sighted person purchases and reads an e-book, then gives it to her blind brother, could the brother circumvent the technological measure disabling the screen reader function without paying an additional fee to the publisher? Would such an additional fee be 'appropriate?' The answer is unclear. If a blind person lawfully obtains a copy, the blind person should be able to read it, regardless of whether he obtained it by purchase or operation of the first sale or fair use doctrines."); *see also* Authors Alliance Additional Comments at 3; EFF Additional Comments at 3; NYIPLA Additional Reply Comments at 3.

⁴⁷⁸ Public Knowledge Additional Comments at 2–3 (suggesting that this would "track the [Marrakesh] Treaty requirements"); *see also* Repair Ass'n & iFixit Additional Comments at 6 (advocating exemption that allows "software modifications that improve accessibility for Americans with other forms of disability").

little in the records from prior rulemaking proceedings regarding other entertainment products” such as “video games, motion pictures or recorded music.”⁴⁷⁹

b. Obsolescence, Repair, and Modification

The Copyright Office received numerous comments advocating for statutory exemptions to permit circumvention to fix obsolete, damaged, or malfunctioning TPMs, to engage in diagnosis, maintenance, and repair of a device protected by a TPM, and to modify the software in such devices.⁴⁸⁰ As the Office understands, the first two categories aim to restore or maintain the status quo, by returning either the TPM or the device to a workable state. Modification does not necessarily aim to restore the status quo, but would include enhancing or customizing a device.

The large volume of comments received—both in this study and in prior rulemakings—reflects the increasing use of access controls on a wide range of consumer devices containing copyrighted software. As the Repair Association put it, “[e]ssentially all categories of manufactured products, from lightbulbs to toothbrushes, now contain software that is central to their functionality. As a result, software has also become central to their repair.”⁴⁸¹ Consumer groups, particularly those representing automobile and tractor owners, expressed concern about copyright liability and their rights as an owner to maintain their vehicle.⁴⁸² Growing public interest in repair activities is further reflected by the right-to-repair bills currently pending in several states, which would require manufacturers to sell the parts and software required to fix their products, as well as to publish repair manuals, providing consumers with the ability to fix their own products or bring them to a local repair shop.⁴⁸³

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

⁴⁷⁹ AAP, ESA, MPAA & RIAA Additional Reply Comments at 4.

⁴⁸⁰ See, e.g., Auto Care Initial Comments at 3; EFF Initial Comments at 12; iFixit Initial Comments at 1–2; Static Control Components, Inc. Initial Comments at 2; AALL Additional Comments at 2; Authors Alliance Additional Comments at 4; John Josephs Additional Comments at 1; Kevin Kenney Additional Comments at 1; LCA Additional Comments at 3; ORI Additional Comments at 2–3; SAA Additional Comments at 2; Edward Matthews Additional Comments at 1; Consumers Union Additional Reply Comments at 3; Eleni Kalfus Additional Comments at 1; Public Knowledge Additional Comments at 3; Misha Cohen Additional Comments at 1.

⁴⁸¹ Repair Ass’n & iFixit Additional Comments at 4.

⁴⁸² Auto Care Additional Comments at 3; iFixit Initial Comments at 1–2.

⁴⁸³ See Kyle Wiens, *You Bought That Gadget, And Damn It, You Should be Able to Fix It*, WIRED (Mar. 22, 2017) <https://www.wired.com/2017/03/right-to-repair-laws/>.

the repair of their automobiles and farm equipment, which previously had no implications under copyright law.”⁴⁸⁴ In the most recent rulemaking, the Register found that TPMs protecting computer programs on vehicle electronic control units have a substantial effect on owners’ ability to engage in lawful diagnosis and repair of their vehicles.⁴⁸⁵

And in this study, many commenters testified as to the impact of section 1201 on repair activities or obsolete TPMs.⁴⁸⁶ For example:

- a Nebraska Farm Bureau member explained that the addition of TPMs have made it impossible to employ mechanical repair and diagnostic methods to tractors and combines, adding time and expense to agricultural work;⁴⁸⁷
- a consumer voiced frustration with a combination ink-jet printer, copier, and scanner, where the scanner stopped working because the printer “was out of yellow ink and [there was] no way to bypass it;”⁴⁸⁸ and
- AALL explained that libraries increasingly face issues with obsolete access controls blocking preservation efforts with respect to born-digital materials.⁴⁸⁹

In addition, some argued that the “use of electronic locks that prevent repair” are really “about protecting the competitive position of manufacturers for repair services” and are outside the purpose of copyright.⁴⁹⁰

⁴⁸⁴ *Register’s Perspective on Copyright Review: Hearing Before the H. Comm. on the Judiciary*, 114th Cong. 23–24 (2015) (statement of Maria A. Pallante, Register of Copyrights and Dir., U.S. Copyright Office).

⁴⁸⁵ 2015 Recommendation at 240.

⁴⁸⁶ *See, e.g.*, IPT USC Initial Comments at 3 (arguing that farmers who want to repair their equipment “face the impractical challenge of seeking renewals for exemptions while simultaneously managing the specific and time-sensitive needs of their farms”); Brian Ehrhart Additional Comments at 1 (suggesting consumers should be empowered “to address their own problems, rather than being forced to wait on arbitrary decisions by software developers as to what is or is not a priority.”); Free Software Foundation Additional Comments at 3 (“The ability to research or repair devices should likewise not be impaired by DRM.”); Kevin Kenney Additional Reply Comments at 1 (suggesting section 1201 “prevents farmers [and] ranchers like myself from fixing our own equipment”); EFF Additional Comments at App’x 1 (advocating “strong, practical, and permanent exemptions” “to protect repair, security research, and other lawful activity” and including a petition with 11,334 signatures).

⁴⁸⁷ Kevin Kenney Additional Reply Comments at 1.

⁴⁸⁸ Michael Oeth Additional Comments at 1.

⁴⁸⁹ AALL Initial Comments at 3.

The growing demand for relief under section 1201 has coincided with a general understanding that bona fide repair and maintenance activities are typically noninfringing. The Copyright Office’s recent study on *Software-Enabled Consumer Products* recognizes that repair activities are often protected from infringement claims by multiple copyright law provisions, including the fair use doctrine and section 117.⁴⁹¹ As the report explained, “the fundamental purpose of any repair is to preserve or restore the functionality of a software-enabled device so that it may continue to be used. In this respect, repair supports—rather than displaces—the purpose of the embedded programs that control that device.”⁴⁹² Similarly, the Office concluded that “section 117 ‘should adequately protect most repair and maintenance activities’” for software-enabled devices.⁴⁹³

As described in detail below, to the extent section 1201 precludes diagnosis, repair, and maintenance activities otherwise permissible under title 17, the Office finds that a limited and properly-tailored permanent exemption for those purposes, including circumventing obsolete access controls for continued functioning of a device, would be consistent with the statute’s overall policy goals. The Office does not, however, recommend that such a permanent exemption extend to circumvention for purposes of making other lawful modifications to software, or “tinkering.” Instead, the Office recommends that these activities continue to be addressed through the rulemaking process, which is able to tailor exemptions to specific classes of works, based on the evidentiary record.

Obsolete, Damaged, or Malfunctioning TPMs. In part because past rulemakings have demonstrated both a repeated need for this exemption and the limited reach of the rulemaking to adequately address this issue, the Office recommends a permanent exemption for obsolete, damaged, or malfunctioning access controls, where circumvention is necessary for continued functionality. The types of TPMs that historically have become obsolete or damaged include “dongles,” described as “hardware locks attached to a computer that interact with software programs to prevent unauthorized access to that software.”⁴⁹⁴ Such TPMs may also include server- or

⁴⁹⁰ Repair Ass’n & iFixit Additional Reply Comments at 7.

⁴⁹¹ SOFTWARE STUDY at 33, 39–41 (also addressing the idea/expression dichotomy, merger, *scènes à faire*, and *de minimis* uses).

⁴⁹² *Id.* at 40.

⁴⁹³ *Id.* at 35 (citation omitted).

⁴⁹⁴ 2000 Recommendation and Final Rule at 64,565.

hardware-checks, where a TPM connects to a different device, locally or remotely, to authenticate the work at issue as being a legitimate copy.⁴⁹⁵

This category has been the topic of multiple prior rulemakings, whose records are replete with descriptions of abandoned or otherwise no-longer-supported access controls preventing a user from the continued lawful use of a work.⁴⁹⁶ In fact, each time there has been a sufficient evidentiary record to evaluate a requested exemption related to obsolete access controls, the Register has recommended, and the Librarian adopted, an exemption for such uses.⁴⁹⁷ In this study, several commenters, including those representing libraries or archives, argued there was a need to accommodate concerns about obsolescence.⁴⁹⁸ For example, Authors Alliance argued that there is a real “[c]oncern about the difficulty of preserving born-digital works” and that obsolete TPMs silence “born-digital works [that] suffer from digital locks that have rusted shut.”⁴⁹⁹ On the other hand, others suggested that the rulemaking may be able to accommodate these needs.⁵⁰⁰

⁴⁹⁵ See 2015 Recommendation at 321 (addressing video games that “connect to an ‘authentication server’ to verify that the game is a legitimate copy. This connection or ‘check’ may be made once, at initial installation, or periodically throughout gameplay.”).

⁴⁹⁶ See, e.g., 2010 Final Rule at 43,833–34; 2006 Final Rule at 68,475; 2003 Final Rule at 62,013–14; 2000 Recommendation and Final Rule at 64,565–66.

⁴⁹⁷ In many instances, the exemptions also considered whether the TPM was damaged or malfunctioning. See, e.g., 2015 Recommendation at 352 (abandoned video games); 2006 Final Rule at 68,475 (for “[c]omputer programs protected by dongles that prevent access due to malfunction or damage and which are obsolete”); 2003 Final Rule at 62,013–14; 2000 Recommendation and Final Rule at 64,564–66 (for “[l]iterary works, including computer programs and databases, protected by access control mechanisms that fail to permit access because of malfunction, damage or obsolescence”). *But see* 2015 Recommendation at 355 (denying request for exemption to circumvent obsolete TPM on music recording software due to absence of any substantive submission supporting the exemption).

⁴⁹⁸ See, e.g., Consumers Union Additional Reply Comments at 3 (recommending a permanent exemption “for addressing obsolete or discontinued technologies” including “circumvention to address malfunction or damage as well”); AALL Initial Comments at 3–4; EFF Additional Comments at 5; LCA Additional Comments at 3.

⁴⁹⁹ Authors Alliance Additional Comments at 4.

⁵⁰⁰ AAP, ESA, MPAA & RIAA Additional Reply Comments at 7 (stating “there has been no consistency with respect to the petitions submitted, the exemptions granted, or the perceived problems articulated by proponents”; noting exemption for “accessing video games where authentication servers were no longer supported” was done so “for the first time” and was limited to “a specific market sector and included several limitations on its exercise”).

But as former Register Peters testified in 2001, the 1201 rulemaking process is a “somewhat ill-fitting regulatory approach,” as damaged, malfunctioning, or obsolete TPMs potentially affect all classes of works, which could, “paradoxically, result in the conclusion that the problem is not one that can be resolved pursuant to [the rulemaking process], which anticipates exemptions only for ‘a particular class of works.’”⁵⁰¹ For that reason, the Register previously recommended that Congress adopt a permanent exemption for obsolete, damaged, or malfunctioning TPMs.⁵⁰² The Office continues to support this permanent exemption for such access controls.

The definition of “obsolete” in section 108 may be a good starting point for defining obsolete access controls.⁵⁰³ Multiple rulemakings have imported the definition into regulatory language stating: “‘Obsolete’ shall mean ‘no longer manufactured or reasonably available in the commercial marketplace.’”⁵⁰⁴ The Office believes that this approach would be equally appropriate as statutory language, and suggests circumvention be permitted where it is necessary for continued lawful use of a work.

Diagnosis, Maintenance, and Repair. The Office concludes that a properly-tailored exemption for repair activities could alleviate concerns regarding section 1201’s effect on consumers’ ability to engage in legitimate activities that did not previously implicate copyright law, without creating a material risk of harm to the market for or value of copyrighted works. As discussed above, virtually all agree that section 1201 was not intended to facilitate manufacturers’ use of TPMs to facilitate product tying or to achieve a lock-in effect under which consumers are effectively limited to repair services offered by the manufacturer. Further, while temporary exemptions are necessarily limited to

⁵⁰¹ U.S. Copyright Office: *Hearing Before the Subcomm. on Courts, the Internet, and Intell. Prop. of the H. Comm. on the Judiciary*, 107th Cong. 12 (2001) (statement of Marybeth Peters, Register of Copyrights and Dir., U.S. Copyright Office) (citing 2000 Recommendation and Final Rule at 64,565).

⁵⁰² *Id.* at 12 (statement of Marybeth Peters, Register of Copyrights and Dir., U.S. Copyright Office) (“I recommended that Congress consider amending Section 1201 to provide a statutory exemption for all works . . . that are protected by access control mechanisms that fail to permit access because of malfunction, damage or obsolescence.”); *see also* 2000 Recommendation and Final Rule at 64,565.

⁵⁰³ 17 U.S.C. § 108(c)(2) (“[A] format shall be considered obsolete if the machine or device necessary to render perceptible a work stored in that format is no longer manufactured or is no longer reasonably available in the commercial marketplace.”).

⁵⁰⁴ 2003 Recommendation at 198; *see* 2006 Final Rule at 68,475; 2000 Recommendation and Final Rule at 64,565–66; *see also* NYIPLA Additional Reply Comments at 5 (recommending this approach). *But see* Public Knowledge Additional Reply Comments at 1 (arguing it was not necessary to tie exemption to section 108, although not offering alternative language).

specific classes of works,⁵⁰⁵ a limited permanent exemption for repair activities could provide greater certainty to users across classes of works, including software-enabled products. It may also help restore the focus of the rulemaking to users seeking “to access and make noninfringing uses of expressive copyrighted works such as motion pictures, video games and e-books, as Congress undoubtedly had in mind when it created” that process.⁵⁰⁶

The Office recognizes that many copyright owners have expressed concern over an exemption for these purposes,⁵⁰⁷ although some appeared to recognize that section 1201 may have room to accommodate legitimate repair activities, particularly of motor vehicles.⁵⁰⁸ SIIA noted that its members “routinely spend millions in providing technical support to their customers” and argued that the “mere existence of an extensive support network does not justify unfettered and harmful access to our members’ intellectual property.”⁵⁰⁹ ESA argued that “a permanent repair exemption as to video game devices” could threaten “[t]echnological measures . . . critical to the protection of creative works on consoles and other gaming devices,” because “circumvention of those measures is closely linked to infringement.”⁵¹⁰ Other copyright owners expressed general opposition to adoption of any additional permanent exemptions, but did not comment specifically on whether Congress should establish a permanent exemption for diagnosis, maintenance, or repair.⁵¹¹ The Office notes that in the most recent rulemaking, these stakeholders did not oppose exemptions for vehicle repair.⁵¹²

⁵⁰⁵ See 17 U.S.C. § 1201(a)(1)(C).

⁵⁰⁶ 2015 Recommendation at 2.

⁵⁰⁷ See, e.g., BSA Additional Comments at 2; Ass’n of Equip. Mfrs. & Equip. Dealers Ass’n (“AEM & EDA”) Additional Comments at 2.

⁵⁰⁸ AAP, ESA, MPAA & RIAA Additional Reply Comments at 14 (disagreeing with need for amendment to anti-trafficking provisions but “acknowledg[ing] that circumvention in the context of automobile repair or other forms of repair might present a unique and distinguishable set of circumstances”); see also Tr. at 37:22–38:03 (May 25, 2016) (Chertkof, RIAA) (acknowledging RIAA’s concerns are not with automobile circumvention but expressing concern over line-drawing); Tr. at 56:01–57:03 (May 25, 2016) (Sheffner, MPAA).

⁵⁰⁹ SIIA Initial Comments at 6.

⁵¹⁰ ESA Initial Reply Comments at 5–6.

⁵¹¹ See Copyright Alliance Additional Comments at 2; DVD CCA & AACCS LA Additional Comments at 2–3 (in response to question regarding obsolete access controls, stating “DVD CCA and AACCS LA have no additional comments at this time”); AAP, ESA, MPAA & RIAA Additional Reply Comments at 5–6 (addressing only “modification” prong of the study’s Second Notice).

⁵¹² See 2015 Recommendation at 228 (describing opposition comments received regarding vehicle repair exemption).

To the extent that rightsholders are concerned that an exemption to accommodate diagnosis, repair, maintenance, and obsolescence would be overbroad or misused,⁵¹³ the Office believes that these concerns can be adequately addressed with appropriately drafted statutory language. While the Copyright Office is not suggesting specific legislative text, believing instead that continued stakeholder discussion would be beneficial to any legislative process, it offers a few guidelines for consideration. First, as both rightsholders and user groups recognized,⁵¹⁴ Congress anticipated the need to accommodate repair and maintenance activities in section 117, which contains definitions of “repair” and “maintenance” in section 117(d).⁵¹⁵ These definitions may provide a reasonable starting point for future legislation.⁵¹⁶ Linking an exemption to section 117(d) would seem to address vagueness concerns, while still providing meaningful relief to many consumers and repair technicians.⁵¹⁷ Second, the Office also recommends that any permanent exemption also require that circumvention be a necessary step to allow the diagnosis, repair, or maintenance, as is required under the

⁵¹³ See, e.g., AAP, ESA, MPAA & RIAA Additional Reply Comments at 6.

⁵¹⁴ See, e.g., Public Knowledge Additional Comments at 3–4 (“While modification may raise concerns about infringing uses, by tying the exemption to the existing Section 117 exceptions, rights holders will still have recourse in enforcing their copyrights under existing case law. We believe that an exemption limited strictly to Section 117 would be inadequate, as the Office itself has granted related exemptions on the basis of both Section 117 and fair use.”); AAP, ESA, MPAA & RIAA Additional Reply Comments at 6 (noting that “‘maintenance and repair’ can be tied to Section 117 activity”); Motor & Equip. Mfrs. Ass’n (“MEMA”) Additional Comments at 4. *But see* Repair Ass’n & iFixit Additional Reply Comments at 8 (urging a broader exemption); Auto Care Additional Comments at 4–5 (suggesting an exemption “cover[ing] all activities necessary for the repair or customization of a motor vehicle”; listing activities).

⁵¹⁵ 17 U.S.C. § 117(d) states:

For purposes of this section: (1) the “maintenance” of a machine is the servicing of the machine in order to make it work in accordance with its original specifications and any changes to those specifications authorized for that machine; and (2) the “repair” of a machine is the restoring of the machine to the state of working in accordance with its original specifications and any changes to those specifications authorized for that machine.

⁵¹⁶ The Office did not receive comments in support of its inquiry whether existing legal doctrines of repair and reconstruction in patent law, or “right to repair” bills introduced in state legislatures, could be helpful on this issue. See also Public Knowledge Additional Comments at 5 (“We do not think it is appropriate to look to patent, trademark, or state law in determining the contours of an exemption from circumvention liability.”); NYIPLA Additional Reply Comments at 4 (rejecting analogy to repair/refurbishment doctrine).

⁵¹⁷ For example, remanufacturing processes may fit within section 117(d)’s scope. See MEMA Additional Comments at 3 (“Remanufacturing processes incorporate technical specifications (including engineering, quality and testing standards) to yield fully warranted products.”).

current exemption for motor vehicle software.⁵¹⁸ Third, the Office recommends against limiting an exemption to specific technologies or devices, such as motor vehicles, as any statutory language would likely be soon outpaced by technology. Fourth, to the extent that commenters oppose an exemption for repair out of non-copyright related concerns, such as public safety, the Office believes these matters are better addressed through laws or regulations outside of the Copyright Act.⁵¹⁹

Lawful Modification. Modification or “tinkering,” however, raises significantly different issues from repair. Colloquial uses of tinkering may refer to activities related to diagnosis, analysis, maintenance, repair, and modifications to facilitate interoperability, but also include a broader range of practices related to customization, experimentation, and improvement.⁵²⁰ An exemption of this type might permit, for example, circumvention of access controls on a car’s electronic control unit to make software modifications that would improve a vehicle function.⁵²¹

Many commenters representing user interests supported such an exemption.⁵²² EFF argued that while “[d]iagnosis, maintenance, and repair of personal devices are important, and in need of greater legal certainty . . . [t]here are . . . many other

⁵¹⁸ 2015 Final Rule at 65,954; *cf.* 17 U.S.C. § 117(a) (conditioning exception for making copy or adaptation of computer program on requirement that it is “an essential step in the utilization of the computer program in conjunction with a machine”).

⁵¹⁹ *See, e.g.,* AEM & EDA Additional Comments at 2 (“AEM and EDA oppose the enactment of any permanent exemption to circumvention for diagnosis, repair, maintenance or modification that would pose unnecessary risks to public safety, the environment and the economy.”); BSA Additional Comments at 2 (“With self-driving cars on the horizon, it is not difficult to imagine how mere ‘diagnoses’ or ‘repairs’ that might seem appropriate could create software modifications resulting in safety hazards and unknown consequences to third parties.”).

⁵²⁰ *See, e.g.,* ORI Additional Comments at 3 (“Those engaged in the secondary market for such products should be allowed to circumvent the TPM on the software for the purpose of changing the authenticated user.”); Consumers Union Additional Reply Comments at 2 (suggesting that section 1201 prevents consumers from “being able to tinker with the product, to customize or adapt it, to improve its utility or performance, to get it repaired, or to remove its parts and use them in some other product”); Tr. at 258:15–18 (May 25, 2016) (Samuelson, Univ. of Cal. Berkeley Sch. of Law) (“I’m trying to make [a] device, whether it’s software or an actual gadget, do something that I want it to do better than the device that I bought, is that repair? Is that tinkering?”).

⁵²¹ *See* 2015 Recommendation at 218–49.

⁵²² *See, e.g.,* Tr. at 27:10–11 (May 25, 2016) (Samuelson, Univ. of Cal., Berkeley Sch. of Law) (“Much user innovation actually comes out of tinkering with technologies.”); Public Knowledge Initial Reply Comments at 5; John Josephs Additional Comments at 1; Repair Ass’n & iFixit Additional Comments at 4; *see also* Pamela Samuelson, *Freedom to Tinker 2*, THEORETICAL INQUIRES IN LAW (forthcoming), <https://ssrn.com/abstract=2800362>.

important and lawful reasons to modify copies of computer programs.”⁵²³ Similarly, the Repair Association and iFixit contended that “[w]ith computer software providing key parts of the functionality of many devices bought by American consumers and businesses, repair and improvement of those devices will depend on their ability to modify software, just as they currently have the ability to modify hardware they’ve purchased.”⁵²⁴

Copyright owners strongly opposed an exemption for “tinkering” on the ground that it would be vague and overbroad. AAP, ESA, MPAA, and RIAA opined that “[t]his type of broad-brush approach was rejected by Congress when the DMCA was drafted because creating such vaguely-defined exemptions without specific instructions . . . is a recipe for misuse and confusion.”⁵²⁵ Moreover, they indicated that an exemption for modification would present substantially greater risk of infringement than one limited to diagnosis, repair, and maintenance: “[W]hile ‘maintenance and repair’ can be tied to Section 117 activity, going beyond that to cover all ‘modifications’ or ‘customizations’ or efforts to ‘improve the functionality’ of computer programs would invite the creation of infringing derivative works.”⁵²⁶ In their view, these concerns would not be mitigated by, for example, prohibiting unauthorized use of works other than the accessed computer program, or by limiting the exemption to programs that “do ‘not in turn create any protected expression’ when executed,” similar to the United Kingdom’s anticircumvention law.⁵²⁷

These concerns of copyright owners are valid, and the comments received in response to this study suggest that tinkering is hard to define, and that there is no accepted meaning or limitations on what it involves. To be sure, in many cases modification activities may not implicate significant copyright interests. On the other hand, some tinkering activities may result in the creations of new works in ways that implicate the copyright owner’s exclusive right to prepare derivative works.⁵²⁸ Commenters have suggested no reliable way to define with any precision a category of lawful adaptations, generally, for

⁵²³ EFF Additional Comments at 4.

⁵²⁴ Repair Ass’n & iFixit Additional Comments at 9.

⁵²⁵ AAP, ESA, MPAA & RIAA Additional Reply Comments at 6.

⁵²⁶ *Id.*

⁵²⁷ *Id.* at 6–7 (citation omitted) (quoting Section 1201 Study: Request for Additional Comments, 81 Fed. Reg. at 66,297 (citing example of TPMs used to protect access to the operating software in video game consoles and suggesting that plaintiffs in a legal system like the UK’s “face additional, unnecessary hurdles in litigation against pirate enterprises”); see Copyright, Designs and Patents Act 1988, c. 48, § 296ZA (UK) (circumvention bar that specifically excludes TPMs applied to computer programs).

⁵²⁸ See 17 U.S.C. § 106(2).

purposes of section 1201. Accordingly, in contrast to diagnosis, repair, and maintenance, the Office cannot say that lawful modification of software is categorically unlikely to result in harm to the legitimate interests of copyright owners.⁵²⁹

The Office therefore concludes that such activity does not provide an appropriate basis for a permanent exemption at this time. The triennial rulemaking process, however, will continue to provide a means to obtain exemptions for these uses,⁵³⁰ and the Office is hopeful that the streamlining changes outlined below will lessen the burden of renewing exemptions found to satisfy the statutory requirements. Moreover, as described above, the Office believes that section 1201(f) should be available to accommodate many concerns related to software interoperability.⁵³¹ Collectively, these exemptions may cover a substantial portion of circumvention activities involving software-enabled products in which there is a legitimate consumer interest.

c. Device Unlocking

Since 2006, the triennial rulemaking has involved consideration of exemptions for unlocking cellphones, *i.e.*, enabling them to connect to the network of a different mobile wireless carrier. In the 2015 rulemaking—as directed by the Unlocking Act⁵³²—the Register considered whether to extend the exemption to other categories of wireless devices. The Unlocking Act’s legislative history notes that consumers have “a legitimate interest in unlocking” their used cellphones to connect to an alternate network.⁵³³ In recommending the 2015 exemption the Register similarly concluded that, as a general matter, the unlocking of certain types of used mobile devices is likely to be a fair and noninfringing use, and that absent an exemption, consumers would be adversely

⁵²⁹ See, e.g., AAP, ESA, MPAA & RIAA Additional Reply Comments at 6–7 (“[M]anufacturers of video game consoles use access controls to prevent piracy not only by restricting access to computer programs that render video games perceptible, but also by restricting access to the software that operates the consoles and authenticates games. Circumvention of such access controls leads to play of pirated games.”); see also 2015 Recommendation at 241 (recommending that the exemption permitting lawful modification of motor vehicle software exclude programs controlling telematics or entertainment systems, to avoid “a diminution in the value of copyrighted works if those systems could no longer reliably protect the content made available through them”).

⁵³⁰ See 2015 Final Rule at 65,963 (adopting exemption for, *inter alia*, lawful modification of a vehicle function).

⁵³¹ For example, as discussed above, section 1201(f) may separately exempt certain activities related to replacement parts. See also *Lexmark*, 387 F.3d at 550–51 (disagreeing with district court’s rejection of section 1201(f) defense).

⁵³² See Unlocking Act § 2(b), 128 Stat. at 1751.

⁵³³ H.R. REP. NO. 113-356, at 3 (2014).

affected in their ability to engage in such activity.⁵³⁴ Based on that recommendation, the Librarian adopted an unlocking exemption that applies to used wireless devices of the following types:

- (A) Wireless telephone handsets (*i.e.*, cellphones);
- (B) All-purpose tablet computers;
- (C) Portable mobile connectivity devices, such as mobile hotspots, removable wireless broadband modems, and similar devices; and
- (D) Wearable wireless devices designed to be worn on the body, such as smartwatches or fitness devices.⁵³⁵

Some commenters supported adopting a permanent exemption in substantially the same form as the 2015 exemption.⁵³⁶ Others urged the Office to recommend a broader exemption applicable to “all devices that connect to a wireless network, rather than freezing a list of categories of devices into the statute.”⁵³⁷

Some copyright owners, on the other hand, were skeptical of the need to make any unlocking exemption permanent through legislation, stating, for example, that although they “have no objection in principle to the notion that consumers should be able to connect their devices to the mobile wireless network(s) of their choosing,” they see no reason to revisit Congress’ determination in the Unlocking Act that such requests would continue to be addressed through the triennial rulemaking.⁵³⁸

The Unlocking Act, recent rulemaking proceedings, and comments received in this study collectively reflect a broad level of agreement that device unlocking provides an appropriate basis for an exemption in at least certain circumstances. Significantly, the

⁵³⁴ 2015 Recommendation at 169–71.

⁵³⁵ 2015 Final Rule at 65,952.

⁵³⁶ *See, e.g.*, Competitive Carriers Ass’n Additional Comments at 3; ISRI Additional Comments at 2; *see also* Kernochan Center Additional Reply Comments at 2 (“[I]t is preferable to use the exemption as formulated in the 2015 rulemaking proceeding, and add devices pursuant to the triennial proceeding, to the extent justified by the evidence presented.”).

⁵³⁷ Consumers Union Additional Reply Comments at 3; *see also* Mozilla Additional Comments at 2 (urging the Office to “craft language that achieves the underlying purpose in a way that adapts to current and future technologies”); Repair Ass’n & iFixit Additional Comments at 6–7 (“[T]he language of the existing exemption is too specific.”).

⁵³⁸ AAP, ESA, MPAA & RIAA Additional Reply Comments at 5; *see also* NYIPLA Additional Reply Comments at 4 (“[M]aking the unlocking exemption of 2015 permanent would be premature.”).

2015 exemption generated only minimal opposition from stakeholders, and those complaints were directed to relatively narrow definitional concerns.⁵³⁹ And in this study, even those opposed to addressing this issue through legislation did not dispute the public's interest in unlocking mobile devices or suggest that it threatens the value of copyrighted works. On the other hand, commenters in favor of a statutory exemption did not demonstrate a strong demand to make this exemption permanent, as opposed to repeat adoption through the triennial rulemaking process, and rightsholders suggested that the rulemakings will continue to accommodate the need for renewed exemptions.

In light of these considerations, if Congress wishes to provide more certainty to users, the Office recommends the adoption of a permanent unlocking exemption, based upon the regulatory language repeatedly granted in the rulemakings. At the same time, the Office recognizes that Congress considered this issue in 2014 and elected not to follow that approach. Further, the Office believes that the streamlining changes outlined below will serve as a useful alternative to legislation for purposes of renewing exemptions to which there is no opposition.

d. Library and Archival Uses

Libraries and archives advocated a new permanent exemption allowing them to circumvent for broader purposes than the existing permanent exemption set out in section 1201(d). While section 1201(d) allows nonprofit libraries, archives, and educational institutions to circumvent access controls for the sole purpose of making a good-faith determination of whether to acquire a copy of the protected work, participants representing these institutions uniformly expressed the view that this exemption does not serve any of their practical needs.⁵⁴⁰ Instead, they supported a new permanent exemption for all activities permitted under section 108, which authorizes libraries and archives to reproduce and distribute certain copyrighted works on a limited basis for purposes of preservation, replacement, and research.⁵⁴¹ As an example,

⁵³⁹ See 2015 Recommendation at 156–64 (addressing request to limit exemption to exclude “certain illicit unlocking practices,” such as “the unlocking of new, carrier-subsidized prepaid cellphones”).

⁵⁴⁰ See, e.g., AAU, ACE, APLU & EDUCAUSE Initial Comments at 6–7 (noting that vendors of copyrighted works typically provide trial access to institutions considering potential purchases, making it unnecessary for such users to engage in circumvention for that purpose); LCA Initial Comments at 9 (stating it is unaware of any instance since the DMCA's enactment in which a covered institution has made use of this exemption); MIT Initial Comments at 4–5; SAA Initial Comments at 5; Univ. of Va. Libraries Initial Comments at 3; Tr. at 88:07–11 (May 20, 2016) (Cox, ARL).

⁵⁴¹ See, e.g., AALL Initial Comments at 4; see 17 U.S.C. § 108 (permitting reproduction and distribution of works for the purposes of preservation and security, deposit for research, replacement, and user requests).

while libraries rely on section 108(c)'s exception allowing reproduction of certain works stored in obsolete formats in certain circumstances, section 1201 "currently does not allow for circumvention of access controls for preservation."⁵⁴² This is a particular concern, the AALL argued, given the need to "circumvent or permanently remove obsolete TPMs" to gain access to "older born-digital materials."⁵⁴³

Others questioned the need for an additional permanent exemption for libraries and archives. The Kernochan Center noted that libraries have requested exemptions in past rulemakings "to a limited extent," which, in the Center's view, is inconsistent with "the assertion that the current statutory structure is inadequate."⁵⁴⁴ AAP suggested that issues of digital preservation are more properly addressed through updates to section 108 itself, and questioned whether such an exemption could be tailored to ensure that it did not give rise to access other than for legitimate preservation activities.⁵⁴⁵

The Office appreciates that TPMs can affect legitimate interests of libraries, archives, and other memory institutions and believes that a permanent exemption tied to activities authorized by section 108 is worthy of consideration and debate, but finds it is premature to recommend specific legislative reforms. As the Office previously noted when recommending a temporary exemption for the preservation of video games, "section 108 provides useful and important guidance as to Congress' intent regarding the nature and scope of legitimate preservation activities."⁵⁴⁶ That said, the Office also has long expressed concern that section 108 is in some ways inadequate to address the needs of institutions in the digital age.⁵⁴⁷ For example, section 108 does not address museums, but the past rulemaking record included many examples of museum-based video game preservation activities.⁵⁴⁸ These and other changes could be addressed in future updates to section 108. Indeed, the Office is in the midst of a review of section 108, addressing provisions concerning copies for users, security measures, public access,

⁵⁴² AALL Initial Comments at 3–4.

⁵⁴³ *Id.* at 3. SAA proposed a broader exemption that also would permit libraries and archives to circumvent TPMs for activities protected by the fair use doctrine. SAA Additional Comments at 4. Because other stakeholders suggested a similar exemption, this proposal is discussed separately in section III.C.3.f.

⁵⁴⁴ Kernochan Center Initial Comments at 8.

⁵⁴⁵ Tr. at 51:04–52:10 (May 20, 2016) (Adler, AAP).

⁵⁴⁶ 2015 Recommendation at 341.

⁵⁴⁷ *See, e.g., id.* at 7 ("[T]he exceptions for preservation activities set forth in section 108 appear inadequate to address institutional needs in relation to digital works."); *The Register's Perspective on Copyright Review: Hearing Before the H. Comm. on the Judiciary, 114th Cong. 20–21 (2015)* (statement of Maria A. Pallante, Register of Copyrights and Dir., U.S. Copyright Office).

⁵⁴⁸ *See* 2015 Recommendation at 342.

and third-party outsourcing.⁵⁴⁹ In light of this, and because this Report could not study the interaction of any potential legislative changes to section 108 with section 1201, the Office believes that broad reform of section 1201 in this area is premature. Moreover, as many of the comments from library associations focused on the specific problem of obsolete access controls, the Office believes that the more targeted proposed exemption for obsolete TPMs discussed above is a preferable first step.⁵⁵⁰ The triennial rulemaking, however, remains a vehicle to evaluate requests for a broader exemption for preservation activities by classes of works by memory institutions.

e. Educational and Derivative Uses of Audiovisual Works

The past four rulemakings have granted various exemptions for educational uses for audiovisual works.⁵⁵¹ As adopted in 2015, the exemption permits circumvention to make use of short portions of motion pictures for purposes of criticism and comment in various contexts, including documentary filmmaking, noncommercial videos, multimedia e-books, and education.⁵⁵² A few commenters expressed support for making this exemption permanent. LCA argued that

[a]s audiovisual works have become increasing[ly] more central to education, this exemption has become even more critical to effective instruction at all levels. At the same time, rights holders have never demonstrated that the exemption has led to any infringing activity. Thus, making the exemption permanent would eliminate the burden of seeking an exemption every three years without causing rights holders any harm.⁵⁵³

While not mentioning audiovisual works specifically, AAU, ACE, APLU, and EDUCAUSE offered that any permanent exemption for “nonprofit educational uses or

⁵⁴⁹ See Section 108: Draft Revision of the Library and Archives Exceptions in U.S. Copyright Law, 81 Fed. Reg. 36,594, 36,598 (June 7, 2016); *Revising Section 108: Copyright Exceptions for Libraries and Archives*, U.S. COPYRIGHT OFFICE, <https://www.copyright.gov/policy/section108/> (last visited June 15, 2017).

⁵⁵⁰ See *supra* pp. 90–92.

⁵⁵¹ 2015 Final Rule at 65,946–47; 2012 Final Rule at 65,266; 2010 Final Rule at 43,827–28; 2006 Final Rule at 68,473–74.

⁵⁵² 2015 Final Rule at 65,961–62.

⁵⁵³ LCA Additional Comments at 1; see also Tr. at 172:03–09 (May 19, 2016) (Butler, Univ. of Va. Libraries) (advocating a permanent exemption for educational uses for audiovisual classes); Tr. at 96:01–10 (May 20, 2016) (Cox, ARL) (same).

for certain ‘per se’ educational works” should be drafted broadly, “so they are sufficiently adaptable to accommodate evolving technologies.”⁵⁵⁴

The Copyright Office recognizes the burdens associated with the need to request this exemption on a recurring basis. The language and scope of this exemption has changed with each rulemaking, however, suggesting that adopting it as permanent would be premature.⁵⁵⁵ In this respect, the exemption differs from the assistive technologies exemption. The Office expects that a new streamlined process for repeat exemptions, as discussed below, should facilitate the process of renewal, enabling proponents to focus on expanding the exemption’s scope to include new technologies and/or on eliminating obsolete technologies.

f. All Lawful or Fair Uses

Finally, commenters representing various user interests urged adoption of a broad permanent exemption that would permit circumvention for any lawful or noninfringing use.⁵⁵⁶ Although framed as an exemption, this suggestion is substantially identical to the proposal discussed above to limit the activities covered by section 1201(a) in the first instance to those bearing a nexus to infringement. For the same reasons addressed in reference to that proposal, the Office does not recommend such an exemption. As discussed, conditioning section 1201 liability on a violation of another law would fail to account for the independent harm to the value of copyrighted works caused by unauthorized digital access.

Some also suggested a similar, though somewhat narrower, exemption allowing circumvention for any activity protected by the fair use doctrine.⁵⁵⁷ In response, others

⁵⁵⁴ AAU, ACE, APLU & EDUCAUSE Initial Comments at 13.

⁵⁵⁵ In this regard, the Office agrees that, in general, “[n]ew or expanded permanent exemptions should be recommended where, and only to the extent that, parties have consistently sought and been granted exemptions in the past through the rulemaking process.” Kernochan Center Additional Reply Comments at 2.

⁵⁵⁶ *See, e.g.*, Authors Alliance Initial Comments at 4 (suggesting that an “exemption . . . to enable noninfringing use of a technically protected copyright work . . . would remedy the persistent under-inclusiveness of the existing statute’s exemption process”); OTW Initial Comments at 8 (“The best result would be a permanent exemption for noninfringing uses”); Univ. of Va. Libraries Initial Comments at 3 (“A more useful permanent exemption for libraries (and others) would be a blanket exception for any lawful use”); SAA Additional Comments at 2 (“[T]here should be a blanket exemption . . . that would allow anyone to circumvent an access mechanism for a lawful purpose.”).

⁵⁵⁷ Public Knowledge Additional Comments at 1–2 (“[W]e note the absence [in the Second Notice] of a proposal to permanently exempt fair uses made under Section 107, although exemptions grounded in that exception are routinely granted to filmmakers and educators.”); *see also* AAU,

argued that a general exemption of this type “would generate widespread mistakes regarding when circumvention is permissible.”⁵⁵⁸ As they put it, “one person’s notion of fair use is another person’s infringement.”⁵⁵⁹ At a minimum, however, such an exemption would constitute a fundamental departure from Congress’ considered decision to establish the triennial rulemaking as the forum for consideration of specific exemption requests grounded in fair use.⁵⁶⁰ As the Commerce Committee explained in adding the rulemaking proceeding to the legislation:

[T]he Committee was mindful of the need to honor the United States’ commitment to effectively implement the two WIPO treaties, as well as the fact that fair use principles certainly should not be extended beyond their current formulation. The Committee has struck a balance that is now embodied in . . . the bill, as reported by the Committee on Commerce. The Committee has endeavored to specify, with as much clarity as possible, how the right against anti-circumvention [*sic*] would be qualified to maintain balance between the interests of content creators and information users. The Committee considers it particularly important to ensure that the concept of fair use remains firmly established in the law. Consistent with the United States’ commitment to implement the two WIPO treaties, H.R. 2281, as reported by the Committee on Commerce, fully respects 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.⁵⁶¹

Accordingly, Congress created the rulemaking as a “mechanism . . . [to] monitor developments in the marketplace for copyrighted materials” and to ensure that circumvention activities implicating fair use “can be fully considered and fairly decided on the basis of real marketplace developments that may diminish otherwise lawful

ACE, APLU & EDUCAUSE Initial Comments at 9 (“[W]e urge that any changes to section 1201 explicitly state that section 1201 should in no way hinder uses that may fall within the ambit of 17 USC § 107.”).

⁵⁵⁸ AAP, ESA, MPAA & RIAA Additional Reply Comments at 6; *see also* Int’l Assoc. Sci. Tech. & Med. Pub. Initial Reply Comments at 2–3 (opposing a blanket fair use exemption); Kernochan Center Additional Reply Comments at 1 (“[T]he broad amendments offered by some commenters should be rejected, as they would unquestionably undermine the goals and effect of the law. (We refer, for example, to the suggestion[] . . . that circumvention for any non-infringing purpose be allowed, etc.)”).

⁵⁵⁹ AAP, ESA, MPAA & RIAA Additional Reply Comments at 6.

⁵⁶⁰ *See* COMMERCE COMMITTEE REPORT at 35 (stating that the addition of the rulemaking proceeding “responds to [the] concern” regarding prior legislation’s effect on fair use).

⁵⁶¹ *Id.* at 26.

access to works.”⁵⁶² The Office sees no basis for abandoning that basic framework, although, as discussed below, it does intend to implement reforms to improve the rulemaking process.

3. International Considerations

As noted, multiple FTAs to which the United States is a party address the categories of exceptions and limitations that signatory countries may adopt in this area. These trade obligations may be relevant to any consideration of a change to the current domestic permanent exemption framework. To the extent there is interest in implementing the Office’s recommendations, there are a number of ways to pursue potential reforms with these considerations in mind. First, Congress could adopt legislation implementing these proposals and address any potential international concerns, including any changes it believes appropriate, in the legislative text.⁵⁶³ The Office is not providing proposed legislative language, and accordingly expresses no view as to possible trade implications.⁵⁶⁴ Second, the Office has offered interpretive guidance to facilitate broader reliance on existing exemption language, as in the case of the provisions under section 1201(f) concerning interoperability. Third, the Office has tried to identify statutory and regulatory changes that can be accomplished within the current trade framework, as in the case of legislation that would expand the factors to be considered by the Librarian in conducting the triennial rulemaking.⁵⁶⁵ Finally, the existing triennial rulemaking framework provides an avenue to evaluate whether some proposals may be appropriately adopted as temporary exemptions.

⁵⁶² *Id.* at 36.

⁵⁶³ *Cf.* Unlocking Technology Act of 2015, H.R. 1587, 114th Cong. § 4 (2015) (“The President shall take the necessary steps to secure modifications to applicable bilateral and multilateral trade agreements to which the United States is a party in order to ensure that such agreements are consistent with the amendments made by this Act.”); Unlocking Technology Act of 2013, H.R. 1892, 113th Cong. § 4 (2013) (same).

⁵⁶⁴ The Office notes that the Trans-Pacific Partnership Agreement (“TPP”) contains a more flexible structure in that it neither confines TPM exceptions to enumerated activities nor limits their duration. *See* TPP art. 18.68.4, Feb. 4, 2016, *available at* <https://ustr.gov/trade-agreements/free-trade-agreements/trans-pacific-partnership/tpp-full-text>. The United States has withdrawn from that agreement. *See* Letter from María L. Pagán, Acting United States Trade Representative, to Trans-Pacific Partnership Depositary (Jan. 30, 2017), *available at* <https://ustr.gov/sites/default/files/files/Press/Releases/1-30-17%20USTR%20Letter%20to%20TPP%20Depositary.pdf>.

⁵⁶⁵ *See, e.g., infra* section III.C.4 (discussing the proposed Breaking Down Barriers to Innovation Act).

4. Alternative Approach of Expanding Statutory Rulemaking Factors

Finally, should Congress decline to pursue new or updated permanent exemptions, it could consider adding to the list of statutory factors the Librarian shall consider in the rulemaking. This approach was proposed by the Breaking Down Barriers to Innovation Act, which would add factors addressing security research, “the impact that the prohibition on the circumvention of technological measures has on the accessibility of works and technologies for persons with disabilities,” and consideration of “repair, recycling, research, or other fair uses, and . . . access to information not subject to copyright protection.”⁵⁶⁶

From a matter of copyright policy, the Office believes that a preferable approach may be to adopt or amend a permanent exemption in the limited cases described above. The current statute already empowers the Office and Librarian to consider all appropriate factors,⁵⁶⁷ and expanding the list of enumerated factors for the rulemaking would appear to provide less certainty to users than a permanent exemption.

IV. THE RULEMAKING PROCESS

The triennial rulemaking established by section 1201(a)(1)(C) generated much discussion among those who participated in the study, as it is an area where the Office itself can take action pursuant to its rulemaking authority without needing Congress to amend section 1201. Many participants acknowledged that the rulemaking process is “working reasonably well.”⁵⁶⁸ As detailed below, others urged various reforms, whether through statutory or regulatory changes. Notably, while the comments revealed a variety of perspectives on almost all issues, there was extraordinary consensus that the Office should exercise its existing regulatory authority to streamline the process for renewing previously granted exemptions.

⁵⁶⁶ H.R. 1883, 114th Cong. § 3(a)(1)(B)(iii)–(v) (2015); S. 990, 114th Cong. § 3(a)(1)(B)(iii)–(v) (2015).

⁵⁶⁷ 17 U.S.C. § 1201(a)(1)(C)(v).

⁵⁶⁸ Kernochan Center Initial Comments at 5; *see also* Tr. at 96:09–13 (May 19, 2016) (Decherney, Univ. of Pa.) (“[I]n some ways, the rulemaking has I think really been effective and . . . thousands of educators and students have been able to engage in non-infringing uses as a result.”); AAP, MPAA & RIAA Initial Comments at 11 (noting that “the current ground rules for the triennial rulemaking proceeding are fair, practical, and consistent with Congress’ instructions,” and that the proceeding “regularly results in the issuance of a large number of exemptions ” and stating that “continued complaints regarding the proceeding, and calls for a dramatic reorganization to lessen the burdens on proponents of exemptions, ignore the reality of the prior processes”).

The Copyright Office believes that any shortcomings in the rulemaking process can largely be addressed without legislative changes, although the Office would continue to support amending the statute to allow for burden-shifting in the case of repeat exemptions.⁵⁶⁹ In some instances, stakeholder concerns are addressed below by clarifying the Office’s position on issues such as allocation of the burden of proof and the relevant evidentiary standards applied by the Register in forming a recommendation to grant or deny an exemption. In addition, in light of the stakeholder consensus noted above, the Office also proposes to undertake specific changes to streamline the process for renewing previously granted exemptions. Finally, this section also outlines additional steps the Office intends to take to further improve the rulemaking process, such as implementing educational outreach, adjusting the timeframe for the rulemaking to facilitate participation, and investigating ways to improve access to and participation in public hearings.

A. Administrative Law Considerations

In prior rulemakings, the Copyright Office has adopted certain standards and procedures beyond the minimum required for informal rulemaking by section 553 of the APA. The Office adopted some of these in its discretion, such as limiting consideration to the evidentiary record submitted by participants and adopting a quasi-adversarial format—categorizing participants as either proponents or opponents of a specific class of exemption. The Office has previously found other elements, such as the application of the preponderance of the evidence standard, to be mandated by section 1201’s statutory language.⁵⁷⁰ The Office has found still other elements, such as the public hearings the Office holds, to be mandated by Congress’ clearly expressed intent.⁵⁷¹ While some commenters praised this approach as “correctly proceed[ing] with caution to develop specific exemptions on a case-by-case basis” and generally “consistent with

⁵⁶⁹ See *Register’s Perspective on Copyright Review: Hearing Before H. Comm. on the Judiciary, 114th Cong. 5* (2015) (statement of Maria A. Pallante, Register of Copyrights and Dir., U.S. Copyright Office).

⁵⁷⁰ See 2015 Recommendation at 14 (“This requirement stems from the statute, which requires a demonstration that users ‘are, or are likely to be,’ adversely affected by the prohibition on circumvention.”) (quoting 17 U.S.C. § 1201(a)(1)(B)). In the sixth rulemaking, the Office also noted that the preponderance standard is in accord with general principles of formal agency rulemakings under the APA. See *id.* at 14 & n.50 (citing 5 U.S.C. § 556(d); *Steadman v. Sec. & Exch. Comm’n*, 450 U.S. 91, 102 (1981)).

⁵⁷¹ See H.R. REP. NO. 106-464, at 149 (1999) (Conf. Rep.) (“The intent is to permit interested persons an opportunity to participate through the submission of written statements, oral presentations at one or more of the public hearings, and the submission of written responses to the submissions or presentations of others.”).

the statute, its legislative history and principles of administrative law,⁵⁷² others found this approach overly restrictive, suggesting “that procedures that artificially limit what kinds of evidence the Office may consider . . . or otherwise arbitrarily limit the record before the Office could violate the Administrative Procedures Act.”⁵⁷³ Such commenters suggested that a less adjudicatory format would enable the Office “to more effectively conduct the fact-finding process,” as the Office’s approach “places too much of a burden on commenters and unnecessarily restricts the Register’s factual inquiry.”⁵⁷⁴ Instead, they suggested that the Register “should conduct her own fact-finding investigation, informed by the comments but not reliant solely on those who have the resources to participate.”⁵⁷⁵

After considering this feedback, the Office has concluded that a reassessment of the rulemaking process is appropriate. The following sections discuss specific ways that process may be improved. As an initial matter, section 1201 appears to give the Office considerable flexibility to define and tailor the rulemaking process.⁵⁷⁶ The Office will continue to exercise its flexibility to improve that process while maintaining procedural rules necessary for it to administer the rulemaking efficiently within the statutorily mandated period. For example, in the upcoming seventh rulemaking, the Office plans to take advantage of its ability to take administrative notice of facts outside the public record where appropriate, but, particularly given its limited resources, does not assume an affirmative obligation to independently seek out or raise additional materials not presented by the parties.⁵⁷⁷

⁵⁷² DVD CCA & AACCS LA Initial Reply Comments at 9.

⁵⁷³ Public Knowledge Initial Reply Comments at 9.

⁵⁷⁴ Joint Filmmakers I Initial Comments at 11–12; *see also* OTW Initial Comments at 4 (“In part, the difficulty is because the Office combines repeated rounds of submissions on an administrative law model with an adversarial approach that treats factual development as solely the job of the contending participants.”).

⁵⁷⁵ Joint Filmmakers I Initial Comments at 11–13 (“As the leading treatise *Administrative Law and Practice* observes, it is well-accepted that in a rulemaking, “[t]he agency and its staff cannot sit passively and let interested persons develop a record.”). *But see* Tr. at 102:09–103:07 (May 25, 2016) (Lerner, Joint Filmmakers I) (“I do think that the Copyright Office has wide latitude to set this rulemaking up under the APA.”).

⁵⁷⁶ The Office draws this conclusion both from section 1201 itself and the APA. *See, e.g., Perez v. Mortg. Bankers Ass’n*, 135 S. Ct. 1199, 1207 (2015) (stating that it is a “very basic tenet of administrative law that agencies should be free to fashion their own rules of procedure” and that the APA “established the maximum procedural requirements which Congress was willing to have the courts impose upon agencies in conducting rulemaking procedures”).

⁵⁷⁷ *See, e.g., Baka v. INS*, 963 F.2d 1376, 1379 (10th Cir. 1992) (“An agency . . . may take official notice of commonly acknowledged facts, and technical or scientific facts that are within the

As a separate question of administrative law, it was not clear to some commenters whether determinations made by the Librarian are subject to challenge under the APA.⁵⁷⁸ Although the Register of Copyrights issues a recommendation based on the information generated in the rulemaking proceeding, it is the Librarian who adopts the final rule. The Library of Congress is not subject to the APA,⁵⁷⁹ and the Department of Justice has taken this position in ongoing litigation concerning section 1201.⁵⁸⁰

B. Defining an Exemption Class

Some study participants questioned the way the Copyright Office and the Librarian have previously constructed the “class[es] of copyrighted works”⁵⁸¹ for which a temporary exemption has been granted or denied. On the side of classes being too narrow, the Cyberlaw Clinic at Harvard Law School (“Cyberlaw Clinic”) said that “the heavily qualified exemptions issued by this Office are out of step with the intent of Congress, which asked the Register and Librarian to identify ‘a narrow and focused subset’ of works, but only compared to the very broad categories of authorship in 17 U.S.C. § 102.”⁵⁸² Others argued the classes have been defined too broadly, with Auto Alliance stating that for the recently considered exemption for vehicle repair, “[i]t [did] not appear that the Register considered ‘refining’ the proposed class of works to exclude vehicles covered by” a memorandum of understanding “entered into by virtually the entire U.S. automobile industry,” “thereby ‘limiting the adverse consequences’ of an

agency’s area of expertise,” but “[t]he taking of such notice is committed to the broad discretion of the agency.”) (internal quotation marks, citations, and alterations omitted); *Fleming Cos., Inc. v. U.S. Dep’t of Agric.*, 322 F. Supp. 2d 744, 764 (E.D. Tex. 2004) (holding that the agency was not required to “have conducted an independent investigation” or to “have sought additional information” during its informal rulemaking; giving interested parties thirty days to comment on new rule “satisfies the APA’s procedural requirements” and “[n]othing more is required”).

⁵⁷⁸ AAP, MPAA & RIAA Initial Comments at 14.

⁵⁷⁹ In *Kissinger v. Reporters Comm. for the Freedom of the Press*, 445 U.S. 136 (1979), the Court noted that the Library of Congress “is not an ‘agency’” as that term is defined for purposes of the Freedom of Information Act (“FOIA”). *Id.* at 145. The same definition applies to the APA. See 5 U.S.C. § 552(f).

⁵⁸⁰ See Mem. in Supp. of Mot. to Dismiss at 42–45, *Green v. Lynch*, No. 16-cv-1492, (D.D.C. Sept. 29, 2016), ECF No. 15-1.

⁵⁸¹ 17 U.S.C. § 1201(a)(1)(C).

⁵⁸² Cyberlaw Clinic Initial Comments at 13; see also Tr. at 102:11–24 (May 19, 2016) (Tushnet, OTW) (proposing that the Office employ a “level of generality, similar to what you see in fair use cases”); LCA Initial Comments at 31–32; Tr. at 86:16–87:04 (May 19, 2016) (Panjwani, Public Knowledge).

overbroad exemption that covers many situations in which circumvention is not required.”⁵⁸³

Still others defended the current approach, stating that “the way the categories are defined has in fact enabled the granting of certain exemptions that in a broader category would not have been granted.”⁵⁸⁴ For example, DVD CCA and AACCS LA suggested that limiting an exemption for uses of Blu-ray and DVD clips to K-12 and higher education users allowed the overall record to support granting the exemption, whereas the exemption may have been difficult to justify for a broader category.⁵⁸⁵ Similarly, AAP, MPAA, and RIAA “have come to find that [limiting a class to specific uses or users] has been helpful,”⁵⁸⁶ and Professor Decherney, a media studies professor who has obtained an exemption in multiple past rulemakings, noted that doing so “brings the idea of a class much more in line with fair use, which is about use and users.”⁵⁸⁷

Past approaches to defining a class of works are well documented in the rulemaking records, and largely emanate from the statute and legislative history. In general, commenters did not necessarily challenge this overall framework, so much as question its application in specific instances. While this Report is intended to be forward-looking, the Office examined concerns that the rulemaking has been unduly atomized⁵⁸⁸ or has neglected to exclude works for which the evidentiary record did not support an exemption.⁵⁸⁹ The Office agrees that, in some cases, it can make a greater effort to group similar classes together, and will do so going forward. For example, in the upcoming seventh rulemaking, the Office will consider consolidating some of the separate classes related to motion pictures into broader categories, such as one related to educational uses.⁵⁹⁰ But in other cases, the Office’s ability to narrowly define the class is what enabled it to recommend the exemption at all, and so the Office will continue to refine classes when merited by the record.⁵⁹¹ For example, in the last rulemaking, the Register could not recommend a broad exemption for jailbreaking video game consoles for the

⁵⁸³ Auto Alliance Initial Comments at 8–9.

⁵⁸⁴ Tr. at 103:01–104:05 (May 19, 2016) (Turnbull, DVD CCA & AACCS LA); Tr. at 104:07–16 (May 19, 2016) (Williams, AAP, MPAA & RIAA) (accord).

⁵⁸⁵ Tr. at 103:01–104:05 (May 19, 2016) (Turnbull, DVD CCA & AACCS LA).

⁵⁸⁶ Tr. at 93:07–13 (May 19, 2016) (Williams, AAP, MPAA & RIAA).

⁵⁸⁷ Tr. at 95:13–96:07 (May 19, 2016) (Decherney, Univ. of Pa.).

⁵⁸⁸ See Cyberlaw Clinic Initial Comments at 13.

⁵⁸⁹ See Auto Alliance Initial Comments at 8–9.

⁵⁹⁰ Compare 2015 Recommendation at 103–06 (breaking out into seven separate classes).

⁵⁹¹ See Tr. at 99:22–100:02 (May 19, 2016) (Panjwani, Public Knowledge) (noting difficulty for the Office in defining classes of works when exemptions must be granted for noninfringing uses).

general public because of evidence that the consoles' TPMs prevented video game piracy, but the Register was able to recommend a narrower exemption for preservationists, finding that "[t]he risk of piracy . . . appear[s] to be greatly diminished in the preservation context."⁵⁹²

C. Burden of Proof

Some commenters suggested that the burden of proof should not be borne by exemption proponents, but rather that it should fall to the Office, or even opponents in certain circumstances, to ensure there is an adequate record.⁵⁹³ Others contended that the Office has properly placed the burden on proponents.⁵⁹⁴ The Supreme Court has noted that "the term 'burden of proof' is one of the slipperiest members of the family of legal terms."⁵⁹⁵ The term can be understood to encompass "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."⁵⁹⁶

The Office noted during the first rulemaking that the statute "does not offer much guidance as to the respective burdens of proponents and opponents" of proposed exemptions.⁵⁹⁷ But regardless of what the statute provides, as a practical matter, 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. Although the Office has discretion to engage in independent fact-finding and take administrative notice of evidence, the primary way that most evidence supporting an exemption will get into the record will continue to be through the submissions of proponents, who are usually in the best position to provide it.

⁵⁹² 2015 Recommendation at 344.

⁵⁹³ *See, e.g.*, CDT Initial Comments at 6–7 ("Although administrative law generally places the burden of proof on the proponent of a rule or order, the plain text of section 1201 requires the Librarian to make a triennial determination as to the provision's adverse effect or likely adverse effect on users making noninfringing uses of particular classes of works, regardless whether any parties step forward."); CTA Initial Comments at 7 ("Where opponents are in a better position to come forward with evidence, they should be obliged to do so.").

⁵⁹⁴ *See, e.g.*, DVD CCA & AACS LA Initial Reply Comments at 7–8 ("A hearing setting where the proponents bear the burden of proof allows a careful examination of each claim of noninfringing use that may vary widely.") (citing *NLRB v. Bell Aerospace Co.*, 416 U.S. 267, 294–95 (1974)).

⁵⁹⁵ *Shaffer v. Weast*, 546 U.S. 49, 56 (2005) (quotation marks and alterations omitted).

⁵⁹⁶ *Id.*

⁵⁹⁷ 2000 Recommendation and Final Rule at 64,558.

As for the burden of persuasion, most commenters speaking to the issue agreed that exemptions should be recommended based upon the preponderance of the evidence.⁵⁹⁸ A few commenters specifically opposed applying a preponderance standard in connection with the noninfringing use prong of the analysis. Joint Filmmakers I, for example, proposed using a “some likelihood”⁵⁹⁹ standard, explaining that such a standard is “more reasonable” because “[t]here’s [a] built in backstop if the Copyright Office were to get it wrong and turn it over to the court and say, this isn’t a non-infringing use.”⁶⁰⁰

The Office continues to believe that the sounder approach is to grant exemptions only when the preponderance of the evidence in the record shows that the conditions for granting an exemption have been met. The preponderance-of-the-evidence standard is the traditional standard used in administrative proceedings⁶⁰¹ and comports with the specific language of section 1201, which requires a determination as to whether users “are, or are likely to be in the succeeding 3-year period, adversely affected by the prohibition [on circumvention] in their ability to make noninfringing uses.”⁶⁰² This conclusion is also supported by the legislative history, which explains that the granting

⁵⁹⁸ See, e.g., AAP, MPAA & RIAA Initial Reply Comments at 5; Cyberlaw Clinic Initial Comments at 2; Kernochan Center Initial Comments at 5; Tr. at 111:12–18 (May 19, 2016) (Panjwani, Public Knowledge); Tr. at 118:02–06 (May 19, 2016) (Greene, OTI).

⁵⁹⁹ Joint Filmmakers I Initial Comments at 13–15 (“[T]he Register should refrain from imposing a restrictive ‘preponderance of the evidence’ standard.”).

⁶⁰⁰ Tr. at 138:01–13 (May 25, 2016) (Lerner, Joint Filmmakers I); see also Tr. at 135:02–136:06 (May 25, 2016) (Samuelson, Univ. of Cal. Berkeley Sch. of Law) (suggesting “if it’s a plausible non-infringing use . . . that should be enough.”). But see Tr. at 142:18–143:18 (May 25, 2016) (Metalitz, AAP, MPAA & RIAA) (arguing that “[p]lausible” is “not the same thing” as “likely,” the standard set forth in the statute).

⁶⁰¹ *Steadman*, 450 U.S. at 101 n.21 (noting that “[t]he use of the ‘preponderance of evidence’ standard is the traditional standard in civil and administrative proceedings”) (quoting *Sea Island Broad. Corp. v. FCC*, 627 F.2d 240, 243 (D.C. Cir. 1980)); see also *Yzaguirre v. Barnhart*, 58 Fed. App’x 460, 463 (10th Cir. 2003) (finding an ALJ erroneously “engraft[ed] a standard of appellate review upon the fact finding process” by applying a “substantial evidence” rather than a preponderance-of-the-evidence standard); *Charlton v. FTC*, 543 F.2d 903, 907 (D.C. Cir. 1976) (analyzing the different standards for judicial review and agency fact-finding; explaining that “the yardstick by which the agency itself is to initially ascertain the facts” cannot be “something less than the weight of the evidence” and that “preponderance of the evidence is rock bottom at the factfinding level”).

⁶⁰² 17 U.S.C. § 1201(a)(1)(C) (emphasis added); see also Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, 70 Fed. Reg. 57,526, 57,528 (Oct. 3, 2005); 2015 Recommendation at 15; 2012 Recommendation at 6; 2003 Recommendation at 19–20.

of an exemption requires the production of a minimum quantity of evidence: the Commerce Committee Report explains that “[i]f the rulemaking has produced insufficient evidence to determine whether there have been adverse impacts with respect to particular classes of copyrighted materials, the circumvention prohibition should go into effect with respect to those classes.”⁶⁰³ The preponderance standard also fits the nature of the section 1201 proceeding, which requires the Register to make a binary choice whether to recommend, or not, a requested exemption, after considering the evidence marshalled on both sides in favor or against a proposal.⁶⁰⁴ In this context, it is appropriate to require the evidence, on balance, to support the requested exemption.⁶⁰⁵ Indeed, the preponderance standard is used by courts in evaluating fair use cases.⁶⁰⁶ For the same reasons, the Office disagrees with those commenters who proposed using a standard other than preponderance specifically in examining noninfringing uses.

In sum, 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.

D. Applicable Evidentiary Standards

The Office received many comments addressing the application of evidentiary standards in past rulemakings. While some suggested that “a way to keep triennial proceedings manageable in scope is to rigorously enforce the current standards of proof for new

⁶⁰³ COMMERCE COMMITTEE REPORT at 38.

⁶⁰⁴ While the rulemakings have provided an avenue for persons to submit comments “that neither support nor oppose an exemption but seek to share pertinent information about a proposal,” in practice the Office receives few such comments. *See* 2015 NPRM at 73,856.

⁶⁰⁵ *Cf. Octane Fitness, LLC v. ICON Health & Fitness, Inc.*, 134 S. Ct. 1749, 1758 (2014) (preponderance of the evidence “is the standard generally applicable in civil actions, because it allows both parties to share the risk of error in roughly equal fashion”) (internal quotation marks omitted).

⁶⁰⁶ *See, e.g., Sony Corp. of Am. v. Universal City Studios, Inc.*, 464 U.S. 417, 451 (1984) (under the fourth factor, “[w]hat is necessary is a showing by a preponderance of the evidence that some meaningful likelihood of future harm exists”); *Balsley v. LFP, Inc.*, No. 1:08 CV 491, 2011 WL 1298180, at *8 (N.D. Ohio Mar. 31, 2011) (noting that the jury must consider whether the defendant proved fair use by a preponderance of the evidence), *aff'd*, 691 F.3d 747 (6th Cir. 2012); *Haberman v. Hustler Magazine, Inc.*, 626 F. Supp. 201, 208 (D. Mass. 1986) (noting that fair use is “established by a preponderance of the evidence” standard).

exemptions (and changes to existing exemptions),”⁶⁰⁷ others suggested that the Register has, to the detriment of exemption proponents, been inconsistent and overly rigid in the interpretation and application of the standards.⁶⁰⁸ More generally, they expressed concern that the Register has not predictably applied a single set of standards from one proceeding to the next.⁶⁰⁹

A number of stakeholders who had previously sought or represented proponents for an exemption agreed with a proposal by the Cyberlaw Clinic for the Office to realign the way it applies the statute to the evidentiary record.⁶¹⁰ According to the Cyberlaw Clinic, in prior rulemakings, the Office has effectively required proponents to satisfy nine separate factors, several of which the Clinic regards as beyond the statute’s requirements, and others of which it believes are redundant.⁶¹¹ For example, it contended that the Office has looked to extra-statutory considerations such as “[h]ow the [TPM] in question works, and how it is circumvented,” whether “the TPM is the ‘clearly attributable’ cause of the claimed adverse impact,” and the existence of “potential alternatives” to circumvention.⁶¹²

As an alternative, the Cyberlaw Clinic proposed what it describes as “a simple four-factor inquiry” whereby a proponent should be required to show that:

- At least some works in the . . . class of works the proponent seeks to access are protected under copyright. . . .

⁶⁰⁷ ESA Initial Comments at 11–12; *see also* DVD CCA & AACS LA Initial Comments at 14.

⁶⁰⁸ Cyberlaw Initial Comments at 2, 5–8 (“The current rulemaking requires substantive showings that are not required under the statutory framework, and presents proponents with evidentiary requirements far beyond the scope of the statutory authority granted by Congress.”); *see also, e.g.*, Authors Alliance Initial Comments at 3; ISRI Initial Comments at 11; OTI Initial Comments at 9–10; OTW Initial Comments at 3–4.

⁶⁰⁹ *See, e.g.*, AFB Initial Comments at 8 (detailing the Office’s treatment of the assistive technology exemption through successive rulemakings, stating that “parties like AFB are largely unable to anticipate the Office’s cycle-to-cycle requirements with any certainty and prepare an appropriate evidentiary record”); Cyberlaw Clinic Initial Comments at 2; Int’l Documentary Ass’n, Film Independent, Kartemquin Educ. Films, Indep. Filmmaker Project, Indie Caucus, The Nat’l Alliance for Media Arts and Culture, New Media Rights & Women in Film and Video (“Joint Filmmakers II”) Reply Comments at 8.

⁶¹⁰ *See, e.g.*, Joint Filmmakers II Initial Reply Comments at 7 & n.19; Public Knowledge Additional Comments at 2; Tr. at 118:07–11 (May 25, 2016) (Samuelson, Univ. of Cal. Berkeley Sch. of Law); Tr. at 83:06–09, 137:25–138:03 (May 19, 2016) (Tushnet, OTW).

⁶¹¹ Cyberlaw Clinic Initial Comments at 3–5. The Clinic acknowledged that some of these factors reflect the Office’s questions to develop a record to conduct an evaluation of the statutory factors.

⁶¹² *Id.* at 4.

- An activity that the proponent seeks to do with regard to a class of works is likely to be noninfringing under copyright law, but for this anticircumvention provision. . . .
- The presence or planned presence of a technological protection measure makes this activity unlawful under 17 U.S.C. § 1201(a)(1)(A). . . .
- The proponent is “adversely affected” under the factors articulated in 17 U.S.C. § 1201(a)(1)(C).⁶¹³

The Cyberlaw Clinic argued that the statute directs that adverse effects and the statutory factors in section 1201(a)(1)(C) should be “examined in reference to the other.”⁶¹⁴ The Clinic explained that “a use should be found to be ‘adversely affected’ whenever the harm to the planned noninfringing use is not outweighed by the harm to the market for or value of a work that would occur by allowing the particular use.”⁶¹⁵

The Copyright Office does not agree that the rulemaking has ever required exemption proponents to demonstrate nine separate factors, and notes that the Cyberlaw Clinic admits some of the “factors” it identified are “redundant” of each other.⁶¹⁶ For example, the Office has previously sought information regarding how the TPM at issue works and how it is circumvented.⁶¹⁷ This information is sought because it is helpful to facilitate the development of the administrative record and for all participants to understand how to comment and what to comment on; it is not an evidentiary hurdle that must be satisfied. Going forward, the Office will continue to ask proponents for such information, and the Office will also be clearer in encouraging exemption opponents to provide it as well.

The Office does, however, believe it is prudent to provide regulatory guidance clarifying the applicable evidentiary standards that must be satisfied to obtain an exemption. The Office believes its application of the statute is similar to many commenters’ preferred approaches, including the Cyberlaw Clinic. At bottom, under section 1201(a)(1)(C), the Office must inquire: *Are users of a copyrighted work adversely affected by the prohibition on 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?* This inquiry derives directly

⁶¹³ *Id.* at 8; *see also* Joint Filmmakers II Initial Reply Comments at 2, 7–9 (proposing an alternative four-factor test).

⁶¹⁴ Cyberlaw Clinic Initial Comments at 8.

⁶¹⁵ *Id.* at 2, 9–10 (elaborating on proposed balancing of factors).

⁶¹⁶ *See id.* at 7.

⁶¹⁷ *See* 2015 NPRM at 73,871 (listing information the Office “encourages commenters . . . to address”).

from the statute, and its application is guided by legislative history. Practically speaking, it breaks down into these elements:

- The proposed class includes at least some works protected by copyright.
- The uses at issue are noninfringing under title 17.
- Users are adversely affected in their ability to make such noninfringing uses or, alternatively, users are likely to be adversely affected in their ability to make such noninfringing uses during the next three years. This element is analyzed in reference to section 1201(a)(1)(C)'s five statutory factors.
- The statutory prohibition on circumventing access controls is the cause of the adverse effects.

The Office hopes that participants who expressed confusion over the evidentiary standards applied by the Office find this articulation helpful. In practice, this approach is not substantively different from that employed in past rulemakings.

1. Copyrightable Works at Issue

The first element under the Office's test is a straightforward matter of ascertaining whether at least some works included in a class are protected by copyright. This requirement comes directly from the statute, which refers to a "class of copyrighted works"⁶¹⁸ and provides that the circumvention ban only applies to a TPM that controls access to "a work protected under this title."⁶¹⁹

2. Noninfringing Uses

The second element emanates directly from the statute as well, which references users' "ability to make noninfringing uses" of a class of works.⁶²⁰ 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. . . . [T]here is no "rule of doubt" favoring an exemption when it is unclear that a particular use is a fair or otherwise noninfringing use. Thus, a proponent must show more than that a particular use *could*

⁶¹⁸ See 17 U.S.C. § 1201(a)(1)(C).

⁶¹⁹ See *id.* § 1201(a)(1)(A).

⁶²⁰ See *id.* § 1201(a)(1)(C).

be noninfringing. Rather, the proponent must establish that the proposed use is likely to qualify as noninfringing under relevant law.⁶²¹

The Office continues to emphasize that this standard does not require “controlling precedent directly on point.”⁶²² Rather, as it has done in the past, the Office will look to analogous case law in assessing whether a use is likely to be noninfringing.

Some commenters, including Public Knowledge, seemed to advocate that the Librarian should grant an exemption even where it is unclear whether uses are “likely” to be noninfringing, stating that “barring affirmative case law saying that that activity is in fact infringing . . . the tie goes to a determination of non-infringement.”⁶²³ It suggested that “reasonable experts can disagree as to whether the case law indicates that an act is infringing or not” and that “[i]n such cases, it would be best to grant the exemption, and allow the question to be properly resolved by a federal court if a copyright owner feels aggrieved.”⁶²⁴ In the absence of an exemption, it explained, a court presented with such a case would be compelled to find a section 1201(a)(1) violation based on the circumvention, even if it believed that the use of the underlying work may constitute fair use.⁶²⁵

But a permissive approach to finding noninfringing uses in the absence of an established basis in the statute or case law would be contrary to the overall statutory scheme, which, as explained above, requires the production of sufficient evidence that there have been or are likely to be adverse impacts on noninfringing uses.⁶²⁶ The Office also disagrees that the denial of exemptions based on a “dearth of case law” “effectively depriv[es] the courts of . . . critical jurisdiction” to determine whether certain uses are noninfringing.⁶²⁷

⁶²¹ 2015 Recommendation at 15; *see* 2012 Recommendation at 7; 2010 Recommendation at 11–12.

⁶²² *See* 2010 Recommendation at 12.

⁶²³ Tr. at 120:23–121:07 (May 19, 2016) (Panjwani, Public Knowledge).

⁶²⁴ Public Knowledge Initial Comments at 5–6; *see also* Joint Filmmakers II Reply Comments at 7 (“[A]n unduly restrictive standard runs counter to Congress’s intent not to disturb the natural development of case law with respect to fair and other lawful uses.”).

⁶²⁵ Public Knowledge Initial Comments at 6 (citing *RealNetworks, Inc. v. DVD Copy Control Ass’n, Inc.*, 641 F. Supp. 2d 913 (N.D. Cal. 2009)).

⁶²⁶ COMMERCE COMMITTEE REPORT at 38 (“If the rulemaking has produced insufficient evidence to determine whether there have been adverse impacts with respect to particular classes of copyrighted materials, the circumvention prohibition should go into effect with respect to those classes.”).

⁶²⁷ *See* Public Knowledge Initial Comments at 6.

Nothing in section 1201 prevents a user from seeking declaratory judgment as appropriate, or engaging in litigation involving works not protected by TPMs.⁶²⁸

Moreover, the rulemaking is not an appropriate venue for breaking new ground in fair use jurisprudence, and the Office is hesitant to place itself in the position of making fair use findings in a rulemaking context—potentially subject to some degree of judicial deference—that might have influence beyond the current state of the law. The Office’s approach in this regard has some support in the statute: section 1201(c) states that nothing in the rest of section 1201 “shall affect rights, remedies, limitations, or defenses to copyright infringement, including fair use, under this title,”⁶²⁹ and legislative history states that this provision was “intended to ensure that none of the provisions in section 1201 affect the existing legal regime established in the Copyright Act and case law interpreting that statute.”⁶³⁰ This suggests that Congress did not intend for the Office to expand or contract the contours of fair use through the rulemaking proceeding.

3. Causation

This requirement comes directly from the statute, which requires that users be “adversely affected by the prohibition [on circumvention].”⁶³¹ Legislative history confirms what the statute makes clear: “[a]dverse impacts that flow from other sources . . . are outside the scope of the rulemaking.”⁶³² Examples of potential sources of non-cognizable harms include “marketplace trends, other technological developments, or changes in the roles of libraries, distributors or other intermediaries.”⁶³³ In the past, the Office said adverse effects must be “clearly attributable to implementation of a technological protection measure,”⁶³⁴ but “clearly attributable” does not imply a heightened causation requirement above preponderance of the evidence.

⁶²⁸ To be clear, there is no actual deprivation of jurisdiction: copyright infringement and section 1201 violations are separate causes of action, and a court entertaining both claims would be called on to resolve both issues, including the merits of any asserted fair use defense to the infringement claim.

⁶²⁹ 17 U.S.C. § 1201(c).

⁶³⁰ SENATE JUDICIARY COMMITTEE REPORT at 30; *see also* COMMERCE COMMITTEE REPORT at 20, 26 (“[F]air use principles certainly should not be extended beyond their current formulation.”).

⁶³¹ 17 U.S.C. § 1201(a)(1)(C).

⁶³² COMMERCE COMMITTEE REPORT at 37; HOUSE MANAGER’S REPORT at 6.

⁶³³ HOUSE MANAGER’S REPORT at 6.

⁶³⁴ *See* 2015 Recommendation at 16 (quoting COMMERCE COMMITTEE REPORT at 37); *see also* HOUSE MANAGER’S REPORT at 6 (“Adverse impacts . . . that are not clearly attributable to such a prohibition, are outside the scope of the rulemaking.”).

4. Adverse Effects and the Statutory Factors

The Office agrees with the Cyberlaw Clinic that the adverse effects analysis is connected to the statutory factors. Congress has explained that the factors “are illustrative of the questions that the rulemaking proceeding should ask,” and in examining them, “the focus must remain on whether the implementation of technological protection measures . . . has caused adverse impact on the ability of users to make lawful uses.”⁶³⁵ As the Office has previously noted, these factors delineate the “nature of the inquiry for the rulemaking process as a whole,”⁶³⁶ and “[t]hese statutory considerations require examination and careful balancing” in reaching a determination to grant or deny an exemption.⁶³⁷

Although the Office has sometimes laid out these factors themselves separately for clarity or administrability, in practice, the Office generally balances “[t]he harm identified by a proponent of an exemption . . . with the harm that would result from an exemption.”⁶³⁸ As the Office explained in the first rulemaking:

Ultimately, the task [of the] rulemaking proceeding is to balance the benefits of technological measures that control access to copyrighted works against the harm caused to users of those works, and to determine, with respect to any particular class of works, whether an exemption is warranted because users of that class of works have suffered significant harm in their ability to engage in noninfringing uses. The four factors specified in section 1201(a)(1)(C) reflect some of the significant considerations that must be balanced⁶³⁹

⁶³⁵ COMMERCE COMMITTEE REPORT at 37.

⁶³⁶ 2006 Recommendation at 5; 2003 Recommendation at 6.

⁶³⁷ 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. at 57,530; Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, 67 Fed. Reg. 63,578, 63,581 (Oct. 15, 2002).

⁶³⁸ Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, 76 Fed. Reg. at 60,403; Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, 73 Fed. Reg. at 58,078; Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, 70 Fed. Reg. at 57,530; Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, 67 Fed. Reg. at 63,581.

⁶³⁹ 2000 Recommendation and Final Rule at 64,563 (internal citations omitted).

a. Degree of Adverse Effects Required

While rightsholders generally praised the Office’s past analysis of adverse effects,⁶⁴⁰ some commenters questioned the Office’s reliance on various committee reports that they believe articulate standards beyond what is statutorily required, specifically: that the “main focus” of the rulemaking is on whether “a substantial diminution of” the availability of works for noninfringing uses “is *actually occurring* in the market”;⁶⁴¹ that adverse impacts should be “distinct, verifiable and measurable” and “not . . . *de minimis*”;⁶⁴² that “mere inconveniences, or individual cases, that do not rise to the level of a substantial adverse impact” are insufficient;⁶⁴³ and that a “determination should be based upon anticipated, rather than actual, adverse impacts only in extraordinary circumstances in which the evidence of likelihood of future adverse impact during that time period is highly specific, strong and persuasive.”⁶⁴⁴ These requirements, such commenters argued, are not required by the statute’s text⁶⁴⁵ and are largely the result of the Office placing undue weight on the House Manager’s Report.⁶⁴⁶ They asserted that such statements serve as *de facto* heightened evidentiary standards, noting that the statute requires “[n]o further evidence of harm other than that inability to make noninfringing uses.”⁶⁴⁷

The Office does not believe that by referencing statements from the legislative history, it has applied a heightened standard beyond preponderance of the evidence.⁶⁴⁸ Rather, the

⁶⁴⁰ AAP, MPAA & RIAA Initial Comments at 13; AAP, MPAA & RIAA Initial Reply Comments at 5–6; SIIA Initial Reply Comments at 3–4.

⁶⁴¹ HOUSE MANAGER’S REPORT at 6.

⁶⁴² COMMERCE COMMITTEE REPORT at 37.

⁶⁴³ HOUSE MANAGER’S REPORT at 6.

⁶⁴⁴ HOUSE MANAGER’S REPORT at 6.

⁶⁴⁵ See, e.g., Authors Alliance Initial Comments at 3; CDT Initial Comments at 6–7; Consumers Union Initial Comments at 4–5; New Media Rights (“NMR”) Initial Comments at 16; OTW Initial Comments at 3–4.

⁶⁴⁶ See, e.g., Cyberlaw Clinic Initial Comments at 5–6; ISRI Initial Comments at 12 (noting that the report was issued after the bill passed the House, and that the report is “the handiwork of one legislator after the fact”) (quoting DAVID NIMMER, COPYRIGHT: SACRED TEXT, TECHNOLOGY, AND THE DMCA 426 (2003)); Tr. at 117:14–19 (May 19, 2016) (Greene, OTI).

⁶⁴⁷ OTW Initial Comments at 3–4; see also Consumers Union Initial Comments at 5; Cyberlaw Clinic Initial Comments at 12–13; ISRI Initial Comments at 12; OTI Initial Comments at 9–10.

⁶⁴⁸ The Office declines some commenters’ suggestions to ignore section 1201’s legislative history on this topic. While the Office appreciates that the DMCA went through various changes, and that the statute speaks most plainly for itself, on many issues, including the degree of adverse

legislative history merely confirms the statutory standard. When read together, the Commerce Committee and House Manager's Reports make clear that the "burden of proof is not more stringent than the statutory text, but rather is a clarification that any showing must be based on real, verifiable, and reasonable evidence."⁶⁴⁹ As the Office has explained, the House Manager's Report's characterization of the necessary showing as being one of "substantial adverse impact" or "substantial diminution" is "equivalent" to the standard articulated by the Commerce Committee: that the rulemaking proceeding should focus on "distinct, verifiable, and measurable impacts" compared to "*de minimis* impacts."⁶⁵⁰ In other words, "[s]tating that there is a requirement of 'substantial' adverse impact is another way of saying that a showing of more than 'de minimis impacts' is required."⁶⁵¹ Similarly, reference to "distinct . . . impacts," requires only "more than a vague or generalized claim unrelated to a particular class."⁶⁵²

With regard to the House Manager's Report's statement that a "determination should be based upon anticipated, rather than actual, adverse impacts only in extraordinary circumstances in which the evidence of likelihood of future adverse impact during that time period is highly specific, strong and persuasive,"⁶⁵³ the Office has similarly found, and now reaffirms, that "the statutory language enacted does not specify a standard beyond . . . the traditional preponderance of the evidence standard."⁶⁵⁴

To the extent these legislative history statements have relevance beyond restating the statutory standard in different terms, it is in confirming that evidence cannot be hypothetical, theoretical, or speculative, but must be real, tangible, and concrete.⁶⁵⁵

effects required, the bicameral legislative history paints a cohesive picture and can illuminate congressional intent.

⁶⁴⁹ See 2003 Recommendation at 17–18.

⁶⁵⁰ *Id.* at 16–18 (citing both legislative reports); see also 2012 Recommendation at 7; 2010 Recommendation at 10; 2006 Recommendation at 8; 2000 Recommendation and Final Rule at 64,558 n.4.

⁶⁵¹ See 2003 Recommendation at 16–17; see also 2012 Recommendation at 7; 2010 Recommendation at 10; 2006 Recommendation at 8.

⁶⁵² See 2010 Recommendation at 10.

⁶⁵³ HOUSE MANAGER'S REPORT at 6.

⁶⁵⁴ See 2003 Recommendation at 19–20 (internal quotation marks and alterations omitted); see also 2012 Recommendation at 8; 2010 Recommendation at 10; 2006 Recommendation at 8.

⁶⁵⁵ Many commenters agreed with this interpretation. See, e.g., NMR Initial Comments at 16 (suggesting legislative history should be interpreted to only require a "measurable" impact); Joint Filmmakers II Initial Reply Comments at 8 ("[T]he Register should define 'adverse' as 'more than de minimis,' meaning that if real cases exist which are emblematic of a broader impact, an adverse effect has been shown."); Tr. at 115:23–117:07, 126:02–07 (May 19, 2016) (Williams, AAP,

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).

Regarding references to denying exemptions where the exemption would affect “individual cases,”⁶⁵⁶ it certainly may be appropriate to weed out edge cases where permitting circumvention broadly may impact the market for copyrighted works. But to be clear, the Register does not decline to recommend exemptions solely because only a small number of individuals would benefit from it. The Office also notes that the admonition against crediting “mere inconveniences”⁶⁵⁷ relates to the availability for use of works under the first statutory factor. As discussed below, whether or not something is an adverse effect or a mere inconvenience can depend upon the costs and burdens involved in making use of reasonable alternatives.⁶⁵⁸

b. Statutory Factors

Many commenters offered views regarding the proper examination of the factors that the statute requires be considered. In evaluating the first factor, “the availability for use of copyrighted works,”⁶⁵⁹ some stakeholders suggested that the Office has placed too much emphasis on whether there are reasonable alternatives to an exemption, and that “[a]lternatives to circumvention need to be realistic.”⁶⁶⁰ On the other hand, rightsholders asserted that “[i]t is also essential that the Register continue to consider ‘the positive as

MCAA & RIAA) (noting that the Office has previously explained that these statements simply require proponents to come forward with “a real-world issue” rather than a “hypothetical” or a “philosophical objection [to] the law”).

⁶⁵⁶ See HOUSE MANAGER’S REPORT at 6.

⁶⁵⁷ See *id.*

⁶⁵⁸ See Public Knowledge Initial Comments at 7 (“Being required to spend money, when the alternative would not infringe a copyright, should by any sensible definition be considered an adverse effect on the public.”); ISRI Initial Comments at 14–15 (providing example of phone unlocking exemption and stating that “[t]he Register rejected NTIA’s common-sense conclusion that it is not an appropriate alternative for a current device owner to be required to purchase another device to switch carriers”) (internal quotation marks omitted).

⁶⁵⁹ 17 U.S.C. § 1201(a)(1)(C)(i).

⁶⁶⁰ OTW Initial Comments at 5–6; see also, *e.g.*, AFB Initial Comments at 8 (arguing the standard should not require a “print-disabled reader to engage in burdensome or costly searches for different formats of works or to abandon their current eBook reader and invest in a different eBook platform (or several) to take advantage of a work accessible only in that format”); Tr. at 155:03–17 (May 25, 2016) (Samuelson, Univ. of Cal. Berkeley Sch. of Law) (“[H]ardship of the alternatives . . . should be taken into account.”).

well as the adverse effects of [TPMs] on the availability of copyrighted materials.”⁶⁶¹ The Office agrees that alternatives to circumvention should be realistic and not merely theoretical,⁶⁶² but does not believe that establishing bright-line rules as to availability would aid this analysis. Instead, the Office will continue to evaluate the burdens or costs involved with an alternative and, depending on the circumstances, find them to either rise to the level of an adverse effect or to just be a mere inconvenience. The Office will also continue to consider both the positive and adverse effects of the prohibition on the availability of copyrighted materials.

The study received few substantive comments concerning the second and third factors, respectively, “the availability for use of works for nonprofit archival, preservation, and educational purposes” and “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.”⁶⁶³ Since these factors harken to exceptions for libraries and archives in section 108 and the paradigmatic fair uses set forth in section 107, the Office will continue to rely on those statutes and relevant case law to inform its consideration of these factors, as appropriate.

With regard to the fourth factor, “the effect of circumvention of technological measures on the market for or value of copyrighted works,”⁶⁶⁴ Joint Filmmakers II argued that “[t]o qualify as a real threat of market substitution, there should be concrete evidence to that effect; mere assertions should not be sufficient.”⁶⁶⁵ For works providing commentary on the original work, they added that “this inquiry should not include effects on the licensing market, because it is well-established that rights holders have no claim to the derivative market for criticisms of their works.”⁶⁶⁶ The Office agrees that claims of a threat of market substitution should be more than bare assertions. The Office also agrees that the effect of noninfringing uses on licensing markets should be excluded, although the Office also notes that the effect on such markets may be relevant

⁶⁶¹ AAP, MPAA & RIAA Initial Comments at 13 (quoting HOUSE MANAGER’S REPORT at 6); *see also* Tr. at 177:08–15 (May 19, 2016) (Geiger, Rapid7) (suggesting that “protecting the availability of copyrighted works” should be considered when evaluating proposed exemptions).

⁶⁶² *See* OTW Initial Comments at 5–6.

⁶⁶³ 17 U.S.C. § 1201(a)(1)(C)(ii),(iii).

⁶⁶⁴ *Id.* § 1201(a)(1)(C)(iv).

⁶⁶⁵ Joint Filmmakers II Initial Reply Comments at 9.

⁶⁶⁶ *Id.*

to assessing whether the use is infringing in the first place (*e.g.*, under the fourth fair use factor).⁶⁶⁷ Otherwise, the study received little comment on the application of this factor.

Many commenters were critical of the Office’s consideration in the last rulemaking of non-copyright issues, such as public safety and environmental concerns, under the fifth statutory factor, “such other factors as the Librarian considers appropriate.”⁶⁶⁸ There was particular concern over the Office’s recommendation that the implementation of certain exemptions for vehicle repair, security research, and medical devices be delayed a year “to provide . . . potentially interested agencies an opportunity to consider and prepare for the lifting of the DMCA prohibition.”⁶⁶⁹ For example, Public Knowledge stated that “Congress, agencies, or the courts have adopted appropriate statutes, regulations, and legal doctrines to address any concerns beyond the scope of copyright law” and that “[a]ny concern that those measures are inadequate to serve their intended purposes should be addressed by the appropriate subject matter authorities.”⁶⁷⁰ EFF questioned whether the Office’s solicitation of comments on non-copyright issues “led to better exemptions,”⁶⁷¹ suggesting that it may instead have “encourage[d] the opportunistic use of Section 1201 by corporations with an interest in suppressing competition and independent research.”⁶⁷² These commenters argued that the fifth

⁶⁶⁷ With respect to Joint Filmmakers II’s comment specifically, the Office notes that in considering whether to recommend an exemption for narrative filmmaking, the sixth rulemaking took into account the effect of potentially *infringing* uses on the relevant licensing market. See 2015 Recommendation at 79–81 (noting that such uses “do not necessarily appear to be related to criticism or comment or otherwise transformative”).

⁶⁶⁸ 17 U.S.C. § 1201(a)(1)(C)(iv).

⁶⁶⁹ 2015 Final Rule at 65,954; see, *e.g.*, Auto Care Initial Comments at 7 (“[T]he Librarian of Congress and the Copyright Office, by delaying implementation of the [2015 Rulemaking’s] Class 21 and 22 exemptions, exceeded their authority and committed clear error.”). *But see* ISRI Initial Comments at 7 (noting that such a delay is “problematic,” but “better than a denial”).

⁶⁷⁰ Public Knowledge Initial Comments at 3–4; see also, *e.g.*, CDT Initial Comments at 4; Consumers Union Initial Comments at 3–4; EFF Initial Comments at 7 (stating that “[n]o exemption granted by the Copyright Office creates a license to violate” such laws, making consideration of such matters as part of the rulemaking unnecessary in its view); OTW Initial Comments at 2; R Street Institute Initial Comments at 8.

⁶⁷¹ EFF Initial Reply Comments at 5–6.

⁶⁷² EFF Initial Comments at 6–7. EFF offered evidence showing that, a day after the Copyright Office solicited views from the EPA, Auto Alliance asked the EPA to voice its concern that allowing consumer modifications to these programs would cause environmental and safety problems. *Id.* at Attachment B.

statutory factor “must be understood within the scope of copyright interests reflected in the body of subparagraph (C) and clauses (i)–(iv).”⁶⁷³

But many other commenters opined that the Office properly exercised its authority in seeking input from other agencies and recommending delayed implementation of an exemption in appropriate circumstances.⁶⁷⁴ As Consumers Union put it, “[t]here may be times when delaying the availability of a new exemption is warranted, to give the regulatory agency prior notice and a reasonable opportunity to establish appropriate conditions on accessing and altering a product’s software, in keeping with the need to ensure safety.”⁶⁷⁵ Looking forward, Microsoft and others asked that the Office “facilitate inter-agency consultation and dialogue as early in the process as possible.”⁶⁷⁶

The Office appreciates commenters’ discussion of the sixth rulemaking which, in light of significant and novel public policy concerns, took certain non-copyright issues into account and implemented a twelve-month delay for certain exemptions relating to security research and automobile repair to allow other agencies to react to the new rule. The Office believes that the open-ended nature of this statutory factor permits broad consideration of a wide variety of factors. As both the Office and NTIA noted in the last rulemaking, it is not always possible to draw a line at “copyright concerns.”⁶⁷⁷ Moreover, certain non-copyright concerns have been consistently relevant to proposed exemptions in past rulemakings, such as competition and telecommunications policies supporting past cellphone unlocking exemptions.⁶⁷⁸ Indeed, the statute itself makes relevant certain non-copyright concerns, such as interoperability, encryption research,

⁶⁷³ Auto Care Initial Comments at 7–8; *see also* Cyberlaw Clinic Initial Comments at 14–15 (“The Supreme Court has endorsed this formulation, holding in a case concerning a judge’s power to consider ‘such other factors as the court deems appropriate’ under a statute to be ‘understood in light of the specific terms that surround it.’”) (quoting *Hughey v. United States*, 495 U.S. 411, 419 (1990)).

⁶⁷⁴ *See, e.g.*, ACT Initial Comments at 5; Copyright Alliance Initial Comments at 11; ISRI Initial Comments at 8; Kernochan Center Initial Comments at 4; Auto Alliance Initial Comments at 3–6; Microsoft Initial Comments at 6–7.

⁶⁷⁵ Consumers Union Initial Comments at 3.

⁶⁷⁶ Microsoft Initial Comments at 6–7 (“The analysis, data and other evidence of expertise from these agencies can inform the Office’s recommendations and increase stakeholder and public confidence in the outcome of the rulemaking process.”); *see also* Auto Alliance Initial Comments at 3–6; Consumers Union Initial Comments at 3; CDT Initial Comments at 4 (“CDT also shares NTIA’s confidence that when triennial exemptions raise substantial concerns outside the scope of copyright, clear and transparent communication can provide notice to other agencies . . .”).

⁶⁷⁷ *See, e.g.*, 2015 Recommendation at 244–45 (noting that the Copyright Office and NTIA agree that both copyright and non-copyright concerns are relevant to some proposed exemptions).

⁶⁷⁸ *See, e.g., id.* at 168.

security testing, and protection of minors and personally identifying information.⁶⁷⁹ And the statute directs NTIA, an agency principally responsible by law for advising the President on telecommunications and information policy issues, to provide its views, suggesting Congress wanted certain non-copyright concerns to play a role in the rulemaking process.⁶⁸⁰

But while the Office declines to categorically exclude “non-copyright” concerns from the fifth statutory factor, the Office also reiterates that the rulemaking must be “principally focused on the copyright concerns implicated by any proposed exemption,” and that it is not typical for safety and environmental concerns to play a significant role in the Register’s recommendation.⁶⁸¹ The sixth rulemaking presented the Office with multiple and novel classes that included devices like tractors and medical devices, which but for the software contained within them would have no place in the rulemaking. Confronted with concerns that have “at best a very tenuous nexus to copyright protection,” but “are serious issues nevertheless,” the Register recommended, and the Librarian adopted, a delayed implementation for certain exemptions to provide adequate time for other agencies to examine and update their own rules and guidance if needed.⁶⁸² Going forward, now that agencies, consumers, and businesses alike have had the opportunity to consider these issues and react to the many exemptions related to embedded software that were granted in the past rulemaking,⁶⁸³ the Office expects its future recommendations will be able to factor this into account. For example, while the Office

⁶⁷⁹ See 17 U.S.C. § 1201(c)(3) (nothing in the statute shall affect product design for components unless otherwise prohibited), § 1201(f) (reverse engineering for interoperability), § 1201(g) (encryption research), § 1201(h) (protection of minors), § 1201(i) (personally identifying information), § 1201(j) (security testing). While these provisions broadly look to non-copyright concerns for purposes of establishing exemptions to section 1201, in many cases they also limit the availability of those exemptions based on non-copyright concerns. See, e.g., *id.* § 1201(g)(2), (j)(2) (conditioning respective exemptions on circumvention not violating “section 1030 of title 18 and those provisions of title 18 amended by the Computer Fraud and Abuse Act of 1986”), § 1201(j)(3)(B) (factors in determining exemption include whether information obtained was used in “violation of privacy or breach of security”).

⁶⁸⁰ 17 U.S.C. § 1201(a)(1)(C).

⁶⁸¹ See 2015 Recommendation at 248.

⁶⁸² See e.g., *id.* at 3, 241–49, 311–20.

⁶⁸³ While it appears that the EPA’s participation in the previous rulemaking may have been initiated by concerns voiced by copyright stakeholders, see EFF Initial Comments at 6–7, the FDA’s cybersecurity guidance on medical devices issued last year, in contrast, suggests the implementation delay may have been beneficial to them. See FDA, POSTMARKET MANAGEMENT OF CYBERSECURITY IN MEDICAL DEVICES—GUIDANCE FOR INDUSTRY AND FOOD AND DRUG ADMINISTRATION STAFF (Dec. 28, 2016), <http://www.fda.gov/downloads/MedicalDevices/DeviceRegulationandGuidance/GuidanceDocuments/UCM482022.pdf>.

might take note of market competition issues, it will generally decline to consider health, safety, and environmental concerns. Likewise, the Office does not anticipate the Register recommending additional delays for implementation of exemptions unless necessitated by a grave or unusual situation. The Office agrees that other agencies should not rely on section 1201 to help enforce or cover gaps in their own health, safety, environmental, or other regulations and reiterates that the granting of an exemption provides no defense to those who use it as an excuse to violate other laws and regulations.⁶⁸⁴

Finally, some commenters put forward additional items that the Office should consider under this factor, such as the purpose for which a TPM was adopted or how the statute broadly affects uses of copyrighted works.⁶⁸⁵ The Office is open to considering these issues in the upcoming rulemaking, while noting that “the Section 1201 rulemaking process is not the forum in which to break new ground on the scope of fair use.”⁶⁸⁶

c. Merged Access and Copy Controls

A few commenters proposed that in the many cases where access controls and copy controls are merged, the rulemaking should treat the inquiry into adverse effects on noninfringing uses differently, favoring a finding of adverse effects over cases where TPMs operate solely as an access control.⁶⁸⁷ This is because, as OTW put it, “the balance that Congress did intend in distinguishing access from rights controls is now gone.”⁶⁸⁸ The encryption protocols used for DVDs and Blu-rays were used as a prime example, with Joint Filmmakers I explaining that “[m]ost participants in the triennial rulemakings who have suggested exemptions” to circumvent DVDs or Blu-rays have sought to do so “to make copies in order to engage in a lawful use.”⁶⁸⁹ Rightholders objected, stating that they did not see any basis in the statute or legislative history for this approach, and

⁶⁸⁴ See 2015 Recommendation at 11 (“[W]hile an exemption may specifically reference other laws of particular concern, any activities conducted under an exemption must be otherwise lawful.”).

⁶⁸⁵ Joint Filmmakers II Initial Reply Comments at 8–9 (asking Register to consider general effect on fair or other lawful uses); see Tr. at 154:05–15 (May 25, 2016) (Samuelson, Univ. of Cal. Berkeley Sch. of Law) (suggesting that if a TPM was “adopted for non-copyright reasons,” this should weigh in favor of an exemption).

⁶⁸⁶ 2015 Recommendation at 109 (quoting 2012 Recommendation at 163).

⁶⁸⁷ OTW Initial Comments at 5 (“The fact that, from the perspective of rights controls, their acts are perfectly lawful should itself indicate an adverse impact on noninfringing uses.”); Joint Filmmakers II Initial Reply Comments at 6–7 (“[T]he Register should strongly favor exemptions involving merged access and use controls where the merged control prevents a use such as copying and the user does not seek to access the material unlawfully.”).

⁶⁸⁸ Tr. at 138:06–11 (May 19, 2016) (Tushnet, OTW).

⁶⁸⁹ Joint Filmmakers I Initial Comments at 16.

noting, “[j]ust because an access control may have aspects of copy control merged with it doesn’t make it any less of an access control.”⁶⁹⁰

The Copyright Office does not find statutory support for the idea that obtaining an exemption should be easier where the TPM at issue is merged. The Office appreciates the desire for accommodation, given that section 1201 does not prohibit circumvention of copy controls. As discussed above, however, the Office believes that section 1201(a)(1) is best read as protecting the integrity of access controls even where prohibited conduct would not be infringing. Additionally, at least in the anti-trafficking context, courts have found that where a TPM acts as both an access control and a copy control, it is independently subject to both section 1201(a)(2) and section 1201(b).⁶⁹¹ The Office will continue to evaluate the effect of access controls, independent of whether the TPM also functions as a copy control. That being said, the Office notes that it has frequently granted exemptions permitting circumvention of merged access and copy controls where the record supported them, as has been the case for the exemptions for circumvention of the TPMs on DVDs and Blu-ray discs.⁶⁹²

E. Streamlined Process to Renew Exemptions

While viewpoints differed as to whether legislative changes regarding the section 1201 rulemaking were warranted and if so, what those changes should look like, there was “a remarkable degree of consensus”⁶⁹³ among otherwise polarized stakeholders that the Copyright Office should take steps within its existing regulatory authority to streamline

⁶⁹⁰ Tr. at 151:02–16 (May 25, 2016) (Metalitz, AAP, MPAA & RIAA); *see also* Maryna Koberidze Initial Comments Ex. A, at 231 (noting that bypassing an access control would remain prohibited, even if the same TPM acted as a copy control).

⁶⁹¹ *See 321 Studios.*, 307 F. Supp. 2d at 1094–99 (finding DVD encryption controls to independently be both access controls and copy controls, and finding trafficking violations under both sections 1201(a)(2) and (b)).

⁶⁹² *See, e.g.*, 2015 Recommendation at 29–30, 99–106 (description of TPMs on DVDs and Blu-ray discs and Register’s recommendation for exemptions involving works protected by these TPMs).

⁶⁹³ Tr. at 155:14–22 (May 19, 2016) (Sheffner, MPAA); *see also* EFF Initial Reply Comments at 3 (“There is strong consensus among the commenters that exemptions granted in a triennial rulemaking should be renewed in subsequent three-year periods with little or no burden on proponents.”); DVD CCA & AACS LA Additional Reply Comments at 3 (“There is significant consensus that the rulemaking should be streamlined to permit previously granted exemptions to be more easily renewed.”).

the process for recommending renewal of previously adopted exemptions to the Librarian.⁶⁹⁴

1. The Need for a Renewal Process

Prior participants in the rulemaking process generally characterized it as burdensome for both users and rightsholders of copyrighted works.⁶⁹⁵ For example, the Cyberlaw Clinic estimated that in the most recent rulemaking, its attorneys, students, and interns “logged approximately 575 hours of work” to obtain an exemption to circumvent medical devices,⁶⁹⁶ and AFB estimated that law students spent 527.2 hours supporting its petition for a renewed exemption.⁶⁹⁷ The commitment was keenly felt by individuals, such as documentary filmmakers and farmers, where participation in the rulemaking process competed with demands of their occupations,⁶⁹⁸ and by other communities,

⁶⁹⁴ See, e.g., AAP, MPAA & RIAA Initial Comments at 11–12; AAU, ACE, APLU & EDUCAUSE Initial Comments at 14; Auto Alliance Initial Comments at 6–7; AIPLA Initial Comments at 2; AFB Initial Comments at 3; Authors Alliance Initial Comments at 2–3; Auto Care Initial Comments at 8–9; CDT Initial Comments at 5–6; Competitive Carriers Ass’n Initial Comments at 5–11; CTA Initial Comments at 7; Consumers Union Initial Comments at 4; Copyright Alliance Initial Comments at 11–12; David Oster Initial Comments at 1; DIYAbility Initial Comments at 4–6; DVD CCA & AACCS LA Initial Comments at 10–14; EFF Initial Comments at 8–9; ESA Initial Comments at 8–11; iFixit Initial Comments at 3; ISRI Initial Comments at 8–11; Joint Filmmakers I Initial Comments at 9–10; Kernochan Center Initial Comments at 4–5; KEI Initial Comments at 4–5; LDAA Initial Comments at 1–2; LCA Initial Comments at 33–34; Maryna Koberidze Initial Comments at 2–3; MIT Initial Comments at 3–4; Microsoft Initial Comments at 6; Mozilla Initial Comments at 5; OTI Initial Comments at 7–9; NMR Initial Comments at 17–18; OTW Initial Comments at 2, 4–5; ORI Initial Comments at 3; Peter Decherney Initial Comments at 6–13; Peter Hunt Initial Comments at 3; Public Knowledge Initial Comments at 4–5; R Street Institute Initial Comments at 7; Rapid7, Bugcrowd & HackerOne Initial Comments at 4; Rico Robbins Initial Comments at 1; SAA Initial Comments at 3; SIIA Initial Comments at 7; SIIA Initial Reply Comments at 5; UVA Initial Comments at 2–3; IPT USC Initial Comments at 7–9; USACM Initial Comments at 2; AAA Initial Reply Comments at 6 (all expressing general support).

⁶⁹⁵ See, e.g., AAU, ACE, APLU & EDUCAUSE Initial Comments at 10; Copyright Alliance Initial Comments at 12.

⁶⁹⁶ Cyberlaw Clinic Initial Comments at 1.

⁶⁹⁷ AFB Initial Comments at 9; see also Tr. at 82:22–83:05 (May 19, 2016) (Tushnet, OTW) (noting that OTW spent 500–600 hours on petition to circumvent for remix artists); Joint Filmmakers II Initial Reply Comments at 3 (noting that law clinic and pro bono counsel spent “nearly 2000 hours advocating for an exemption”).

⁶⁹⁸ IPT USC Initial Comments at 3 (“[F]armers face the impractical challenge of seeking renewals for exemptions while simultaneously managing the specific and time-sensitive needs of their farms.”); Joint Filmmakers I Initial Comments at 10 (“The requirement to reapply *de novo* for the

including the blind, visually impaired, and print-disabled, which have come to rely upon an exemption but must go through the process again each rulemaking.⁶⁹⁹ As a result, stakeholders suggested that “this cost and the difficulty of securing pro bono representation deters some individuals and organizations from participating in the triennial rulemaking process.”⁷⁰⁰

As described above, the sixth rulemaking process instituted procedural changes designed to make the process more accessible, to facilitate participation and the development of the factual record, and to reduce administrative burdens on participants and the Office.⁷⁰¹ While some praised the Office for these improvements,⁷⁰² others found the petition process and subsequent filing periods “repetitive” and in need of shortening.⁷⁰³

There was a particular focus on the need for the Office to expedite the process for considering requests to readopt or “renew” a previously granted exemption. Commenters said the needs of many of the users of an exemption, including the blind, visually impaired, and print disabled, documentary filmmakers, or universities and libraries, has “remained fairly constant.”⁷⁰⁴ Given the reliance these users have come to place upon the exemptions relevant to them, stakeholders expressed concern over the overall lack of certainty that an exemption, even one lacking opposition, would be

same previously granted exemptions detracts from our time, attention, and resources to enriching society with documentary films.”).

⁶⁹⁹ Tr. at 162:25–163:15 (May 19, 2016) (Cazares, AFB).

⁷⁰⁰ See, e.g., AFB Initial Comments at 9; Tr. at 88:10–89:07 (May 19, 2016) (Cox, ARL) (“[The process] is just an extraordinary amount of time for something that is proposed by public interest groups that often don’t have the time and resources”); Tr. at 106:01–09 (May 25, 2016) (Lerner, Joint Filmmakers I) (“[F]ew people can afford to participate in a proceeding without this unique animal called law clinics”); Tr. at 111:05–10 (May 25, 2016) (Wiens, iFixit & Repair.org) (“[W]e had a list of about 50 exemptions that we wanted to file. And we whittled that down to about the six that we were able to work on and file because that was the number of clinics that we had.”); Tr. at 119:21–120:13 (May 25, 2016) (Wolfe, Authors Alliance).

⁷⁰¹ See Section 1201 Study: Notice and Request for Public Comment, 80 Fed. Reg. at 81,371.

⁷⁰² See, e.g., Microsoft Initial Comments at 5 (“We applaud the Copyright Office for the creative ways in which it streamlined the process for identifying, categorizing, and obtaining feedback on proposed exemptions in the 2015 rulemaking.”); Kernochan Center Initial Comments at 6 (stating that grouping proposed exemptions into categories for comment “benefited the rulemaking process and should be retained”).

⁷⁰³ See AAU, ACE, APLU & EDUCAUSE Initial Comments at 14–15; Joint Filmmakers II Initial Reply Comments at 3 (requesting this change).

⁷⁰⁴ MIT Initial Comments at 4.

granted in subsequent rulemaking cycles.⁷⁰⁵ Stakeholders who had previously opposed the initial grant of such exemptions also recognized the benefits of a expediting the process for renewal. Such stakeholders generally expressed the view that they “are not opposed in principle to the Register recommending renewal of existing exemptions to the Librarian so long as there is no meaningful opposition to renewal.”⁷⁰⁶

The Office’s prior requirement that a factual record to support an exemption be developed *de novo* each rulemaking⁷⁰⁷ was seen as placing significant and unnecessary requirements on parties and the Office—especially when there is little to no opposition to the renewal of the exemption.⁷⁰⁸ Specifically, commenters pointed out that once an exemption has been granted, it can be more difficult to develop a factual record demonstrating the need for the exemption.⁷⁰⁹ As one stakeholder described it, “it becomes more difficult to empirically demonstrate adverse impact resulting from a

⁷⁰⁵ See, e.g., AAU, ACE, APLU & EDUCAUSE Initial Comments at 11; IPT USC Initial Comments at 6; Tr. at 171:02–07 (May 19, 2016) (Butler, Univ. of Va. Libraries) (noting that many universities have built up DVD libraries under the “value proposition” that “we will be able to cut clips”).

⁷⁰⁶ AAP, MPAA & RIAA Initial Comments at 11–12; see also Auto Alliance Initial Comments at 6 (“Auto Alliance would not oppose reasonable procedural changes that could expedite consideration of uncontested requests for the ‘renewal’ of specific exemptions.”); Copyright Alliance Initial Comments at 11 (“The Copyright Alliance is willing to consider supporting an appropriately focused solution to reduce administrative burdens on the Copyright Office, such as those which may facilitate the renewal of exemptions for which there is no meaningful opposition.”); DVD CCA & AACS LA Comments at 11 (“[T]hey would not oppose a streamlined process for meeting the burden for renewal of an existing exemption under the conditions noted below”); ESA Initial Comments at 9 (“ESA is open to the possibility of adjustments in the Copyright Office’s procedures to streamline the triennial proceedings within the current statutory framework.”).

⁷⁰⁷ See 2015 Recommendation at 14.

⁷⁰⁸ See, e.g., AFB Initial Comments at 3 (“The *de novo* review process . . . has become a never-ending exemptions treadmill, even when the exemption occasions little to no opposition.”); ISRI Initial Comments at 8–9 (“Eliminating the *de novo* requirement would vastly reduce much of the unnecessary burden on proponents to reestablish the evidentiary and legal justifications for their exemptions every three years, as well as the burden on the office to review ever-expending [*sic*] records for already-granted exceptions.”); LCA Initial Comments at 3 (“The requirement that an exemption be renewed *de novo* every three years is enormously burdensome.”); USACM Initial Comments at 2 (“The current requirements to provide the factual and legal evidence anew each time can result in significant inefficiencies and duplication of effort by all parties and [the Copyright Office].”).

⁷⁰⁹ See Peter Decherney Initial Comments at 7 (stating “it is difficult, if not impossible, to show continued harm after one has been granted an effective exemption whose very purpose is to preclude such harm”); IPT USC Initial Comments at 5 (describing the process as “placing a stringent requirement for a new, fully developed record that is impossible to create”).

technological protection measure when an existing exemption is succeeding in addressing that very problem.”⁷¹⁰

Several commenters argued that section 1201 does not require *de novo* review, or at least not the *de novo* presentation of evidence by exemption proponents in each proceeding.⁷¹¹ Under this view, commenters questioned the Office’s reliance upon the Commerce Committee Report’s statement that “the assessment of adverse impacts on particular categories of works is to be determined *de novo*”⁷¹² and contended that this statement should not preclude the Office from adopting a more forgiving standard than it has in the past.⁷¹³ Many read the language as suggesting that the Office at most must make a new evaluation of the evidence during each proceeding—not necessarily that new evidence must be presented by proponents.⁷¹⁴ These stakeholders explained that under this approach, the Office could rely on evidence from prior proceedings to make its determination.⁷¹⁵ Multiple commenters offered ways in which the Office could facilitate the re-use of evidence submitted in prior rulemakings by participants, such as “forming a database to preserve the evidence from past rulemakings so that all parties may utilize

⁷¹⁰ AFB Initial Comments at 5, 10 (noting that even though the 2010 exemption was unopposed and the Register acknowledged the importance of broad accessibility for the blind and print disabled, she concluded that there was insufficient evidence to support granting the exemption).

⁷¹¹ See, e.g., Authors Alliance Initial Comments at 3 (“Current requirements that proponents provide a renewed evidentiary record for each rulemaking are particularly burdensome and do not appear to be statutorily mandated.”); Peter Decherney Initial Comments at 7 (“The statute itself does not address how evidence and legal analysis from rulemakings should be employed in subsequent rulemakings.”).

⁷¹² COMMERCE COMMITTEE REPORT at 37.

⁷¹³ See, e.g., AAU, ACE, APLU & EDUCAUSE Initial Comments at 14 n.7 (“[T]he *de novo* standard is set out only in the report of one committee that considered the DMCA.”); EFF Initial Comments at 9 (“Legislative history is not law and does not bind the Copyright Office.”) (citing *Blanchard v. Bergeron*, 489 U.S. 87, 99 (1989) (Scalia, J., concurring)); ISRI Initial Comments at 9–10 (“[T]he rulemaking section of the statute described in the Report underwent so many substantive changes that there simply is no basis for giving the Report’s mention of *de novo* review any weight whatsoever.”); NMR Initial Comments at 17.

⁷¹⁴ See, e.g., CDT Initial Comments at 6 (“Even if the statute does require *de novo* review of a requested exemption, that review does not foreclose consideration of or reliance on evidence adduced in prior rulemakings.”) (citing *Freeman v. DirecTV, Inc.*, 457 F.3d 1001, 1004 (9th Cir. 2006)); DVD CCA & AACS LA Initial Reply Comments at 6; Joint Filmmakers I Initial Comments at 10.

⁷¹⁵ See, e.g., AAU, ACE, APLU & EDUCAUSE Initial Comments at 14 n.7; Authors Alliance Initial Comments at 3; LCA Initial Comments at 34.

[it], when appropriate, in future proceedings⁷¹⁶ or automatically “porting” evidence from prior rulemakings for each docket “into the next cycle, for all classes, regardless of whether exemptions were approved or denied.”⁷¹⁷

While generally agreeing that the Office has some latitude to adjust the rulemaking framework in light of the statute and legislative history, some commenters noted that “[t]here were good reasons why the rulemaking requires proponents to put on their case and meet their burden of proof de novo.”⁷¹⁸ As Auto Alliance put it:

Since the inception of the rulemaking process, the concept that the case for exemptions must be demonstrated de novo in each cycle has been a core feature. . . . Most of the markets relevant to proposed exemptions are dynamic and fast-changing (most assuredly this is the case for the automotive marketplace). Issues such as whether technological changes or market developments have created new alternatives to circumvention that did not exist three years previously, or have made circumvention less (or more) necessary to carry out specified non-infringing uses, inevitably require determinations on the proposed renewal of existing exemptions to be made de novo.⁷¹⁹

2. Proposals for Reform

Despite general consensus over the desirability of expediting the rulemaking process for repeat exemptions, views differed regarding what that should entail, and, correspondingly, whether statutory amendment was required. Suggestions for methods of improving the process for renewing exemptions generally fell into two camps: first, a “burden-shifting” model where exemptions would be automatically renewed unless opponents met an evidentiary burden for denial, and second, a “streamlined” process that would allow for readoption of exemptions upon short affidavits, absent some showing of meaningful opposition. Some commenters were only “open to considering proposals for steps that can be taken short of amending the statute that could help alleviate these burdens without adversely affecting the objectives of the process or the statute, which remain sound.”⁷²⁰

⁷¹⁶ Peter Decherney Initial Comments at 14–15 (“If the evidence is out of date, the Office can disregard it, but if it is still relevant, the Office can consider it.”).

⁷¹⁷ Public Knowledge Initial Comments at 5; *see also* Tr. at 167:04–21 (May 19, 2016) (Turnbull, DVD CCA & AACS LA).

⁷¹⁸ DVD CCA & AACS LA Initial Comments at 10–11.

⁷¹⁹ Auto Alliance Initial Comments at 6.

⁷²⁰ Copyright Alliance Initial Comments at 12.

a. “Burden-Shifting” Model

The Copyright Office has previously recommended “that the process of renewing existing exemptions should be adjusted to create a regulatory presumption in favor of renewal,” and that “it would be beneficial for Congress to amend Section 1201 to provide that existing exemptions will be presumptively renewed during the ensuing triennial period in cases where there is no opposition.”⁷²¹ Most commenters agreed that the Copyright Office could not, under the current statute, implement such changes.⁷²² Others, however, suggested that the Office already possesses authority to implement a system of “presumptive renewal,” although it was not always clear whether the phrase “presumptive renewal” would include an explicit shifting of the burdens between potential seekers of an exemption and those who might oppose it.⁷²³

The Office received several comments in support of this approach,⁷²⁴ although they were of limited number compared to those supporting a streamlined process for renewal, discussed below. Under the burden-shifting model, “once the exemption exists, the burden should shift to the copyright holder.”⁷²⁵ Opinions differed as to whether this burden-shifting should apply to “*all* previously granted exemptions”⁷²⁶ or be limited by

⁷²¹ *Register’s Perspective on Copyright Review: Hearing Before the H. Comm. on the Judiciary*, 114th Cong. 27 (2015) (statement of Maria A. Pallante, Register of Copyrights and Dir., U.S. Copyright Office).

⁷²² *See, e.g.*, AIPLA Initial Comments at 2 (“AIPLA endorses, in principle, an amendment to the Copyright Act that would adjust the triennial process by which exemptions are renewed.”); Peter Decherney Initial Comments at 8 (“The purpose behind reconsidering existing exemptions on a triennial basis is to account for that fact that changes in technology, patterns of consumption, and the marketplace may make some existing exemptions obsolete. Thus, the creation of a hard presumption of renewability might well violate Congressional preference expressed through legislative history.”); KEI Initial Comments at 4 (“[T]he statute should be amended to . . . allow for a presumptive renewal of granted exemptions . . .”).

⁷²³ *See, e.g.*, ISRI Initial Comments at 11 (“[T]he Copyright Office currently possesses the authority to make such a change without legislative action . . .”); Tr. at 132:03–09 (May 25, 2016) (McClure, AFB) (suggesting that such authority can be found in the fifth statutory factor).

⁷²⁴ AAU, ACE, APLU & EDUCAUSE Initial Comments at 14; *see also* AFB Initial Comments at 10 (“[T]he Office should presume that the exemption is still needed and working.”); DIYAbility Initial Comments at 5 (“The most effective for filing groups would be to amend Section 1201 to allow the Library of Congress to automatically renew an exemption granted in the previous rulemaking if no opposition is raised.”); OTI Initial Comments at 8.

⁷²⁵ Tr. at 158:01–06 (May 19, 2016) (Goldman, KEI); *see also* LCA Initial Comments at 3.

⁷²⁶ Authors Alliance Initial Comments at 2.

a threshold, such as “[e]xemptions which encounter no substantive opposition, or which are granted twice in succession over objections.”⁷²⁷

On the other hand, representatives of copyright owners objected to the burden-shifting model, with one stakeholder explaining “that the opponent doesn’t necessarily have all the evidence necessary to show that the exemption is no longer necessary.”⁷²⁸ Another noted that the Copyright Office had previously rejected burden-shifting as incompatible with a statutory scheme to provide exemptions to a statute, and argued that those reasons remain valid.⁷²⁹

Even those who supported a burden-shifting model disagreed as to what showing would be needed to overcome the presumption of renewal. Mozilla suggested that objections should “demonstrate that the balance of interests favors nonrenewal” by “demonstrat[ing] what circumstances have changed” and “identify[ing] actual harm (cognizable under copyright law) as a result of the exemption” that is not speculative in nature.⁷³⁰ AAA suggested that the presumption could be rebutted “by a showing of materially changed circumstances,” which would allow objectors to raise “[i]ssues such as whether technological changes or market developments have created new alternatives to circumvention that did not exist three years previously, or have made circumvention less (or more) necessary to carry out specified non-infringing uses.”⁷³¹ Similarly, Public Knowledge suggested that opponents must present “compelling” evidence “that shows

⁷²⁷ Mozilla Initial Comments at 5.

⁷²⁸ Tr. at 174:05–17 (May 19, 2016) (Castillo, AAP); *see also* AAP, MPAA & RIAA Initial Reply Comments at 6 n.6 (explaining that “Congress intended for proponents, who are better positioned than opponents, to present evidence regarding the purported need for exemptions”); Auto Alliance Initial Comments at 6 (rejecting presumptive renewal as “inconsistent with the fundamental character of the proceeding as a fact-based inquiry that depends on specific evidence of the concrete, real-world impact of the anti-circumvention prohibition on actual non-infringing uses of works”); Copyright Alliance Initial Reply at 3 (objecting to a statutory presumption of renewal); DVD CCA & AACS LA Initial Comments at 10 (“DVD CCA and AACS LA would oppose the creation of a presumption of renewal for an exemption, as it would not be consistent with the principles of administrative law.”); Tr. at 87:15–88:03 (May 25, 2016) (Reed, Fox Entm’t Grp.) (opposing “outright burden shifting”).

⁷²⁹ Tr. at 178:04–179:03 (May 19, 2016) (Sheffner, MPAA) (stating that “rules of statutory construction and administrative law” dictate that exemptions should be construed narrowly and that the burden for an exemption should be on proponents) (citing 2000 Recommendation and Final Rule at 64,558–59).

⁷³⁰ Mozilla Initial Comments at 5.

⁷³¹ AAA Initial Reply Comments at 6.

that a previously granted exemption should not be automatically renewed because of a change in legal or factual circumstances since the granting of the exemption.”⁷³²

b. “Streamlining” Model

An alternate model, endorsed by a wider group of commenters, including many who also supported a burden-shifting approach,⁷³³ would be for the Copyright Office to implement a streamlined process for renewal under its existing regulatory authority. As commenters seemed to generally understand it, under this approach:

[A] proponent of the exemption should be required to file a simple request for renewal, affirming that the exemption is still warranted and that there have been no material substantive changes in the circumstances that supported the earlier determination to grant an exemption. A party who opposes the exemption would have the obligation to come forth with evidence that there has been a change in circumstances, *e.g.*, evidence that there is greater ability to make fair uses without circumvention than there was when the earlier exemption was granted, or evidence that the circumvention of technological access controls is having an adverse effect on the market for or value of copyrighted works. At that point, the Copyright Office should consider the application for the exemption *de novo*, and the burden of proof should be on the proponent.⁷³⁴

Commenters widely agreed that the Office already has sufficient statutory authority to implement this streamlining model.⁷³⁵ As one commenter explained, an agency has

⁷³² Public Knowledge Initial Comments at 4.

⁷³³ *See, e.g.*, EFF Initial Comments at 8 (“[W]hile we support and encourage legislative efforts to address this problem, the Copyright Office can take meaningful steps without waiting for Congressional action.”).

⁷³⁴ Kernochan Center Initial Comments at 4; *see also, e.g.*, DVD CCA & AACS LA Initial Reply Comments at 6 (endorsing the model and stating “[w]e see no reason, however, that a *de novo* determination would necessarily require submission of entirely new evidence”).

⁷³⁵ *See, e.g.*, Peter Decherney Initial Comments at 5 (noting that a model based upon an affidavit of continued use “fits within the statutory framework as it exists now without needing Congressional action”); Joint Filmmakers I Initial Comments at 4 (“[T]he statute affords the Librarian substantial discretion to structure the burden of proof, burden of persuasion, and standard of proof in ways that maximize fairness and efficiency.”); DVD CCA & AACS LA Initial Reply Comments at 6 (“DVD CCA and AACS LA believe that a renewal procedure can be achieved under existing statutory authority, through a streamlined procedure where, following a request for a renewed exemption (on terms identical to the one already in effect), the record reveals no meaningful objection.”); SIIA Initial Reply Comments at 5 (“[W]e share the general

discretion to change its interpretation of a statute upon providing a reasoned explanation, and “[h]ere, evidence of the need for change is abundant.”⁷³⁶ Supporters of this model also suggested that the Office could adopt this procedure while still establishing the basis for each exemption *de novo* in each triennial proceeding.⁷³⁷

Some rightsholders believed that by requiring affirmative requests for renewal of exemptions, the streamlining model would prevent “the renewal of exemptions for which there is no demand, which would run counter to the design of the proceeding as a triennial review of the marketplace.”⁷³⁸ ESA expressed concern that “the regulations implementing Section 1201 . . . not become a repository for outmoded and unnecessary exemptions that continue only because nobody cares enough to address them one way or the other” and urged the Office “to retain some form of periodic review to ensure that only exemptions that are current and important remain on the books.”⁷³⁹ On the other hand, some past participants noted that petitioners are often nonprofits, and/or are represented by law clinics that change personnel each semester, and expressed concern that otherwise relied-upon exemptions might fall through the cracks.⁷⁴⁰ It was also proposed that “it would be better for the Copyright Office to . . . look . . . at the conditions even if people don’t show up” asking for renewal.⁷⁴¹

Content of Request. In terms of the specific mechanics of the streamlining model, commenters generally envisioned the required affidavit as “a very simple one- or two-page filing”⁷⁴² that would include a “summary of reasons underlying a renewal, and not requiring . . . full submissions or hearings.”⁷⁴³ Some suggested that the Office should

consensus that the statute provides discretion to streamline the proof required to renew previously granted exemptions . . .”).

⁷³⁶ EFF Initial Comments at 9.

⁷³⁷ DVD CCA & AACS LA Initial Reply Comments at 6 (“[D]e novo simply means that the determination must be newly made in each successive rulemaking,” and not that “submission of entirely new evidence” is required.); *see also* Tr. at 160:03–10 (May 19, 2016) (Band, LCA) (same).

⁷³⁸ AAP, MPAA & RIAA Initial Comments at 11–12.

⁷³⁹ ESA Initial Comments at 10.

⁷⁴⁰ Tr. at 169:12–170:24 (May 19, 2016) (Butler, Univ. of Va. Libraries).

⁷⁴¹ Tr. at 123:12–22 (May 25, 2016) (Lerner, Joint Filmmakers I).

⁷⁴² Tr. at 156:14–15 (May 19, 2016) (Sheffner, MPAA); *see also* Tr. at 160:15–17 (May 19, 2016) (Band, LCA) (suggesting “we can just do maybe not even a page, even maybe a paragraph or a sentence”); Tr. at 180:08–23 (May 19, 2016) (Turnbull, DVD CCA & AACS LA) (noting “it could be a checkbox on a form”). *But see* Tr. at 175:04–21 (May 19, 2016) (Geiger, Rapid7) (“[T]he idea that it would be just one page I’m not sure is going to hold for very long” because “every word on that page is going to get litigated.”).

⁷⁴³ Microsoft Initial Comments at 6.

request evidence of use or reliance on the exemption to determine whether “in the absence of an exemption, users would be harmed.”⁷⁴⁴ Another approach would be to “require that a proponent file an assertion that the need for a particular exemption persists and that there has been no material change to the facts and circumstances surrounding the exemption since the previous triennial rulemaking.”⁷⁴⁵ Similarly, others suggested that a declaration that “the conditions present in a previous rulemaking continue to exist” would be sufficient, with the Copyright Office taking notice of the underlying administrative record that originally gave rise to that exemption.⁷⁴⁶

In terms of timing, commenters largely agreed that the Office should solicit affidavits prior to initiating the next rulemaking cycle.⁷⁴⁷ One commenter proposed having the Office establish an email alert to notify previous participants that an exemption was about to expire and asking them whether they wished to request renewal.⁷⁴⁸ Another suggested that the Office could establish a renewal form, similar to a statement of incontestability established by the U.S. Patent and Trademark Office for trademark renewals.⁷⁴⁹

Requests to Expand an Existing Exemption. Given that the sixth rulemaking concerned several requests for renewal of exemptions where the proponents also sought to expand the breadth of the previously granted exemption, commenters debated the proper treatment where requests to “renew” also sought to “expand” an exemption. As DVD CCA and AACS LA pointed out, for most renewal requests, “the ‘burden’ on the parties and the Copyright Office has come from the fact that actual deliberations over the proposed exemptions are not simply to extend past exemptions but rather determining whether the exemption should be expanded as the proponents request.”⁷⁵⁰ Accordingly, they suggested that “proponents of a renewal could choose either to use the streamlined process to renew previously granted exemptions without any modifications or to proceed through the normal deliberations of the rulemaking to determine if a modified

⁷⁴⁴ Peter Decherney Initial Comments at 12 (emphasis omitted); *see also* SIIA Initial Comments at 7 (“[T]he person seeking that presumption should have to demonstrate specific evidence of use in the triennial after the exemption issued.”).

⁷⁴⁵ Copyright Alliance Initial Comments at 12; *see also* ESA Initial Comments at 9.

⁷⁴⁶ Joint Filmmakers I Initial Comments at 10; *see* Tr. at 183:20–184:08 (May 19, 2016) (Band, LCA) (suggesting that, in light of the existing record, the Office could act after a person checked a box that “says do you want to renew this exemption because you are being harmed or likely to be harmed over the next three years”).

⁷⁴⁷ *See, e.g.*, Tr. at 214:14–22 (May 19, 2016) (Band, LCA); *id.* at 216:01–08 (Sheffner, MPAA).

⁷⁴⁸ Tr. at 170:04–20 (May 19, 2016) (Butler, Univ. of Va. Libraries).

⁷⁴⁹ Tr. at 185:01–16 (May 19, 2016) (Tushnet, OTW).

⁷⁵⁰ DVD CCA & AACS LA Initial Comments at 13.

exemption is warranted.”⁷⁵¹ Others agreed that “[t]he presumption should only apply to the exemption exactly as it issued the first time.”⁷⁵²

But while there was tentative agreement that expansions of exemptions should be addressed outside the streamlined process for renewal, there was some concern as to how these requests should be treated. Some suggested that parties submit “evidence only to the extent relevant to the expansion,” with the proceeding taking into account the prior underlying record.⁷⁵³ One repeat participant noted that it was often necessary to expand, or update, an exemption because “technology doesn’t stand still” and so “we [need to] start where we left off last time” in those cases.⁷⁵⁴ Another suggested that the Office hold an informal discussion, similar to a pre-hearing conference, to determine whether the expansion is likely to be opposed.⁷⁵⁵ However, one commenter noted that some “evidence is relevant to both the existing and proposed expansions,” suggesting there may be tension with ignoring such evidence with respect to the existing (technically unopposed) exemption under a rulemaking model.⁷⁵⁶

Opposition to Renewal. Much discussion concerned how the Office should treat statements in opposition to renewal of exemptions. Multiple commenters suggested that “if there is meaningful opposition, the petitioner would have to go through the review process and meet the standards applied to new applicants, without the benefit of the presumption.”⁷⁵⁷ But OTW argued that “[m]eaningful’ is a subjective term that

⁷⁵¹ *Id.* at 11.

⁷⁵² SIIA Initial Comments at 7; *see also* Auto Alliance Initial Comments at 7 (stating “any ‘fast-track’ procedures should not apply whenever material changes to an existing exemption are proposed”); Tr. at 157:03–23 (May 19, 2016) (Sheffner, MPAA).

⁷⁵³ Microsoft Initial Comments at 6; *see also* DIYAbility Initial Comments at 5 (“Adopting by reference the factual record from previous rulemakings would greatly reduce the length of comments filed in the triennial rulemaking process” allowing parties to “focus their comments on addressing relevant changes to the law and marketplace that have occurred since the previous rulemaking.”); Tr. at 200:04–07 (May 19, 2016) (Sheffner, MPAA) (“[W]e would not oppose the ability of proponents to incorporate by reference evidence that has been submitted in prior rulemakings.”).

⁷⁵⁴ Tr. at 161:19–162:12 (May 19, 2016) (Decherney, U. Penn.).

⁷⁵⁵ Tr. at 205:02–19 (May 19, 2016) (Band, LCA); *see* Tr. at 117:15–118:06 (May 25, 2016) (Samuelson, Univ. of Cal. Berkeley Sch. of Law) (suggesting there should be “maybe not quite so heavy a burden for the modification of an existing exemption”).

⁷⁵⁶ Tr. at 186:01–15 (May 19, 2016) (Tushnet, OTW).

⁷⁵⁷ AIPLA Initial Comments at 2; *see also* Tr. at 156:16–22 (May 19, 2016) (Sheffner, MPAA) (accord); Joint Filmmakers II Initial Reply Comments at 6 (“[A]n opposition requirement any more lenient than that would likely render the presumption ineffectual, because anyone could extinguish a presumption merely by expressing opposition.”).

invites further strife” and suggested that some participants “could be expected to argue in every case that their opposition is ‘meaningful,’ creating yet another issue the Office would have to seek submissions on and then resolve.”⁷⁵⁸

Others tried to define “meaningful opposition” in useful ways that would preserve the underlying goal of facilitating renewal of uncontroversial exemptions. One prior participant noted, “[b]y meaningful opposition, we mean that the opponent of an exemption would have to demonstrate that there was a change of circumstance that justified no longer granting an exemption.”⁷⁵⁹ Many tied the standard for opposition to an inquiry into adverse impacts, with one commenter suggesting that opponents must proffer “convincing evidence showing that adverse impact on non-infringing uses has ceased”⁷⁶⁰ and another proposing that opponents submit “concrete evidence that no adverse effects would result if the previously granted exemption were withdrawn.”⁷⁶¹

From its perspective, MPAA suggested it is only likely to oppose a previously granted exemption if there were a change in relevant case law, business models, or technology.⁷⁶² In those cases, it suggested that the administrative record may have become stale such that additional evidence demonstrating the need for the exemption would be valuable.⁷⁶³ Finally, it was suggested that the Office should allow proponents to dispute whether the opposition was meaningful before moving the request for renewal into the next triennial rulemaking.⁷⁶⁴

c. Presumptive Rejection Model

Some stakeholders expressed frustration that the rulemaking process is equally burdensome when evaluating proposals where a similar proposed exemption has previously been *rejected*. ESA pointed out that the fifth and sixth rulemakings both involved requests to “create an exemption for circumvention of access controls on video game consoles”; it contended that the sixth rulemaking in large part rehashed

⁷⁵⁸ OTW Initial Comments at 2.

⁷⁵⁹ Peter Decherney Initial Reply Comments at 5; *see also* Tr. at 166:05–17 (May 19, 2016) (McClure, ISRI); Rapid7, Bugcrowd & HackerOne Initial Comments at 4.

⁷⁶⁰ EFF Initial Reply Comments at 3.

⁷⁶¹ Joint Filmmakers II Initial Reply Comments at 5; *see also* AFB Initial Comments at 3 (arguing that renewal should proceed “provided opponents do not show that the adverse impacts that initially justified the exemption are no longer relevant”).

⁷⁶² Tr. at 200:19–201:10 (May 19, 2016) (Sheffner, MPAA).

⁷⁶³ *Id.*

⁷⁶⁴ Tr. at 221:07–15 (May 19, 2016) (Geiger, Rapid7).

arguments that the Office and the Librarian had previously rejected.⁷⁶⁵ To avoid wasting resources by revisiting issues that had been previously decided, ESA proposed that “proponents of an exemption that has previously been rejected should be required to show what conditions have changed that would compel a contrary decision in a subsequent rulemaking.”⁷⁶⁶ Certain other rightsholders supported this proposal,⁷⁶⁷ while other stakeholders strongly objected to this model, considering that both proposed exemption language and proponents’ circumstances change over time.⁷⁶⁸

3. Office’s Recommendations

The Copyright Office realizes that the triennial rulemaking process set up by statute imposes some burdens on its participants—including the NTIA and the Office itself. Since 1998, the number of participants in the rulemaking has successively expanded, and the most recent rulemaking saw the Office receive nearly 40,000 comments and testimony from sixty-three witnesses.⁷⁶⁹ During that rulemaking, a number of petitions essentially sought renewal of existing exemptions, some of them—including a petition that would continue to allow persons who are blind, visually impaired, or print disabled to circumvent literary works distributed electronically—unopposed. There is little to suggest this trend will reverse by itself. The Office also appreciates the concern from some that without alteration to the current process, it may become increasingly difficult to develop fresh evidence each cycle demonstrating the need to renew an exemption.⁷⁷⁰ Moreover, this study revealed a broad consensus from stakeholders on all sides supporting a streamlined process for the renewal of exemptions.

⁷⁶⁵ ESA Initial Comments at 12.

⁷⁶⁶ *Id.*

⁷⁶⁷ See AAP, MPAA & RIAA Initial Reply Comments at 6 (supporting “ESA’s suggestion that the Copyright Office should require exemption proponents to demonstrate significant changes in the marketplace or the case law before any exemption that has been previously denied will be reconsidered”).

⁷⁶⁸ Tr. at 210:16–211:16 (May 19, 2016) (Band, LCA) (noting that circumstances change for petitioners over time); Tr. at 210:02–210:11 (May 19, 2016) (Tushnet, OTW) (noting that proposed exemptions have changed over time); see also *id.* at 209:18–210:01 (opposing streamlined system for rejection, arguing the rulemaking is already “structurally unequal,” since copyright owners have more chances at defeating an exemption, as they can bring infringement claims even after a section 1201 exemption was granted, which could effectively “end the exemption”).

⁷⁶⁹ 2015 Recommendation at 2.

⁷⁷⁰ See, e.g., AAU, ACE, APLU & EDUCAUSE Initial Comments at 10; Univ. of Va. Libraries Initial Comments at 2–3; see also 2015 Recommendation at 4 (“When there is an existing exemption, however, the evidence may be weak, incomplete or otherwise inadequate to support the request for renewal.”).

In analyzing the concerns of study participants, the Copyright Office considered the feasibility and merit of both legislative reforms and actions that the Office might take under its existing regulatory authority. After reviewing the current framework and stakeholders' views, the Office concludes that under existing regulatory authority it can pursue some changes to streamline the process to readopt exemptions for which there is no meaningful opposition, although it cannot adopt a presumption of renewal for those exemptions without legislative change.

Burden-Shifting Model. The Copyright Office reaffirms its view, shared by many stakeholders, that the current statute does not empower the Librarian or Register to implement a burden-shifting model providing for the presumptive or automatic renewal of exemptions, whereby opponents would have the burden of showing why an exemption should be removed, as opposed to proponents demonstrating why the exemption should be renewed.⁷⁷¹

As noted, this Report was requested by the House Judiciary Committee's Ranking Member, in part, to evaluate former Register Pallante's recommendation that Congress consider "a legislative change to provide a presumption in favor of renewal in cases where there is no opposition."⁷⁷² When the Office asked about this approach as part of this study, many favored this change, but there was no clear consensus supporting statutory reform, despite a strong overall demand for some mechanism to ease the process by which exemptions are continued. Instead, public input generally revealed a stronger preference for non-statutory reform, with some sharply opposing legislation and others merely agnostic as to how any change should be put in place. In addition, some expressed concern that a statutory mechanism could allow outmoded exemptions to linger in the regulations.

Given the large demand to simplify the process for readopting exemptions, the Copyright Office remains committed to its support of a statutory amendment to shift the burdens associated with the renewal, or removal, of previously adopted temporary exemptions. To be clear, the Office is hopeful that its regulatory reforms described below will alleviate many unnecessary burdens associated with renewal of existing exemptions. But an amendment to provide for burden-shifting or presumptive renewal could introduce even greater efficiencies when addressing somewhat perennial, uncontested exemptions, such as cellphone unlocking, by avoiding the need for the public to request, and the Office to evaluate the need for, renewal. At the same time,

⁷⁷¹ See 2015 Recommendation at 13–14 (discussing statutory requirements).

⁷⁷² See *Register's Perspective on Copyright Review: Hearing Before the H. Comm. on the Judiciary*, 114th Cong. 5 (2015) (statement of Maria A. Pallante, Register of Copyrights and Dir., U.S. Copyright Office); *accord id.* at 49 (statement of Rep. John Conyers, Jr., Ranking Member, H. Comm. on the Judiciary).

stakeholders would retain the ability to object to exemptions that have become outmoded by changing technological or legal developments. To the extent that Congress pursues the other statutory reforms discussed elsewhere in this Report, the Office recommends consideration of statutory changes to allow for presumptive or automatic renewal of exemptions while preserving the flexibility of the rulemaking process to take into account changing technology and market developments.

Streamlining Model. In the meantime, the Copyright Office plans to focus on immediate changes it can make within the existing regulatory framework. The following section outlines guiding principles, rather than a blueprint, from which subsequent rulemakings can implement and adapt administrative processes. The Office concludes that there is some regulatory flexibility in how it may establish a process for streamlining the rulemaking, and that experience suggests specific procedures may need to remain flexible from rulemaking to rulemaking to accommodate changing technologies and public demands. The Office does intend to implement a streamlined renewal process in the upcoming seventh rulemaking, and further specifics will be provided shortly in a notice of inquiry.

As a threshold matter, the Copyright Office concludes that the statute itself requires that exemptions cannot be renewed automatically, presumptively, or otherwise, without a fresh determination concerning the next three-year period. The relevant statutory provision requires the Librarian, upon the recommendation of the Register of Copyrights, to make a determination whether “users of a copyrighted work are, or are likely to be in the succeeding 3-year period, adversely affected by the prohibition” on circumvention.⁷⁷³ That is, a determination must be made specifically for each triennial period. In addition, while legislative history itself is not law, it can serve as a useful aid in statutory interpretation, and the Commerce Committee’s report unequivocally states that “the assessment of adverse impacts on particular categories of works is to be determined *de novo*.”⁷⁷⁴ In this way, these determinations are qualitatively different from an appellate court’s review of the factual record established by a lower court,⁷⁷⁵ as

⁷⁷³ 17 U.S.C. § 1201(a)(1)(B).

⁷⁷⁴ COMMERCE COMMITTEE REPORT at 37 (“[T]he . . . prohibition [on circumvention] is presumed to apply to any and all kinds of works, including those as to which a waiver of applicability was previously in effect, unless, and until, the Secretary makes a new determination that the adverse impact criteria have been met with respect to a particular class and therefore issues a new waiver.”).

⁷⁷⁵ Cf. CDT Initial Comments at 6 (“Just as appellate courts may rely on the record developed below when reviewing a lower court’s decision *de novo*, the Office is entitled to rely on evidence from a prior rulemaking when conducting a subsequent one.”); DIYAbility Initial Comments at 5 (“This type of *de novo* review based on an existing factual record is common—circuit courts of

appellate courts do not have to determine whether the record retains reliability when applied to a new set of circumstances.

That said, the statutory language appears to be broad enough to permit determinations to be based upon evidence drawn from prior proceedings, but only upon a conclusion that this evidence remains reliable to support granting an exemption in the current proceeding. Adopting an approach of *de novo* assessment of evidence—compared to *de novo* submission—would allow future rulemakings to consider the appropriate weight to afford to previously submitted evidence when evaluating renewal requests.⁷⁷⁶ The relatively quick three-year turnover of the exemptions was put in place by Congress to allow the rulemaking to be “fully considered and fairly decided on the basis of real marketplace developments,”⁷⁷⁷ and any streamlined process for recommending renewed exemptions must retain flexibility to accommodate changes in the marketplace that affect the required rulemaking analysis. But at the same time, where there is little evidence of marketplace or technological changes, the Office believes it is statutorily permissible to establish a framework that expedites the recommendation to renew perennially sought exemptions.

Mechanics of streamlined process. As noted, the Office intends to implement a streamlined process for evaluating proposals to readopt exemptions in the upcoming seventh rulemaking, with further details to be provided in a notice of inquiry. That notice will request parties seeking renewal of an exemption to submit a short declaration outlining the continuing need for an exemption.⁷⁷⁸ Here, again, the law appears to permit

appeal, for example, review questions of law *de novo* based on the factual record established by the district court.”).

⁷⁷⁶ The Office recognizes that historically it has required *de novo* submission of evidence, which remains a reasonable interpretation of the statute and legislative history. The Office agrees, however, that this standard may have become overly restrictive as the rulemaking has grown. *De novo* assessment of evidence is another reasonable interpretation that may better accommodate current demands, so long as parties provide a basis for the Office to ascertain the ripeness of the prior record from which a new determination can be made, such as through the proposed streamlining process, as discussed further below.

⁷⁷⁷ COMMERCE COMMITTEE REPORT at 36.

⁷⁷⁸ See, e.g., Peter Decherney Initial Comments at 12 (“Under our proposal, a proponent seeking renewal of an exemption would be required establish a prima facie showing of reliance.”); Kernochan Center Initial Comments at 4 (“[A] proponent of the exemption should be required to file a simple request for renewal, affirming that the exemption is still warranted and that there have been no material substantive changes in the circumstances that supported the earlier determination to grant an exemption.”); Tr. at 180:10–17 (May 19, 2016) (Turnbull, DVD CCA & AACSLA) (“[I]f the Copyright Office emails that form to the prior proponent and says do you want to renew exactly what you got before, and you check the box . . . as far as I’m concerned, that would be a sufficient filing.”).

flexibility. A declaration could include a statement that there has been no material change to the facts and circumstances necessitating the exemption since the previous triennial period. The Copyright Office could also require a statement that the proponent is being harmed, or will likely be harmed over the next three-year period, accompanied by a description of use or reliance upon the current exemption in support for this statement. The Office believes that the evidentiary showing required in a declaration can be minimal, as the aim is only to show that the harm that existed when the exemption was first granted continues to occur or would return but for the exemption, thus providing a sufficient justification for the Office to rely upon the prior rulemaking record in making a new recommendation supporting renewal of the exemption. Moreover, this approach appears consistent with relevant case law upholding determinations based upon a single sworn affidavit.⁷⁷⁹ While some stakeholders expressed wariness that, in practice, a short-form filing might recreate the requirements of the current rulemaking, the Office is optimistic that this can be avoided with appropriate guidance, including by providing forms for petitioners to use—which the Office plans to use for the next rulemaking.

A streamlined process may include outreach to promote awareness of the relevant deadline. Many existing exemptions have been obtained through efforts led by student legal clinics that have rapid turnover,⁷⁸⁰ or laypersons unlikely to monitor the Office’s website or the Federal Register. Similar to the process for trademark renewal, in the upcoming rulemaking, the Copyright Office intends to issue renewal reminder emails to dedicated addresses on file. The Register will also allow any person to submit a request for renewal; given the strong public interest taken in the rulemaking process to date, this may minimize the risk that a significantly relied-upon exemption is overlooked. At the same time, the lack of an affidavit seeking renewal of an exemption would provide an avenue for outdated exemptions to be pruned from the regulations. Finally, while theoretically the Office itself can propose renewal of an existing exemption for renewal, because the Register must have a reasonable basis for recommending that the Librarian

⁷⁷⁹ See, e.g., *EchoStar Comm’ns Corp. v. FCC*, 92 F.3d 749, 752–53 (D.C. Cir. 2002) (holding FCC did not err in relying upon an employee affidavit to dismiss a complaint, noting it was “well settled” that a sworn declaration, although hearsay, could constitute “substantial evidence” supporting a decision made under the APA so long as it was “reliable and trustworthy”); *Aero Mayflower Transit Co., Inc. v. Interstate Commerce Comm’n*, 686 F.2d 1, 9 (D.C. Cir. 1982) (upholding procedure for granting transport certificates whereby an applicant filed an affidavit, followed by a published period of opposition); *California ex rel. Lockyer v. FERC*, 329 F.3d 700, 714 (9th Cir. 2003) (holding that FERC properly relied upon a single affidavit in concluding that substantial evidence supported a determination that reorganization was not harmful to the public interest).

⁷⁸⁰ Tr. at 169:12–170:24 (May 19, 2016) (Butler, Univ. of Va. Libraries) (“[I]n my clinic, it’s a different student team every three years. And the way that we structure our retainers with our clients is that representation ends the minute . . . this process ends.”).

adopt an exemption, in almost all circumstances it would still be necessary for a participant to take up the cause and make the required showing for renewal.⁷⁸¹

A streamlined process must also include an opportunity for stakeholders to raise objections to renewal, and for the Register to consider these objections in determining whether to recommend renewal of an exemption. The public process preceding this Report revealed a fair amount of support for a procedure whereby the Copyright Office first evaluates whether there is “meaningful opposition” to the renewal of an exemption, even if some were wary to what extent this would, in practice, simplify requirements under the current process. Here, again, the statute is helpful. The Register must apply the same evidentiary standards in recommending the renewal of exemptions as for first-time exemption requests. Accordingly, oppositions raising concerns that address these standards would be more likely to prevent the Register from recommending renewal of an exemption. For example, a change in case law might affect whether a particular use is noninfringing, new technological developments might affect the availability for use of copyrighted works, or new business models might affect the market for or value of copyrighted works.⁷⁸² Such evidence, if credible, could cause the Office to conclude that the prior evidentiary record is too stale to rely upon for an assessment affecting the subsequent three-year period.

Procedurally, the statutory framework gives the Copyright Office flexibility in structuring the rulemaking so long as there is a reasoned basis for the Register’s ultimate recommendation. For the seventh rulemaking, for reasons of administrability, the Office intends to place any repeat exemptions facing meaningful opposition in the normal, more comprehensive notice and comment process.⁷⁸³ Alternatively, the Office believes it would be equally permissible for future rulemakings to determine, in the interest of administrative convenience, to separately seek comment on any oppositions to renewal, in an effort to resolve potentially more targeted questions than those typically presented by requests for an exemption of first instance.⁷⁸⁴

In sum, the Copyright Office concludes that it is empowered to implement a streamlined process to recommend the renewal of previously granted exemptions, based upon a sufficient showing that the prior record is still a relevant reflection of the legal and factual concerns at issue in the succeeding rulemaking. Such a process, as requested by

⁷⁸¹ Compare Tr. at 123:12–22 (May 25, 2016) (Lerner, Joint Filmmakers I) (suggesting that “it would be better for the Copyright Office to . . . look . . . at the conditions even if people don’t show up” to request renewal).

⁷⁸² See Tr. at 200:19–201:10 (May 19, 2016) (Sheffner, MPAA).

⁷⁸³ See, e.g., AIPLA Initial Comments at 2; see also Tr. at 156:11–22 (May 19, 2016) (Sheffner, MPAA) (both suggesting same).

⁷⁸⁴ Tr. at 220:24–221:15 (May 19, 2016) (Geiger, Rapid7) (suggesting same).

a consensus of stakeholders, could incorporate the use of a short form for proponents to request renewal and attest to the continuing need for an exemption. While this process would also take into account objections to the renewal of an exemption, rightsholders' comments suggest that they are unlikely to oppose the renewal of many frequently granted exemptions, such as exemptions for assistive technology and cell phone unlocking, which were unopposed in the last rulemaking.⁷⁸⁵ In practical terms, it will be seen shortly in the upcoming seventh rulemaking to what extent this approach succeeds in alleviating the burdens the rulemaking imposes on its repeat participants.

Modifications to an exemption. The public process raised a few additional issues, including how a streamlined process should treat petitions to alter an exemption. Again, section 1201 and the APA afford the Copyright Office some flexibility to define its process. Any process, however, must take care to ensure that requests for changed exemptions are evaluated pursuant to a fully developed administrative record. Accordingly, in cases where the circumstances are unchanged, a party asking the Office to rely upon a preexisting record to alter a previously granted exemption faces a greater lift than a party seeking renewal of the exemption as previously granted. For the upcoming seventh rulemaking, the Office intends to limit renewal requests to cases where no material changes to an existing exemption are sought, while evaluating potential modifications within the main notice and comment process.⁷⁸⁶ That said, the Office will consider other ways to minimize unnecessary requirements on participants. The Office concludes it has authority to conduct a more limited inquiry regarding a proposed modification where "as-is" renewal is unopposed, and to allow a participant to explain whether the prior record remains relevant to the request for a changed exemption.⁷⁸⁷ Finally, considering stakeholder requests for more accessible regulatory

⁷⁸⁵ See DVD CCA & AACS LA Initial Comments at 11 ("Historically, DVD CCA has generally not opposed the continuation of the same CSS-related exemptions."); Tr. at 179:04–180:06 (May 19, 2016) (Ben Sheffner, MPAA) (noting "[in] practice, there is virtually no opposition to previously granted exemptions").

⁷⁸⁶ See, e.g., DVD CCA & AACS LA Initial Comments at 11–12; SIIA Initial Comments at 7; Auto Alliance Initial Comments at 7.

⁷⁸⁷ The Office acknowledges that some evidence submitted in opposition to a request for an expanded exemption may also be relevant to the renewal of an existing exemption. See, e.g., Tr. at 186:12–24 (May 19, 2016) (Tushnet, OTW) (suggesting the Office "might not" be able to disregard evidence of a "new screen cap program" submitted in response to a different proposed class, while evaluating an unopposed request for renewal). But this hypothetical concern need not block all streamlined processes, given that the Office is afforded considerable discretion in establishing the timing and procedures for the rulemaking, and that the hypothetical lack of opposition to renewal may itself serve as an admission that the evidence should not tip the balances against renewal. The statutory requirement that the rulemaking be held every three years necessitates timely procedures and courts routinely give substantial deference to agencies

language and more transparency in adoption of such language, the Office notes that it is also empowered to address the need for technical changes to regulatory language separately.⁷⁸⁸

Presumptive rejection. Another suggestion was that the Copyright Office should establish a streamlined procedure to recommend against previously denied exemptions. While in theory the same rationale supporting the creation of a streamlined renewal process also lends support to a fast-track for rejections, there was no consensus about the need for presumptive rejection, and some users strongly objected to this proposal.⁷⁸⁹ Further, the Office is mindful that the rulemaking is intended to “ensure that access for lawful purposes is not unjustifiably diminished” by TPMs.⁷⁹⁰ As such, the Office does not at this time intend to implement such a process. But 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.⁷⁹¹

F. Other Rulemaking Process Considerations

In addition to establishing a process for streamlined renewal of exemptions, several commenters suggested other changes aimed at making the rulemaking process more transparent and easily accessible. The Copyright Office supports these goals, and previously implemented procedural adjustments for the sixth triennial rulemaking to “enhance public understanding of the rulemaking process, including its legal and

to define the procedural requirements of their rulemakings. See *Vermont Yankee Nuclear Power Corp. v. NRDC*, 435 U.S. 519, 549 (1978) (“The court should . . . not stray beyond the judicial province to explore the procedural format or to impose upon the agency its own notion of which procedures are ‘best’ or most likely to further some vague, undefined public good.”); see also *Fla. Inst. of Tech. v. FCC*, 952 F.2d 549, 550–54 (D.C. Cir. 1992) (affirming FCC’s strict “cut-off” rules regarding broadcast licenses to allow the “orderly processing” of applications); *Crawford v. FCC*, 417 F.3d 1289, 1296–97 (D.C. Cir. 2005) (similar).

⁷⁸⁸ For example, changes the Register makes to recommended regulatory language made solely to improve readability may not qualify as material.

⁷⁸⁹ See, e.g., Tr. at 209:18–210:14 (May 19, 2016) (Tushnet, OTW); Tr. at 210:16–211:21 (May 19, 2016) (Band, LCA).

⁷⁹⁰ COMMERCE COMMITTEE REPORT at 36.

⁷⁹¹ See, e.g., 2015 Recommendation at 107–126 (declining again to recommend proposed classes for “Audiovisual Works and Literary Works Distributed Electronically—Space-Shifting and Format-Shifting,” noting that the continued “absence of clear supporting precedent” meant that “the fair use analysis [in 2015] largely follow[ed] the 2012 analysis”); 2006 Recommendation at 72–73 (declining a class for “DVDs that cannot be viewed on Linux operating systems” for “the same reasons as in 2000 and 2003”).

evidentiary requirements, and facilitate more effective participation.”⁷⁹² As outlined below, the Office is undertaking further efforts to make the rulemaking process clear and accessible to the public, consistent with its statutory obligations.

1. *Educational Outreach.* The Office will dedicate further resources to educating interested parties about the section 1201 rulemaking process.⁷⁹³ The Office understands that it can be difficult for the public, especially for those not versed in copyright law or the rulemaking process, to participate in such a complex and resource-intensive process. For example, in connection with the upcoming seventh rulemaking, the Office plans to provide a tutorial or webinar to explain the rulemaking process.

2. *Timing Considerations.* The Copyright Office empathizes with parties who find the scheduling and rapid pace of the rulemaking difficult.⁷⁹⁴ It is difficult, however, to accommodate every scheduling interest given the three-year statutory mandate.⁷⁹⁵ The Office will continue to try to accommodate scheduling needs of participants, including law school clinics. For the seventh rulemaking, the Office intends to move up the schedule for written comments, to better align with academic calendars.

Relatedly, the Office believes it would be premature for Congress to alter the statutory three-year cycle of the rulemaking, although this subject may be worthy of further study should Congress pursue legislative reforms. While some suggested that the rulemaking should be amended to allow a process to evaluate “out-of-cycle” exemptions,⁷⁹⁶ overall, there was not a strong demand for such a change. Commenters did not comment substantively on a proposal in the Breaking Down Barriers to Innovation Act that would provide the Librarian with discretion to conduct a rulemaking outside of the triennial review process.⁷⁹⁷ While the Office recognizes the current cycle is an imperfect fit for

⁷⁹² Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, 79 Fed. Reg. 55,687, 55,687 (Sept. 17, 2014).

⁷⁹³ See, e.g., Mozilla Initial Comments at 6 (“[T]he Copyright Office should also undertake education, advocacy, and media efforts regarding the rulemaking process” to encourage participation from ‘non-copyright experts.’”).

⁷⁹⁴ See, e.g., Joint Filmmakers II Initial Reply Comments at 4.

⁷⁹⁵ The Office welcomes informal input concerning parties’ different needs, including suggestions how to best accommodate the differing schedules of law school clinics, as many operate on different schedules (e.g., semester, trimester, or quarterly terms with differing start dates).

⁷⁹⁶ See, e.g., DIYAbility Initial Comments at 1–2 (“The triennial rulemaking process provides only a brief opportunity every three years to petition for an exemption. This is not frequent enough to . . . effectively serve the needs of disabled users.”); SAA Initial Comments at 3 (“[I]n many cases the three-year window is too long” for grant-funded preservation projects and the rapid pace of technological change).

⁷⁹⁷ H.R. 1883, 114th Cong. § 3 (2015); S. 990, 114th Cong. § 3 (2015).

some needs, reforms would seem to also fall short. A longer cycle would not be as responsive to the pressing needs of proponents. A shorter cycle would be more demanding of participants and would make it difficult to determine whether any exceptions were working as intended.

3. *Phased Comment Structure and Administrative Record.* Though some criticized the procedural changes implemented for the sixth triennial rulemaking,⁷⁹⁸ others praised the Copyright Office's efforts.⁷⁹⁹ Notably, NTIA applauded the Office for "implementing constructive process changes," and noted specifically that "the three-round public comment phase and requirement that each comment submission address one specific proposed exemption facilitated the development of a clear and comprehensive record."⁸⁰⁰ The Office's (and NTIA's) limited resources require a clear and efficient comment process so that recommendations can be issued in time for the Librarian to meet the statutory deadline. In the next rulemaking, the Office does not anticipate changing the overall framework of the phased comment structure, but will explore ways to ensure that the record is properly balanced, such as by allowing additional submissions or continuing to ask post-hearing questions as needed to create a more complete record. The Office will also attempt to lessen demands by considering relevant evidence across classes when appropriate and providing a mechanism for testimony to count for multiple classes to avoid necessitating travel to two cities,⁸⁰¹ while maintaining its requirement for submission of written evidence by classes for administrative convenience.

4. *Confidential information.* Some commenters expressed a desire to submit confidential business information, attorney-client privileged information, or evidence of ongoing circumvention activity without increasing their risk of legal liability.⁸⁰² The APA does

⁷⁹⁸ See, e.g., Auto Alliance Initial Comments at 7 (suggesting "rebalancing [the commenting] ratio in future rulemaking cycles, in order to develop a more complete and balanced record"); DVD CCA & AACCS LA Initial Comments at 14 (noting that the "new procedural approach . . . gave the proponents three opportunities to make written submissions . . . [but that o]pponents however only had one"); Tr. at 105:01–08 (May 25, 2016) (Lerner, Joint Filmmakers I) ("The petition really ended up being a huge amount of work.").

⁷⁹⁹ See, e.g., Kernochan Center Initial Comments at 5 (stating that the changes made in the sixth rulemaking "benefited the rulemaking process and should be retained").

⁸⁰⁰ 2015 NTIA Letter at 3.

⁸⁰¹ AAP, MPAA & RIAA Initial Comments at 13 ("Witnesses, whether they be executives of large corporations or individual consumers, should not have to appear multiple times, or on multiple coasts, when their testimony is relevant to multiple proposals.").

⁸⁰² See, e.g., OTI Initial Comments at 2–3, 9–11; NMR Initial Comments at 19–20.

not prohibit the submission of such materials⁸⁰³ and other agencies have created rules governing the submission and disclosure of such information.⁸⁰⁴ The need for such a rule here, however, is less clear, and the Office is disinclined at this time to adopt procedures to allow submission of comments that cannot be shared publicly.

5. *Accessibility.* Following the successful webcast of the San Francisco hearings for this study, the Office will explore making hearings available via webcast as well as allowing for remote participation, including for the upcoming seventh rulemaking. The Office acknowledges that budget and technology constraints may pose hurdles, but is encouraged by offers of schools and other venues to host future rulemaking roundtables and hearings. The Office will continue to archive past proceedings on its website in an organized manner.

6. *Increased Opportunities for Participant Input.* Some commenters suggested that the Office should make the recommended regulatory language available for comment prior to the Librarian's final determination.⁸⁰⁵ While previewing regulatory language is not required by section 1201, the Office recognizes that it is a typical agency practice.⁸⁰⁶ In this case, however, while the Office is committed to encouraging public participation, it may not always be feasible to add another round of comments on a proposed rule. Such a process would involve a notice period, possible reply comments, and time for analysis, which would add months to an already lengthy process. Further, in most cases, parties can, and do, already address existing or proposed regulatory language. In addition to post-hearing questions targeted at shaping proposed regulatory language,⁸⁰⁷ the Office

⁸⁰³ The APA only requires that an agency "shall give interested persons an opportunity to participate in the rule making through submission of written data, views, or arguments." 5 U.S.C. § 553(c).

⁸⁰⁴ See, e.g., 14 C.F.R. § 11.35 (FAA); 46 C.F.R. § 502.5 (Maritime Administration). But see 26 C.F.R. § 601.601(b)(1) (IRS does not accept any confidential information in rulemakings).

⁸⁰⁵ AAP, MPAA & RIAA Initial Comments at 13; Auto Alliance Initial Comments at 7.

⁸⁰⁶ While the APA generally requires the publication of final rules at least 30 days prior to their effective date, it excepts "substantive rule[s] which grant or recognize[] an exemption or relieve[] a restriction." 5 U.S.C. § 553(d). This is because rules that relieve restrictions do not require parties "to adjust their behavior before the final rule takes effect." *San Diego Navy Broadway Complex Coal. v. U.S. Coast Guard*, No. 10-cv-2565, 2011 WL 1212888, at *3 n.3 (S.D. Cal. 2011). As noted above, while Congress directed the Copyright Office to conduct the rulemaking pursuant to the APA, the Librarian of Congress, who is exempt from the APA, issues the final rule.

⁸⁰⁷ See, e.g., Letter from Jacqueline Charlesworth, Gen. Counsel and Assoc. Register of Copyrights, U.S. Copyright Office, to Andrea Matwyshyn, et al. (June 3, 2015), <https://www.copyright.gov/1201/2015/post-hearing/Post%20hearing%20questions%20for%20class%2025-signed.pdf> (regarding proposed security research exemption); Letter from U.S. Copyright Office to Catherine Gellis, et al. (June 3, 2015), <https://www.copyright.gov/1201/2015/post-hearing/Post%20>

will consider whether to utilize informal meetings to discuss proposed language or address discrete issues prior to issuing a recommendation, including by establishing guidelines for *ex parte* communications.⁸⁰⁸

7. *Simplified Regulatory Language.* The Office agrees with some commenters⁸⁰⁹ that drafting the section 1201 regulatory language in plain language is a worthy goal, echoing efforts from the Legislative and Executive Branches to promote clear communication to the public.⁸¹⁰ Congress recently heard testimony that copyright law has become more opaque and technical over time,⁸¹¹ and section 1201 is no exception—the proposed exemptions in the triennial rulemakings have steadily increased both in complexity and number. Nevertheless, the Office will make a greater effort to use plain language in regulations, while accurately reflecting what is supported in the evidentiary record.

hearing%20questions%20for%20class%2022-signed.pdf (regarding proposed automobile exemption); Letter from Jacqueline Charlesworth, Gen. Counsel and Assoc. Register of Copyrights, U.S. Copyright Office to Jack Lerner, et al. (June 3, 2015), <https://www.copyright.gov/1201/2015/post-hearing/Letter%20to%20Class%206%20Witnesses-signed.pdf> (regarding proposed filmmaking exemption).

⁸⁰⁸ Tr. at 204:19–206:14 (May 19, 2016) (Band, LCA) (recommending conferences with interested parties to resolve issues related to exemption renewals).

⁸⁰⁹ See, e.g., LCA Initial Comments at 32 (“The increasing complexity of the exemptions issued by the Library of Congress make them harder for their beneficiaries to understand and use.”); AAU, ACE, APLU & EDUCAUSE Initial Comments at 10–11; Univ. of Va. Libraries Initial Comments at 3–4; Tr. at 130:21–131:06 (May 25, 2016) (LaBarre, NFB).

⁸¹⁰ See Plain Writing Act of 2010, Pub. L. No. 111-274, §§ 3(3), 4(b), 124 Stat. 2861, 2861–62 (2010) (while exempting regulations, generally requiring that agencies communicate to the public in a “clear, concise, [and] well-organized” manner); Exec. Order No. 13,563, Improving Regulations and Regulatory Review, 3 C.F.R. pt. 100 (2011), <https://obamawhitehouse.archives.gov/the-press-office/2011/01/18/executive-order-13563-improving-regulation-and-regulatory-review> (“Our regulatory system . . . must ensure that regulations are accessible, consistent, written in plain language, and easy to understand.”).

⁸¹¹ *A Case Study for Consensus Building: The Copyright Principles Project: Hearing Before the Subcomm. on Courts, Intellectual Prop. & the Internet of the H. Comm. on the Judiciary*, 113th Cong. 58 (2013) (testimony of Pamela Samuelson, Professor, Univ. of Cal. Berkeley Sch. of Law and Dir., Berkeley Ctr. for Law and Tech.) (“[T]he [copyright] statute has become much longer than it was in 1976, and the longer it has become, the more technical it has become.”); see also *id.* at 82 (statement of Rep. Melvin Watt, Ranking Member, H. Comm. on the Judiciary) (“[O]ur problem here in Congress is that we either have to write a law that covers every eccentricity, every nuance, or we have to write a general principle and delegate responsibility for the nuances to regulators.”).

8. *Relationship with NTIA.* Finally, though one commenter suggested transferring rulemaking responsibilities to the Department of Commerce,⁸¹² the Copyright Office believes the current structure is preferable as it can take advantage of the Copyright Office's and NTIA's respective subject matter expertise and experience in past rulemakings. The Office anticipates continued productive consultations with NTIA.

V. CONCLUSION

The past twenty years have witnessed the rise of an array of new platforms and formats for delivering creative works to the public, and in this respect, section 1201 has succeeded in fostering a thriving, innovative, and flexible digital marketplace, as Congress envisioned. The basic framework of section 1201—including its treatment of circumvention as a standalone violation independent of copyright infringement and robust anti-trafficking provisions—remains sound, and the Copyright Office does not recommend broad changes to the statute's overall scope. Within this existing framework, however, it may be appropriate to recalibrate provisions in section 1201 to better reflect changes in technology since the DMCA's enactment nearly two decades ago. Specifically, the Office recommends amending section 1201 to permit third-party assistance for exemption beneficiaries, expand the scope of the security testing and encryption research exemptions, and establish new permanent exemptions to allow uses of assistive technology for e-books, certain repair, diagnosis, and maintenance activities, and cellphone unlocking. The Office continues to support establishing a statutory presumption of renewal for exemptions adopted through the triennial rulemaking process. Meanwhile, it intends to implement changes within existing regulatory authority to streamline the process for evaluating and renewing previously adopted exemptions. These changes include establishing a short form declaration and abbreviated opposition period for repeat exemptions, to allow the Register to recommend renewed exemptions based on the prior administrative record, in cases where that record remains a reliable reflection of the legal and factual concerns at issue. Moreover, the Office hopes that the interpretive guidance provided here will prove useful to courts and stakeholders as they consider section 1201's possible application to both current and emerging uses of copyrighted works.

⁸¹² See LCA Initial Comments at 32–33.

APPENDIX A **FEDERAL REGISTER NOTICES**

Signed at Washington, DC, this 22nd day of December 2015.

Kimberly D. Hill,

Chief, Division of Management Systems,
Bureau of Labor Statistics.

[FR Doc. 2015-32664 Filed 12-28-15; 8:45 am]

BILLING CODE 4510-24-P

LIBRARY OF CONGRESS

U.S. Copyright Office

[Docket No. 2015-8]

Section 1201 Study: Notice and Request for Public Comment

AGENCY: U.S. Copyright Office, Library of Congress.

ACTION: Notice of inquiry.

SUMMARY: The United States Copyright Office is undertaking a public study to assess the operation of section 1201 of Title 17, including the triennial rulemaking process established under the DMCA to adopt exemptions to the prohibition against circumvention of technological measures that control access to copyrighted works. To aid this effort, and to ensure thorough assistance to Congress, the Office is seeking public input on a number of key questions.

DATES: Written comments must be received no later than 11:59 p.m. Eastern Time on February 25, 2016. Written reply comments must be received no later than 11:59 p.m. Eastern Time on March 25, 2016. The Office will be announcing one or more public meetings, to take place after written comments are received, by separate notice in the future.

ADDRESSES: All comments must be submitted electronically. Specific instructions for submitting comments will be posted on the Copyright Office Web site at <http://www.copyright.gov/policy/1201> on or before February 1, 2016. To meet accessibility standards, all comments must be provided in a single file not to exceed six megabytes (MB) in one of the following formats: Portable Document File (PDF) format containing searchable, accessible text (not an image); Microsoft Word; WordPerfect; Rich Text Format (RTF); or ASCII text file format (not a scanned document). All comments must include the name of the submitter and any organization the submitter represents. The Office will post all comments publicly in the form that they are received. If electronic submission of comments is not feasible, please contact the Office using the contact information below for special instructions.

FOR FURTHER INFORMATION CONTACT:

Regan A. Smith, Associate General Counsel, by email at resm@loc.gov or by telephone at 202-707-8350; or Kevin Amer, Senior Counsel for Policy and International Affairs, by email at kamer@loc.gov or by telephone at 202-707-8350.

SUPPLEMENTARY INFORMATION:

I. Background

The Digital Millennium Copyright Act (“DMCA”) has played a pivotal role in the development of the modern digital economy. Enacted in 1998 to implement the United States’ obligations under two international treaties,¹ it is intended to foster the growth of the digital marketplace by ensuring adequate legal protections for copyrighted content.² As envisioned by Congress, the DMCA seeks to balance the interests of copyright owners and users, including the personal interests of consumers, in the digital environment.³ In addition to provisions limiting the liability of online service providers,⁴ the DMCA includes provisions prohibiting the circumvention of technological measures used to protect copyrighted works as well as trafficking in anticircumvention devices.⁵ These anticircumvention provisions, codified in section 1201 of the Copyright Act, were the subject of a 2014 hearing held by the House Judiciary Committee’s Subcommittee on Courts, Intellectual Property and the Internet as part of its comprehensive review of the nation’s copyright law,⁶ and, as discussed below, a recently concluded rulemaking conducted by the Copyright Office. In accordance with the request from the House Judiciary Committee’s Ranking Member to the Register of Copyrights at the April 2015 House Judiciary Committee hearing on copyright review, and consistent with the Register’s testimony in that hearing that the impact and efficacy of section 1201 merit analysis at this time, the Office is undertaking a study and soliciting public input.⁷

¹ See WIPO Copyright Treaty art. 11, Dec. 20, 1996, 36 I.L.M. 65 (1997); WIPO Performances and Phonograms Treaty art. 18, Dec. 20, 1996, 36 I.L.M. 76 (1997).

² See H.R. Rep. No. 105-551, pt. 2, at 23 (1998).

³ See *id.* at 26.

⁴ See 17 U.S.C. 512.

⁵ The DMCA also established protections for the integrity of copyright management information. See *id.* 1202.

⁶ See Chapter 12 of Title 17: Hearing Before the Subcomm. on Courts, Intellectual Prop., and the Internet of the H. Comm. on the Judiciary, 113th Cong. (2014) (“Chapter 12 of Title 17 Hearing”).

⁷ See Register’s Perspective on Copyright Review: Hearing Before the H. Comm. on the Judiciary, 114th Cong. 6 (2015) (“Register’s Perspective on

A. Overview of Section 1201

Prohibitions on Circumvention and Trafficking

Section 1201 prohibits the circumvention of technological measures employed by or on behalf of copyright owners to control access to their works (also known as “access controls”), as well as the trafficking in technologies or services that facilitate such circumvention.⁸ It also prohibits trafficking in technologies or services that facilitate circumvention of technological measures that protect the exclusive rights granted to copyright owners under Title 17 (also known as “copy controls”).⁹ In enacting section 1201, Congress recognized that technological measures can be deployed “not only to prevent piracy and other economically harmful unauthorized uses of copyrighted material, but also to support new ways of disseminating copyrighted materials to users,” as well as to make “the process of obtaining permissions easier.”¹⁰ Violations of

Copyright Review Hearing”) (statement of Maria A. Pallante, Register of Copyrights and Director, U.S. Copyright Office) (“For [certain] aspects of section 1201, we are recommending a comprehensive study, including the permanent exemptions for security, encryption, and privacy research.”); *id.* at 49 (statement of Rep. John Conyers, Jr., Ranking Member, H. Comm. on the Judiciary) (“[T]here are policy issues that warrant studies and analysis, including section 512, section 1201, mass digitization, and moral rights. I would like the Copyright Office to conduct and complete reports on those policy issues . . .”). Separately, as discussed below, the Register has also proposed amending the triennial rulemaking process to ease the burden of renewing existing exemptions. See *id.* at 5 (statement of Maria A. Pallante, Register of Copyrights and Director, U.S. Copyright Office) (“We are therefore recommending a legislative change to provide a presumption in favor of renewal in cases where there is no opposition.”).

⁸ 17 U.S.C. 1201(a); see 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 4th, 1998, at 5-9 (Comm. Print 1998) (“House Manager’s Report”).

⁹ 17 U.S.C. 1201(b); see House Manager’s Report at 12-13. While section 1201 does not prohibit the circumvention of copy controls, in some cases access control and copy control measures are merged, and thus circumvention of such measures is prohibited by section 1201(a)(1). U.S. Copyright Office, Section 1201 Rulemaking: Sixth Triennial Proceeding to Determine Exemptions to the Prohibition on Circumvention, Recommendation of the Register of Copyrights 4 n.13 (2015), <http://copyright.gov/1201/2015/registers-recommendation.pdf> (“2015 Recommendation”); U.S. Copyright Office, Recommendation of the Register of Copyrights in RM 2008-8, Rulemaking on Exemptions from Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies 44-47 (June 11, 2010), <http://www.copyright.gov/1201/2010/initialed-registers-recommendation-june-11-2010.pdf> (“2010 Recommendation”).

¹⁰ House Manager’s Report at 6.

section 1201 are subject to both civil and criminal penalties.¹¹

Rulemaking Process

Section 1201 includes a triennial rulemaking process through which the Librarian of Congress, following a public proceeding conducted by the Register of Copyrights in consultation with the National Telecommunications and Information Administration of the Department of Commerce (“NTIA”), may grant limited exceptions to section 1201(a)(1)’s bar on the circumvention of access controls. By statute, the triennial rulemaking process addresses only the prohibition on the act of circumvention itself; section 1201 does not provide a mechanism to grant exceptions to the anti-trafficking provisions of sections 1201(a)(2) or 1201(b).¹² The section 1201 rulemaking is intended to serve as a “fail-safe” mechanism through which the Copyright Office can monitor developments in the copyright marketplace and recommend limited exemptions as needed to prevent the unnecessary restriction of fair and other noninfringing uses.¹³ In keeping with that goal, the primary responsibility of the Office in the rulemaking proceeding is to assess whether the implementation of access controls impairs the ability of individuals to make noninfringing uses of copyrighted works within the meaning of section 1201(a)(1). To do this, the Register solicits proposals from the public, develops a comprehensive administrative record using information submitted by interested parties, and makes recommendations to the Librarian concerning whether exemptions are warranted based on that record. While the first triennial rulemaking completed in the year 2000 considered nearly 400 comments, resulting in the adoption of two exemptions,¹⁴ the process has grown such that the recently concluded sixth triennial rulemaking considered nearly 40,000 comments, resulting in exemptions for twenty-two types of uses.¹⁵

Those seeking an exemption from the prohibition on circumvention must establish that “persons who are users of a copyrighted work are, or are likely to be in the succeeding 3-year period, adversely affected by the prohibition . . . in their ability to make noninfringing uses under this title of a

particular class of copyrighted works.”¹⁶ To meet the statutory standard, a proponent must show: (1) That uses affected by the prohibition on circumvention are or are likely to be noninfringing; and (2) that as a result of a technological measure controlling access to a copyrighted work, the prohibition is causing, or in the next three years is likely to cause, an adverse impact on those uses.¹⁷ With respect to the first requirement, proponents in prior rulemakings have pointed to several types of noninfringing uses that could be affected by the prohibition of section 1201(a)(1), including fair use (codified in section 107 of the Copyright Act), certain educational uses (section 110), and certain uses of computer programs (section 117).¹⁸ The second requirement asks whether technological measures are “diminishing the ability of individuals to use these works in ways that are otherwise lawful.”¹⁹ Congress stressed that proponents must establish that a “substantial diminution” of the availability of works for noninfringing uses is “*actually occurring*” in the marketplace—or, in “extraordinary circumstances,” may establish the “likelihood of future adverse impact during that time period” where such evidence is “highly specific, strong and persuasive.”²⁰

In considering a proposed exemption, the Librarian—and hence the Register—must also weigh the statutory factors listed in section 1201(a)(1)(C), namely: “(i) the availability for use of copyrighted works; (ii) the availability

for use of works for nonprofit archival, preservation, and educational purposes; (iii) the impact that the prohibition on the circumvention of technological measures applied to copyrighted works has on criticism, comment, news reporting, teaching, scholarship, or research; (iv) the effect of circumvention of technological measures on the market for or value of copyrighted works; and (v) such other factors as the Librarian considers appropriate.”²¹

In addition, section 1201(a)(1) specifies that exemptions adopted through the triennial rulemaking must be defined based on “a particular *class* of works.”²² The legislative history explains that “the ‘particular class of copyrighted works’ [is intended to] be a narrow and focused subset of the broad categories of works” appearing in section 102 of Title 17, such as literary works, musical works, and sound recordings.²³ In the course of prior rulemakings, the Register has concluded that, based on the record presented, a “class of works” defined initially by reference to a section 102 category or subcategory of works may be additionally refined by reference to the medium in which the works are distributed, the particular access controls at issue, or the particular type of use and/or user to which the exemption will apply.²⁴

Exemptions adopted via the rulemaking process are to remain in effect for three years. Congress made clear that the basis for an exemption must be established *de novo* in each triennial proceeding.²⁵ Accordingly, even if the same exemption is sought

¹⁶ 17 U.S.C. 1201(a)(1)(C); see 2015 Recommendation at 13–14; 2010 Recommendation at 10. Under the APA, “[e]xcept as otherwise provided by statute, the proponent of a rule or order has the burden of proof.” 5 U.S.C. 556(d). The Breaking Down Barriers to Innovation Act of 2015, introduced in both the House and the Senate, would shift the burden of proof away from proponents of exemptions and provide discretion to the Librarian to conduct a rulemaking proceeding outside the triennial process. H.R. 1883, 114th Cong. sec. 3(a)(1)(E) (2015); S. 990, 114th Cong. sec. 3(a)(1)(E) (2015).

¹⁷ 17 U.S.C. 1201(a)(1)(B).

¹⁸ See, e.g., Transcript, U.S. Copyright Office, Hearing on Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies 10:17–11:9 (May 2, 2000) (statement of Peter Jaszi, Digital Future Coalition) (discussing adverse effects of section 1201(a)(1) on noninfringing uses under sections 107 and 110); Internet Archive, Creative Commons, and Berkman Center for Internet & Society, Initial Comments Submitted in Response to U.S. Copyright Office’s Oct. 15, 2002 Notice of Inquiry at 7–9 (2002) (seeking an exemption to allow software archiving as allowed under sections 117 and 107); National Association of Independent Schools, Initial Comments Submitted in Response to U.S. Copyright Office’s Nov. 24, 1999 Notice of Inquiry (2000) (discussing fair use for educational purposes).

¹⁹ H.R. Rep. No. 105–551, pt. 2, at 37.

²⁰ House Manager’s Report at 6.

²¹ 17 U.S.C. 1201(a)(1)(C). In the latest triennial rulemaking, due to the increasing prevalence of technological measures employed in connection with embedded computer software, many participants urged the Register and Librarian to consider non-copyright issues relating to health, safety, and environmental concerns under the rubric of “other factors” appropriate for consideration. See 2015 Recommendation at 2–3. The Breaking Down Barriers to Innovation Act of 2015 would add two additional factors to the list to be considered by the Librarian when deciding whether to grant an exemption: (1) Whether the prohibition on circumvention impacts accessibility for persons with disabilities, and (2) whether the prohibition impacts the furtherance of security research. H.R. 1883 sec. 3(a)(1)(B)(v); S. 990 sec. 3(a)(1)(B)(v).

²² See 17 U.S.C. 1201(a)(1)(B) (emphasis added).

²³ H.R. Rep. No. 105–551, pt. 2, at 38.

²⁴ U.S. Copyright Office, Recommendation of the Register of Copyrights in RM 2005–11, Rulemaking on Exemptions from Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies 9–10 (Nov. 17, 2006), http://www.copyright.gov/1201/docs/1201_recommendation.pdf.

²⁵ See H.R. Rep. No. 105–551, pt. 2, at 37 (explaining that for every rulemaking, “the assessment of adverse impacts on particular categories of works is to be determined *de novo*”).

¹¹ 17 U.S.C. 1203–1204.

¹² *Id.* 1201(a)(1)(C).

¹³ H.R. Rep. No. 105–551, pt. 2, at 36.

¹⁴ Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, Final Rule, 65 FR 64556, 64557 (Oct. 27, 2000).

¹⁵ 2015 Recommendation at 2–7 (2015).

again, it cannot be granted unless its proponents establish a new record that satisfies the statutory criteria.

Permanent Exemptions

In addition to the temporary exemptions adopted pursuant to the triennial rulemaking process, section 1201 provides eight permanent exemptions to the prohibition on circumvention, namely for certain activities of nonprofit libraries, archives, and educational institutions (section 1201(d)) and law enforcement (section 1201(e)); for reverse engineering (section 1201(f)); encryption research (section 1201(g)); the protection of personally identifying information (section 1201(i)); security testing (section 1201(j)); the prevention of access by minors to the internet (section 1201(h)); and relating to certain analog devices such as VHS and Beta format cassettes (section 1201(k)). Separately, section 112 includes a limited permanent exception to section 1201 for purposes of making ephemeral recordings.²⁶ As discussed below, the applicability and usefulness of the existing permanent exemptions has been questioned by some.²⁷

Unlocking Consumer Choice and Wireless Competition Act

In 2014, Congress addressed certain issues relating to section 1201 by passing the Unlocking Consumer Choice and Wireless Competition Act (“Unlocking Act”), which primarily concerned the circumvention of technological measures that control access to computer programs that enable wireless telephone handsets to connect to wireless communication networks (“cellphone unlocking”).²⁸ The Unlocking Act reinstated the cellphone unlocking exemption adopted by the Librarian in 2010,²⁹ replacing the

narrower version adopted in 2012,³⁰ and directed the Librarian to consider in the 2015 rulemaking whether to “extend” the exemption “to include any other category of wireless devices in addition to wireless telephone handsets.”³¹ (On the Register’s recommendation, the Librarian granted additional exemptions for tablets and other types of wireless devices in the 2015 proceeding.³²)

The Unlocking Act also permanently established that circumvention under any exemption to permit a wireless telephone handset or other wireless device to connect to a different telecommunications network may be initiated by the owner of the handset or device, by another person at the direction of the owner, or by a provider of commercial mobile radio or data service, so long as the purpose is to enable the owner or a family member to connect to a wireless network in an authorized manner.³³ The legislation served to clarify that the owner of a device or the owner’s family member can obtain assistance with the circumvention from another party notwithstanding the anti-trafficking provisions of section 1201.³⁴

B. Areas of Concern

Rulemaking Process

As the number of participants in the triennial rulemaking has expanded with each successive cycle, the Office has done what it can within the existing statutory framework to streamline the proceedings. For the recent sixth triennial rulemaking proceeding, the Register (in consultation with NTIA and past proceeding participants) adjusted the administrative procedures to make the process more accessible and understandable; facilitate participation, coordination, and the development of the factual record; and reduce administrative burdens on both the participants and the Copyright Office.³⁵

Access Control Technologies, Final Rule, 75 FR 43825, 43828–32 (July 27, 2010).

³⁰ See Unlocking Consumer Choice and Wireless Competition Act sec. 2(a), 128 Stat. at 1751.

³¹ *Id.* 2(b), 128 Stat. at 1751.

³² See Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, Final Rule, 80 FR 65944, 65952, 65962–63.

³³ Unlocking Consumer Choice and Wireless Competition Act sec. 2(a), (c), 128 Stat. at 1751–52; see also 37 CFR 201.40(b)(3) (2012).

³⁴ Other bills have recently been introduced that would alter the operation of section 1201. Recent examples include the Unlocking Technology Act of 2015, H.R. 1587, 114th Cong. (2015); and the Breaking Down Barriers to Innovation Act of 2015, H.R. 1883, S. 990, 114th Cong. (2015).

³⁵ See generally Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, Notice of Inquiry, 79

The Office solicited initial petitions setting forth only the essential elements of proposed exemptions and then issued a Notice of Proposed Rulemaking that reviewed and grouped the proposals and provided detailed guidance on the submission of written comments.³⁶ The Office also refined the comment phase to encourage a more organized and complete administrative record, including by instituting three distinct rounds of comments to allow participants to better respond to issues raised by other commenters.³⁷ The Office instituted procedures to encourage advance submission of multimedia evidence where appropriate.³⁸

Even with these improvements, however, the rulemaking procedure, as enacted by Congress, is resource-intensive for both participants and the Office. An area of particular concern is the requirement that previously granted exemptions be reviewed anew. During the most recent rulemaking, a number of petitions essentially sought renewal of existing exemptions—for example, unlocking of cellphones and jailbreaking of smartphones. Some of these petitions—including a petition to permit circumvention so that literary works distributed electronically could continue to be accessed by persons who are blind, visually impaired, or print disabled—were unopposed.³⁹ In testimony, the Register has recommended that Congress amend the rulemaking process to create a presumption in favor of renewal when there is no meaningful opposition to the continuation of an exemption.⁴⁰

FR 55687 (Sept. 17, 2014) (“Sixth Triennial Rulemaking NOI”); Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, Notice of Proposed Rulemaking, 79 FR 73856 (Dec. 12, 2014) (“Sixth Triennial Rulemaking NPRM”); cf. Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, Notice of Inquiry, 76 FR 60398 (Sept. 29, 2011).

³⁶ Sixth Triennial Rulemaking NPRM, 79 FR 73856, 73858–71.

³⁷ See Sixth Triennial Rulemaking NPRM, 79 FR 73856, 73857–58; see also Sixth Triennial Rulemaking NOI, 79 FR 55687, 55693.

³⁸ See Sixth Triennial Rulemaking NPRM, 79 FR 73856, 73858.

³⁹ See 2015 Recommendation at 127–37.

⁴⁰ In her testimony, the Register noted this issue is ripe for legislative process. See *Register’s Perspective on Copyright Review Hearing* at 27 (statement of Maria A. Pallante, Register of Copyrights and Director, U.S. Copyright Office); 2015 Recommendation at 4. The Breaking Down Barriers to Innovation Act of 2015 would require the renewal of previously-granted exemptions unless “changed circumstances” justify revoking the exemption. H.R. 1883 sec. 3(a)(1)(F)(iii); S. 990 sec. 3(a)(1)(F)(iii).

²⁶ 17 U.S.C. 112(a)(2).

²⁷ See *Register’s Perspective on Copyright Review Hearing* at 29 (statement of Maria A. Pallante, Register of Copyrights and Director, U.S. Copyright Office) (“The permanent exemptions in Section 1201 relating to reverse engineering, encryption research, and security testing are an ongoing issue, with some stakeholders suggesting that they are too narrow in scope and others of the view that they strike an appropriate balance. For its part, the Office has previously highlighted the limited nature of the existing security testing exemptions and supported congressional review of the problem.”) (citations omitted).

²⁸ Unlocking Consumer Choice and Wireless Competition Act, Public Law 113–144, 128 Stat. 1751 (2014). Subsequently, the Librarian adopted regulatory amendments to reflect the new legislation. See Exemption to Prohibition on Circumvention of Copyright Protection Systems for Wireless Telephone Handsets, Final Rule, 79 FR 50552 (Aug. 25, 2014).

²⁹ See Exemption to Prohibition on Circumvention of Copyright Protection Systems for

Consumer Issues

Since the enactment of section 1201, the use of technological measures has been useful in expanding consumer choice and the avenues for dissemination of creative works, for example, movies and video games.⁴¹ At the same time, as the Copyright Office has stated, it is also apparent that the prohibition on circumvention impacts a wide range of consumer activities that have little to do with the consumption of creative content or the core concerns of copyright.⁴² Considering these impacts, some stakeholders have expressed concern over the effect of section 1201 on competition and innovation in the marketplace. In their view, technological measures are often deployed to “lock in” particular business models by inhibiting the development of interoperable products, such as printer cartridges, or to prevent individuals from engaging in otherwise legitimate pursuits, such as the repair of automobiles and farm equipment—despite the fact that these sorts of activities seem far removed from piracy of copyrighted works.⁴³

These concerns were highlighted throughout the recently completed sixth triennial proceeding. In the 2015 rulemaking, some of the proposed exemptions concerned the ability to access and make noninfringing uses of expressive copyrighted works, such as motion pictures, video games, and e-books, which Congress undoubtedly had in mind when it created the triennial review process. But others concerned the ability to circumvent access controls on copyrighted computer code in consumer devices. Proponents of these latter classes sought to access the computer code not for its creative content, but rather to enable greater functionality and interoperability of devices ranging from cellphones, tablets, and smart TVs to 3-D printers, automobiles, tractors, and pacemakers.⁴⁴ As the Register has

testified, the effect of section 1201 on a wide range of consumer goods that today contain copyrighted software merits review.⁴⁵

Third-Party Assistance

A related issue is whether section 1201 should be clarified to ensure that intended beneficiaries of exemptions are able to engage in the permitted circumvention activities.⁴⁶ For example, a vehicle owner may require assistance from a repair shop technician to take advantage of an exemption that allows circumvention of access controls on automobile software to make a repair.⁴⁷ The anti-trafficking provisions of section 1201, however, prevent the adoption of exemptions that permit third parties to offer circumvention services.⁴⁸ While the Unlocking Act clarified section 1201 to permit specified third parties to circumvent technological measures on behalf of device owners in the case of cellphones and other wireless devices, the statute does not extend to other types of uses or allow the Librarian to grant an exemption that provides for third-party assistance in other circumstances.

Permanent Exemptions

Another concern is that section 1201's permanent exemptions have failed to keep up with changing technologies. In testimony, the Register has identified the limited nature of the existing security testing exemptions and supported congressional review of this problem.⁴⁹ Based on the record in the most recent section 1201 rulemaking, the Register concluded that commenting parties had made a “compelling case that the current permanent exemptions in section 1201, specifically section 1201(f) for reverse engineering, section 1201(g) for encryption research, and section 1201(j) for security testing, are inadequate to accommodate their intended purposes.”⁵⁰ For example,

(statement of Maria A. Pallante, Register of Copyrights and Director, U.S. Copyright Office).

⁴⁵ *Register's Perspective on Copyright Review Hearing* at 29–30 (statement of Maria A. Pallante, Register of Copyrights and Director, U.S. Copyright Office).

⁴⁶ *Id.* at 29 (noting that intended beneficiaries of exemptions lack the practical ability to engage in the permitted circumvention themselves and suggesting the need for further study).

⁴⁷ See 2015 Recommendation at 4–5.

⁴⁸ *Id.*

⁴⁹ *Register's Perspective on Copyright Review Hearing* at 29 (statement of Maria A. Pallante, Register of Copyrights and Director, U.S. Copyright Office).

⁵⁰ 2015 Recommendation at 307. Legislation recently introduced in Congress would increase exemptions for reverse engineering, encryption research, the protection of personally identifying information, and security testing. See Breaking

when considering a requested exemption for good-faith security research, the Register noted that “the existing permanent exemptions . . . do not cover the full range of proposed security research activities, many of which . . . are likely [to] be noninfringing.”⁵¹ Separately, others have suggested that section 1201(d)'s exemption for activities of nonprofit entities is inadequate to meet the legitimate archiving and preservation needs of libraries and archives.⁵²

International Issues

As noted above, section 1201 was adopted in 1998 to implement the United States' obligations under two international treaties.⁵³ Those treaties—the WIPO Copyright Treaty and the WIPO Performances and Phonograms Treaty—require signatory countries to provide “adequate legal protection and effective legal remedies against the circumvention of effective technological measures” that are used by authors, performers, and phonogram producers in connection with the exercise of their rights, and that restrict acts, in respect of their works, performances, or phonograms, which are not authorized by rightsholders or permitted by law.⁵⁴ Since then, the United States has included anticircumvention provisions in a number of bilateral and regional agreements entered into with other nations.⁵⁵ Therefore, any proposals to

Down Barriers to Innovation Act of 2015, H.R. 1883 sec. 3(b)–(e); Breaking Down Barriers to Innovation Act of 2015, S. 990 sec. 3(b)–(e).

⁵¹ 2015 Recommendation at 299. The Breaking Down Barriers to Innovation Act of 2015 would increase exemptions for reverse engineering, encryption research, the protection of personally identifying information, and security testing. H.R. 1883 sec. 3(b)–(e); S. 990 sec. 3(b)–(e).

⁵² See, e.g., 2015 Recommendation at 327 (discussing proposal for exemption for video game preservationists); Pan C. Lee et al., Samuelson Law, Technology & Public Policy Clinic, University of California, Berkeley School of Law, on behalf of Public Knowledge, Updating 17 U.S.C. 1201 for Innovators, Creators, and Consumers in the Digital Age 52 (2010), https://www.publicknowledge.org/assets/uploads//2_Circumvention.pdf.

⁵³ See H.R. Rep. No. 105–551, pt. 2, at 20.

⁵⁴ WIPO Copyright Treaty art. 11, Dec. 20, 1996, 36 I.L.M. 65 (1997); WIPO Performances and Phonograms Treaty art. 18, Dec. 20, 1996, 36 I.L.M. 76 (1997).

⁵⁵ See United States-Australia Free Trade Agreement, U.S.-Austl., art. 17.4.7, May 18, 2004, 43 I.L.M. 1248, <http://www.ustr.gov/trade-agreements/free-trade-agreements/australian-fta/final-text>; United States-Bahrain Free Trade Agreement, U.S.-Bahr., art. 14.4.7, Sept. 14, 2004, 44 I.L.M. 544, <http://www.ustr.gov/trade-agreements/free-trade-agreements/bahrain-fta/final-text>; United States-Chile Free Trade Agreement, U.S.-Chile, art. 17.7.5, June 6, 2003, 42 I.L.M. 1026, <http://www.ustr.gov/trade-agreements/free-trade-agreements/chile-fta/final-text>; United States-Colombia Trade Promotion Agreement, U.S.-Colom., art. 16.7.4, Nov. 22, 2006, <http://www.ustr.gov/trade-agreements/free-trade->

⁴¹ See, e.g., *Chapter 12 of Title 17 Hearing* at 28–29 (statement of Christian Genetski, Senior Vice-President and General Counsel, Entertainment Software Association).

⁴² 2015 Recommendation at 2.

⁴³ See, e.g., *Chapter 12 of Title 17 Hearing* at 43–44 (statement of Corynne McSherry, Intellectual Property Director, Electronic Frontier Foundation); *Unintended Consequences: Fifteen Years under the DMCA*, Electronic Frontier Foundation, <https://www.eff.org/pages/unintended-consequences-fifteen-years-under-dmca> (last updated March 2013). The proposed Unlocking Technology Act of 2015 would amend both the anticircumvention and anti-trafficking provisions of section 1201(a) to prohibit such conduct only when done with the intent to facilitate the infringement of a copyrighted work. H.R. 1587 sec. 2(a).

⁴⁴ 2015 Recommendation at 2; *Register's Perspective on Copyright Review Hearing* at 29–30

modify or amend Section 1201 would require consideration of the United States' international obligations.

C. Relationship to Software Study

The scope of this study is limited to the operation and effectiveness of section 1201. It is not intended to focus on broader issues concerning the role of copyright with respect to software embedded in everyday products. Those issues are the subject of a separate and concurrent Copyright Office study.⁵⁶ Although, as noted, section 1201 certainly has implications for the use of such products, members of the public who wish to address the impact of other provisions of copyright law on embedded software are encouraged to submit comments in that separate process. More information about the Software-Enabled Consumer Products Study may be found at <http://www.copyright.gov/policy/software/>.

II. Subjects of Inquiry

The Office invites written comments on the specific subjects below. A party choosing to respond to this Notice of Inquiry need not address every subject, but the Office requests that responding parties clearly identify and separately address each subject for which a response is submitted.

General

1. Please provide any insights or observations regarding the role and effectiveness of the prohibition on

agreements/colombia-fta/final-text; Dominican Republic-Central America-United States Free Trade Agreement, U.S.-Costa Rica-Dom. Rep.-El Sal.-Guat.-Hond.-Nicar., art 15.5.7, Aug. 5, 2004, 43 I.L.M. 514, <https://ustr.gov/trade-agreements/free-trade-agreements/cafta-dr-dominican-republic-central-america-fta/final-text>; United States-Jordan Free Trade Agreement, U.S.-Jordan, art. 4(13), Oct. 24, 2000, 41 I.L.M. 63, <http://www.ustr.gov/trade-agreements/free-trade-agreements/jordan-fta/final-text>; United States-Korea Free Trade Agreement, U.S.-S. Kor. art. 18.4.7, June 30, 2007, 46 I.L.M. 642, <https://ustr.gov/trade-agreements/free-trade-agreements/korus-fta/final-text>; United States-Morocco Free Trade Agreement, U.S.-Morocco, art. 15.5.8, June 15, 2004, 44 I.L.M. 544, <http://www.ustr.gov/trade-agreements/free-trade-agreements/morocco-fta/final-text>; United States-Oman Free Trade Agreement, U.S.-Oman, art. 15.4.7, Jan. 19, 2006, <http://www.ustr.gov/trade-agreements/free-trade-agreements/oman-fta/final-text>; United States-Panama Trade Promotion Agreement, U.S.-Pan., art. 15.5.7, June 28, 2007, <http://www.ustr.gov/trade-agreements/free-trade-agreements/panama-tpa/final-text>; United States-Peru Trade Promotion Agreement, U.S.-Peru, art. 16.7.4, Apr. 12, 2006, <http://www.ustr.gov/trade-agreements/free-trade-agreements/peru-tpa/final-text>; United States-Singapore Free Trade Agreement, U.S.-Sing., art. 16.4.7, May 6, 2003, 42 I.L.M. 1026, <https://ustr.gov/trade-agreements/free-trade-agreements/singapore-fta/final-text>.

⁵⁶ See Software-Enabled Consumer Products Study: Notice and Request for Public Comment, 80 FR 77668 (Dec. 15, 2015).

circumvention of technological measures in section 1201(a).

2. How should section 1201 accommodate interests that are outside of core copyright concerns, for example, in cases where circumvention of access controls protecting computer programs implicates issues of product interoperability or public safety?

Rulemaking Process

3. Should section 1201 be adjusted to provide for presumptive renewal of previously granted exemptions—for example, when there is no meaningful opposition to renewal—or otherwise be modified to streamline the process of continuing an existing exemption? If so, how?

4. Please assess the current legal requirements that proponents of an exemption must satisfy to demonstrate entitlement to an exemption. Should they be altered? If so, how? In responding, please comment on the relationship to traditional principles of administrative law.

5. Please provide additional suggestions to improve the rulemaking process.

Anti-Trafficking Prohibitions

6. Please assess the role of the anti-trafficking provisions of sections 1201(a)(2) and 1201(b) in deterring copyright infringement, and address whether any amendments may be advisable.

7. Should section 1201 be amended to allow the adoption of exemptions to the prohibition on circumvention that can extend to exemptions to the anti-trafficking prohibitions, and if so, in what way? For example, should the Register be able to recommend, and the Librarian able to adopt, exemptions that permit third-party assistance when justified by the record?

Permanent Exemptions

8. Please assess whether the existing categories of permanent exemptions are necessary, relevant, and/or sufficient. How do the permanent exemptions affect the current state of reverse engineering, encryption research, and security testing? How do the permanent exemptions affect the activities of libraries, archives, and educational institutions? How might the existing permanent exemptions be amended to better facilitate such activities?

9. Please assess whether there are other permanent exemption categories that Congress should consider establishing—for example, to facilitate access to literary works by print-disabled persons?

Other

10. To what extent and how might any proposed amendments to section 1201 implicate the United States' trade and treaty obligations?

11. Please identify any pertinent issues not referenced above that the Copyright Office should consider in conducting its study.

Dated: December 22, 2015.

Maria A. Pallante,

Register of Copyrights, U.S. Copyright Office.

[FR Doc. 2015–32678 Filed 12–28–15; 8:45 am]

BILLING CODE 1410–30–P

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

[Notice (15–122)]

Privacy Act of 1974; Privacy Act System of Records

AGENCY: National Aeronautics and Space Administration (NASA).

ACTION: Notice of proposed revisions to existing Privacy Act systems of records.

SUMMARY: Pursuant to the provisions of the Privacy Act of 1974 (5 U.S.C. 552a), the National Aeronautics and Space Administration is issuing public notice its proposal to modify a previously noticed system of records and rescind another previously noticed system. This notice publishes details of the proposed updates as set forth below under the caption **SUPPLEMENTARY INFORMATION**.

DATES: Submit comments within 30 calendar days from the date of this publication. The changes will take effect at the end of that period, if no adverse comments are received.

ADDRESSES: Patti F. Stockman, Privacy Act Officer, Office of the Chief Information Officer, National Aeronautics and Space Administration Headquarters, Washington, DC 20546–0001, (202) 358–4787, NASA–PAOfficer@nasa.gov.

FOR FURTHER INFORMATION CONTACT: NASA Privacy Act Officer, Patti F. Stockman, (202) 358–4787, NASA–PAOfficer@nasa.gov.

SUPPLEMENTARY INFORMATION: Pursuant to the provisions of the Privacy Act of 1974, 5 U.S.C. 552a, and as part of its biennial System of Records review, NASA is making the following minor modifications of its system of records Exchange Records on Individuals/NASA 10XROI: Inclusion of a statement of purpose for the system of records; updates of system and subsystem managers; clarification of routine uses; and correction of previous typographical errors. Further, NASA

In accordance with sections 201.16(c) and 207.3 of the rules, each document filed by a party to the investigations must be served on all other parties to the investigations (as identified by either the public or BPI service list), and a certificate of service must be timely filed. The Secretary will not accept a document for filing without a certificate of service.

Authority: These investigations are being conducted under authority of title VII of the Tariff Act of 1930; this notice is published pursuant to section 207.12 of the Commission's rules.

By order of the Commission.

Issued: February 12, 2016.

Lisa R. Barton,

Secretary to the Commission.

[FR Doc. 2016-03434 Filed 2-18-16; 8:45 am]

BILLING CODE 7020-02-P

LIBRARY OF CONGRESS

Copyright Office

[Docket No. 2015-8]

Section 1201 Study: Extension of Comment Period

AGENCY: U.S. Copyright Office, Library of Congress.

ACTION: Extension of comment period.

SUMMARY: The United States Copyright Office is extending the deadlines for the submission of written comments in response to its December 29, 2015 Notice of Inquiry regarding the operation of section 1201 of Title 17.

DATES: Initial written comments are now due no later than 11:59 p.m. Eastern Time on March 3, 2016. Written reply comments are due no later than 11:59 p.m. Eastern Time on April 1, 2016.

ADDRESSES: The Copyright Office is using the regulations.gov system for the submission and posting of public comments in this proceeding. All comments are therefore to be submitted electronically through regulations.gov. Specific instructions for submitting comments are available on the Copyright Office Web site at <http://copyright.gov/policy/1201/comment-submission/>. If electronic submission of comments is not feasible, please contact the Office using the contact information below for special instructions.

FOR FURTHER INFORMATION CONTACT: Regan A. Smith, Associate General Counsel, resm@loc.gov; or Kevin R. Amer, Senior Counsel for Policy and International Affairs, kamer@loc.gov. Each can be reached by telephone at (202) 707-8350.

SUPPLEMENTARY INFORMATION: The United States Copyright Office is undertaking a public study to assess the operation of section 1201 of Title 17. On December 29, 2015, the Office issued a Notice of Inquiry seeking public input on several questions relating to that topic. See 80 FR 81369 (Dec. 29, 2015). To ensure that commenters have sufficient time to respond, the Office is extending the deadline for the submission of initial comments in response to the Notice to March 3, 2016, at 11:59 p.m. Eastern Time, and the deadline for the submission of reply comments to April 1, 2016, at 11:59 p.m. Eastern Time. Please note that in light of the expected time frame for this study, the Office is unlikely to grant further extensions for these comments.

Dated: February 16, 2016.

Maria A. Pallante,

Register of Copyrights, U.S. Copyright Office.

[FR Doc. 2016-03515 Filed 2-18-16; 8:45 am]

BILLING CODE 1410-30-P

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

[Notice: (16-012)]

Notice of Information Collection

AGENCY: National Aeronautics and Space Administration (NASA).

ACTION: Notice of information collection.

SUMMARY: The National Aeronautics and Space Administration, as part of its continuing effort to reduce paperwork and respondent burden, invites the general public and other Federal agencies to take this opportunity to comment on proposed and/or continuing information collections, as required by the Paperwork Reduction Act of 1995 (Pub. L. 104-13, 44 U.S.C. 3506(c)(2)(A)).

DATES: All comments should be submitted within 60 calendar days from the date of this publication.

ADDRESSES: All comments should be addressed to Frances Teel, National Aeronautics and Space Administration, Mail Code JF000, 300 E Streets SW., Washington, DC 20546-0001.

FOR FURTHER INFORMATION CONTACT: Requests for additional information or copies of the information collection instrument(s) and instructions should be directed to Frances Teel, NASA Clearance Officer, NASA Headquarters, 300 E Street SW., JF0000, Washington, DC 20546, (202) 358-2225.

SUPPLEMENTARY INFORMATION:

I. Abstract

NASA hosts/sponsors numerous events on federally owned/leased property which are open to NASA affiliates and members of the public. The events include but are not limited to meetings, conferences, briefings, public outreach activities, tours, focus groups, etc. Visitor access is substantiated by a credentialed NASA sponsor who validates the visitor's need to access a building/area, guest networking services, etc. for a specific event/purpose. Information is collected to validate identity and enable intermittent access to activities.

Currently, visitor registration is accomplished via several electronic and paper processes. The NASA Office of Protective Services is transitioning to a one-NASA process to manage access for visitors with an affiliation less than 30-days.

NASA may collect event registration information to include but not limited to a visitor's name, address, citizenship, biometric data, purpose of visit, the location to be visited, escort/sponsor name with contact data, and preferred meeting/event sessions when options are available. When parking is provided on federal owned/leased space, driver's license information as well as vehicle make/model/tag information will be collected.

When visitors/vendors are permitted to bring equipment and/or event set-up materials such as booths and displays, information will be collected to issue property passes and coordinate equipment/property delivery. Information will also be collected, when applicable, to include other associated requirements such as electrical power needs, internet access, etc.

NASA collects, stores, and secures information from individuals requiring routine and intermittent access in a manner consistent with the Constitution and applicable laws, including the Privacy Act (5 U.S.C. 552a) and the Paperwork Reduction Act.

II. Method of Collection

Electronic.

III. Data

Title: The NASA Visitor Management System for Intermittent Access to NASA Hosted/Sponsored Events and Activities.

OMB Number: 2700-XXXX.

Type of review: Active Information Collection In Use Without OMB Approval.

Affected Public: Individuals.

Estimated Number of Respondents: 400,000.

estimated for an average respondent to respond: Of the approximately 18,000 government law enforcement agencies that are eligible to submit cases, it is estimated that thirty to fifty percent will actually submit cases to ViCAP. The time burden of the respondents is less than 60 minutes per form.

6. *An estimate of the total public burden (in hours) associated with the collection:* 5,000 annual burden hours.

If additional information is required contact: Jerri Murray, Department Clearance Officer, United States Department of Justice, Justice Management Division, Policy and Planning Staff, Two Constitution Square, 145 N Street NE., 3E.405B, Washington, DC 20530.

Dated: March 23, 2016.

Jerri Murray,

Department Clearance Officer for PRA, U.S. Department of Justice.

[FR Doc. 2016-06900 Filed 3-25-16; 8:45 am]

BILLING CODE 4410-02-P

LIBRARY OF CONGRESS

Copyright Office

[Docket Nos. 2015-6, 2015-8]

Software-Enabled Consumer Products Study and Section 1201 Study: Announcement of Public Roundtables

AGENCY: U.S. Copyright Office, Library of Congress.

ACTION: Notice of public roundtables.

SUMMARY: The United States Copyright Office has issued Notices of Inquiry (“NOIs”) announcing separate public studies on software-enabled consumer products and section 1201 of title 17. In addition to soliciting written comments on these issues, the Office is now announcing public roundtables for these studies to provide forums for interested members of the public to address the issues set forth in the NOIs.

DATES AND ADDRESSES: Public roundtables for the above-referenced Copyright Office studies will be held on the dates and at the locations provided below. The roundtables for the two studies are being held on consecutive dates in each location to accommodate parties who may have an interest in attending both.

Software-Enabled Consumer Products Study: For its study on software-enabled consumer products, the Office will hold public roundtables in Washington, DC and San Francisco, CA. The roundtable in Washington will take place on May 18, 2016, at the Library of Congress’s Madison Building, 101 Independence

Avenue SE., Washington, DC 20540, from 9:00 a.m. to approximately 5:00 p.m. The roundtable in San Francisco will take place on May 24, 2016, at Hastings School of Law, 200 McAllister Street, San Francisco, CA 94102, from 9:00 a.m. to approximately 5:00 p.m.

Section 1201 Study: Likewise, for its study on section 1201, the Office will hold public roundtables in Washington, DC and San Francisco, CA. The roundtable in Washington will take place on May 19 and May 20, 2016, at the Library of Congress’s Madison Building, 101 Independence Avenue SE., Washington, DC 20540, from 9:00 a.m. to approximately 5:00 p.m. on the first day, and from 9:00 a.m. to approximately 1:00 p.m. on the second day. The roundtable in San Francisco will take place on May 25 and May 26, 2016, at Hastings School of Law, 200 McAllister Street, San Francisco, CA 94102, from 9:00 a.m. to approximately 5:00 p.m. on the first day, and from 9:00 a.m. to approximately 1:00 p.m. on the second day.

Additional information, including instructions for submitting requests to participate in the roundtables, is available on the Copyright Office Web site at <http://copyright.gov/policy/software/> (software-enabled consumer products) and <http://copyright.gov/policy/1201/> (section 1201). Requests to participate in the roundtables must be received by the Copyright Office by April 18, 2016. If you are unable to access a computer or the internet, please contact the Office using the contact information below for special instructions.

FOR FURTHER INFORMATION CONTACT:

Software-Enabled Consumer Products Study: Sarang V. Damle, Deputy General Counsel, sdam@loc.gov; Catherine Rowland, Senior Advisor to the Register of Copyrights, crowland@loc.gov; or Erik Bertin, Deputy Director of Registration Policy and Practice, ebertin@loc.gov.

Section 1201 Study: Regan A. Smith, Associate General Counsel, resm@loc.gov; or Kevin Amer, Senior Counsel for Policy and International Affairs, kamer@loc.gov.

Each of these persons can be reached by telephone at (202) 707-8350.

SUPPLEMENTARY INFORMATION: The Copyright Office is conducting separate studies concerning software-enabled consumer products and section 1201 of title 17.

Software-Enabled Consumer Products Study

On December 15, 2015, the Copyright Office issued an NOI announcing a study on the role of copyright law with

respect to the design, distribution, and use of consumer products that include embedded software. 80 FR 77668. This study is being done at the request of the United States Senate Committee on the Judiciary. Consistent with the Committee’s request, the focus of the study is on software contained in consumer products; it is not intended to address more general questions about software and copyright.

Section 1201 Study

Enacted in 1998 as part of the Digital Millennium Copyright Act (“DMCA”), section 1201 prohibits the circumvention of technological measures employed by or on behalf of copyright owners to control access to their works (also known as “access controls”), as well as the trafficking in technologies or services that facilitate such circumvention. In addition, section 1201 codifies a triennial rulemaking process through which the Librarian of Congress, upon the recommendation of the Register of Copyrights, can grant exemptions to the prohibition on the circumvention of access controls. The Copyright Office issued an NOI soliciting comments on the operation and effectiveness of section 1201 on December 29, 2015. 80 FR 81369.

Roundtable Subjects of Inquiry

At this time, the Copyright Office is providing notice of its intention to seek further input for these studies through public roundtables to be held on the dates and at the addresses set forth above. The public roundtables will offer an opportunity for interested parties to comment on topics set forth in the NOIs.

For the software-enabled consumer products study, the roundtables at each location will consist of sessions on the following topics: (1) The proper role of copyright in protecting software-enabled consumer products; (2) ownership and contractual issues; (3) fair use; and (4) the first sale doctrine, section 117, and other limitations and exceptions. After the final session, the Office will also provide participants and observers with an opportunity to offer additional comments for the record.

For the section 1201 study, roundtables at each location will consist of sessions on the following topics: (1) The relationship of section 1201 to copyright infringement, consumer issues, and competition; (2) the rulemaking process—evidentiary and procedural issues; (3) the rulemaking process—renewal of previously granted exemptions; (4) the anti-trafficking prohibitions and third-party assistance for permitted circumvention of technological measures; and (5)

permanent exemptions to the prohibition on circumvention. After the final session, the Office will also provide participants and observers with an opportunity to offer additional comments for the record.

Each of the roundtable hearing rooms will have a limited number of seats for participants and observers. Public seating for observers will be provided on a first-come, first-served basis on the days of the roundtables.

Dated: March 23, 2016.

Maria A. Pallante,

Register of Copyrights, U.S. Copyright Office.

[FR Doc. 2016-06925 Filed 3-25-16; 8:45 am]

BILLING CODE 1410-30-P

LIBRARY OF CONGRESS

Copyright Royalty Board

[Docket No. 2008-2 CRB CD 2000-2003 (Phase II)]

Distribution of the 2000, 2001, 2002 and 2003 Cable Royalty Funds

AGENCY: Copyright Royalty Board, Library of Congress.

ACTION: Final distribution order.

SUMMARY: The Copyright Royalty Judges announce the final Phase II distribution of cable royalty funds for the years 2000, 2001, 2002 and 2003 for the Program Suppliers programming category.

DATES: Effective March 28, 2016.

ADDRESSES: The final distribution order also is posted on the Copyright Royalty Board Web site at <http://www.loc.gov/crb>.

FOR FURTHER INFORMATION CONTACT: Kimberly Whittle, Attorney Advisor. Telephone: (202) 707-7658; Email: crb@loc.gov.

SUPPLEMENTARY INFORMATION: The captioned consolidated royalty distribution proceeding concluded on August 14, 2015, when the United States Court of Appeals for the DC Circuit issued a mandate relating to their June 30, 2015, order affirming the distribution shares for claimants in the Program Suppliers category as determined by the Copyright Royalty Judges (Judges). After the mandate, the Judges received filings from Worldwide Subsidy Group dba Independent Producers Group (IPG) and the Motion Picture Association of America (MPAA) contesting the appropriate methodology for distribution of the remaining royalty funds on deposit.

By order dated November 25, 2015, the Judges directed MPAA to provide historical context from which the Judges and the Licensing Division of the

Copyright Office could distribute accurately the funds, taking into account prior partial distributions, fund growth through accrued interest, and deductions for Licensing Division costs. MPAA provided the necessary information on December 7, 2015. The Licensing Division staff provided accounting services to assure accurate distribution in accordance with the Judges' orders.

The Licensing Division calculated that, as of February 17, 2016, the total distribution to IPG for each royalty year should be:

2000	\$617,719
2001	164,203
2002	197,725
2003	125,884
Total	1,105,531

Now, therefore, the Judges hereby order that the Licensing Division make final distribution to IPG from the Program Suppliers category for the years 2000 through 2003, inclusive, in the amounts listed, adjusted if necessary to reflect interest accrued or costs incurred from and after February 17, 2016, to the date of distribution.

The Judges further order that the Licensing Division distribute simultaneously the remaining funds in the Program Suppliers category for royalty years 2000 through 2003, inclusive, to MPAA, adjusted if necessary to reflect interest accrued or costs incurred from and after February 17, 2016.

The Judges further order that IPG and MPAA provide to the Licensing Division all necessary and pertinent information to facilitate the transfer by March 31, 2016.

Dated: March 23, 2016.

Suzanne M. Barnett,
Chief Copyright Royalty Judge.

[FR Doc. 2016-06923 Filed 3-25-16; 8:45 am]

BILLING CODE 1410-72-P

NUCLEAR REGULATORY COMMISSION

[NRC-2016-0001]

Sunshine Act Meeting Notice

DATE: March 28, April 4, 11, 18, 25, May 2, 2016.

PLACE: Commissioners' Conference Room, 11555 Rockville Pike, Rockville, Maryland.

STATUS: Public and Closed.

Week of March 28, 2016

Tuesday, March 29, 2016

9:30 a.m. Briefing on Project Aim (Public Meeting); (Contact: Janelle Jessie: 301-415-6775).

This meeting will be webcast live at the Web address—<http://www.nrc.gov/>.

Wednesday, March 30, 2016

9:30 a.m. Briefing on Security Issues (Closed Ex. 1).

Week of April 4, 2016—Tentative

Tuesday, April 5, 2016

9:30 a.m. Briefing on Threat Environment Assessment (Closed Ex. 1).

Week of April 11, 2016—Tentative

There are no meetings scheduled for the week of April 11, 2016.

Week of April 18, 2016—Tentative

Tuesday, April 19, 2016

9:30 a.m. Meeting with the Organization of Agreement States and the Conference of Radiation Control Program Directors (Public Meeting); (Contact: Paul Michalak: 301-415-5804).

This meeting will be webcast live at the Web address—<http://www.nrc.gov/>.

Week of April 25, 2016—Tentative

There are no meetings scheduled for the week of April 25, 2016.

Week of May 2, 2016—Tentative

There are no meetings scheduled for the week of May 2, 2016.

* * * * *

The schedule for Commission meetings is subject to change on short notice. For more information or to verify the status of meetings, contact Denise McGovern at 301-415-0681 or via email at Denise.McGovern@nrc.gov.

* * * * *

The NRC Commission Meeting Schedule can be found on the Internet at: <http://www.nrc.gov/public-involve/public-meetings/schedule.html>.

* * * * *

The NRC provides reasonable accommodation to individuals with disabilities where appropriate. If you need a reasonable accommodation to participate in these public meetings, or need this meeting notice or the transcript or other information from the public meetings in another format (e.g. braille, large print), please notify Kimberly Meyer, NRC Disability Program Manager, at 301-287-0739, by videophone at 240-428-3217, or by email at Kimberly.Meyer-Chambers@nrc.gov

On August 29, 2016, Creative filed a petition for review and on September 1, 2016, Respondents, Intervenor, and OUII filed replies in opposition to Creative's petition.

The Commission has determined not to review the ID. The investigation is terminated.

The authority for the Commission's determination is contained in section 337 of the Tariff Act of 1930, as amended (19 U.S.C. 1337), and in Part 210 of the Commission's Rules of Practice and Procedure (19 CFR part 210).

By order of the Commission.

Issued: September 21, 2016.

Lisa R. Barton,

Secretary to the Commission.

[FR Doc. 2016-23243 Filed 9-26-16; 8:45 am]

BILLING CODE 7020-02-P

LIBRARY OF CONGRESS

U.S. Copyright Office

[Docket No. 2015-8]

Section 1201 Study: Request for Additional Comments

AGENCY: U.S. Copyright Office, Library of Congress.

ACTION: Notice of Inquiry.

SUMMARY: The United States Copyright Office is requesting additional written comments in connection with its ongoing study on the operation of the statutory provisions regarding the circumvention of copyright protection systems. This request provides an opportunity for interested parties to address certain issues raised by various members of the public in response to the Office's initial Notice of Inquiry.

DATES: Written comments must be received no later than 11:59 p.m. Eastern Time on October 27, 2016. Written reply comments must be received no later than 11:59 p.m. Eastern Time on November 16, 2016.

ADDRESSES: The Copyright Office is using the *regulations.gov* system for the submission and posting of public comments in this proceeding. All comments are therefore to be submitted electronically through *regulations.gov*. Specific instructions for submitting comments are available on the Copyright Office Web site at <http://copyright.gov/policy/1201/commentsubmission/>. If electronic submission of comments is not feasible, please contact the Office using the contact information below for special instructions.

FOR FURTHER INFORMATION CONTACT: Kevin R. Amer, Senior Counsel for Policy and International Affairs, by email at kamer@loc.gov or by telephone at 202-707-8350; or Regan A. Smith, Associate General Counsel, by email at resm@loc.gov or by telephone at 202-707-8350.

SUPPLEMENTARY INFORMATION:

I. Background

At the request of the Ranking Member of the House Committee on the Judiciary, the Copyright Office is conducting a study to assess the operation of section 1201 of title 17. In December 2015, the Office issued a Notice of Inquiry identifying several aspects of the statutory and regulatory framework that the Office believes are ripe for review, and inviting public comment on those and any other pertinent issues.¹ The Notice provided for two rounds of written comments. In response, the Office received sixty-eight initial comments and sixteen reply comments.² The Office then announced public roundtables on the topics addressed in the Notice and comments.³ These sessions, held in Washington, DC and San Francisco, California in May 2016, involved participation by more than thirty panelists, representing a wide range of interests and perspectives. Transcripts of the roundtables are available at <http://copyright.gov/policy/1201/>, and video recordings will be available at that location at a later date.

In the written comments and during the roundtables, parties expressed a variety of views regarding whether legislative amendments to section 1201 may be warranted. Among other suggested changes, commenters discussed proposals to update the statute's permanent exemption framework and to amend the anti-trafficking provisions to permit third-party assistance with lawful circumvention activities. At this time, as explained below, the Office is interested in receiving additional stakeholder input on particular aspects of those proposals. In addition, parties submitted numerous and varied views regarding the triennial rulemaking process under section 1201(a)(1)(C); while the Office continues to thoroughly evaluate these comments in conducting its study, this

¹ Section 1201 Study: Notice and Request for Public Comment, 80 FR 81369 (Dec. 29, 2015).

² All comments may be accessed from the Copyright Office Web site at <http://copyright.gov/policy/1201/> by clicking the "Public Comments" tab, followed by the "Comments" link.

³ Software-Enabled Consumer Products Study and Section 1201 Study: Announcement of Public Roundtables, 81 FR 17206 (Mar. 28, 2016).

second Notice of Inquiry does not specifically address those issues.

A party choosing to respond to this Notice of Inquiry need not address every topic below, but the Office requests that responding parties clearly identify and separately address those subjects for which a response is submitted. Parties also are invited to address any other pertinent issues that the Office should consider in conducting its study.

II. Subjects of Inquiry

1. Proposals for New Permanent Exemptions

a. *Assistive Technologies for Use by Persons Who Are Blind, Visually Impaired, or Print Disabled.* The written comments and roundtable discussions revealed widespread support for adoption of a permanent exemption to facilitate access to works in electronic formats by persons who are blind, visually impaired, or print disabled. The Office invites comment regarding specific provisions that commenters believe should be included in legislation proposing such an exemption. For example, the exemption for this purpose granted in the 2015 rulemaking permits circumvention of access controls applied to literary works distributed electronically, where the access controls "either prevent the enabling of read-aloud functionality or interfere with screen readers or other applications or assistive technologies."⁴ The exemption applies in the following circumstances:

(i) When a copy of such a work is lawfully obtained by a blind or other person with a disability, as such a person is defined in 17 U.S.C. 121; provided, however, that the rights owner is remunerated, as appropriate, for the price of the mainstream copy of the work as made available to the general public through customary channels, or

(ii) When such work is a nondramatic literary work, lawfully obtained and used by an authorized entity pursuant to 17 U.S.C. 121.⁵

The Office is interested in commenters' views on whether this language would be appropriate for adoption as a permanent exemption, or whether there are specific changes or additional provisions that Congress may wish to consider.

b. *Device Unlocking.* Some commenters advocated the adoption of a permanent exemption to permit circumvention of access controls on wireless devices for purposes of

⁴ Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, 80 FR 65944, 65950 (Oct. 28, 2015) ("2015 Final Rule").

⁵ *Id.*

“unlocking” such devices—*i.e.*, enabling them to connect to the network of a different mobile wireless carrier. Since 2006, the rulemaking process has involved consideration of exemptions permitting unlocking of cellphones, and in the 2015 rulemaking, pursuant to Congress’s direction,⁶ the Register considered whether to extend the exemption to other categories of wireless devices. At the conclusion of the 2015 proceeding, the Librarian, upon the Register’s recommendation, adopted an unlocking exemption that applies to used wireless devices of the following types:

- (A) Wireless telephone handsets (*i.e.*, cellphones);
- (B) All-purpose tablet computers;
- (C) Portable mobile connectivity devices, such as mobile hotspots, removable wireless broadband modems, and similar devices; and
- (D) Wearable wireless devices designed to be worn on the body, such as smartwatches or fitness devices.⁷

The Office invites comment on whether an unlocking exemption would be appropriate for adoption as a permanent exemption or whether such activities are more properly considered as part of the triennial rulemaking. For commenters who favor consideration of a permanent exemption, the Office is interested in commenters’ views on whether the language of the 2015 unlocking exemption would be appropriate for adoption as a permanent exemption, or whether there are specific changes or additional provisions that Congress may wish to consider.

c. Computer Programs. Several commenters expressed concern over the scope of section 1201 in the context of copyrighted computer programs that enable the operation of a machine or device. These commenters suggested that by prohibiting the circumvention of access controls on such programs, the statute prevents the public from engaging in legitimate activities, such as the repair of automobiles or the use of third-party device components, that seem far removed from the protection of creative expression that section 1201 was intended to address. To respond to this concern, some commenters argued that Congress should establish a statutory exemption that would permit circumvention of technological protection measures (“TPM”s) controlling access to such software in appropriate circumstances. The Office is interested in additional views on such proposals.

⁶ See Unlocking Consumer Choice and Wireless Competition Act, Public Law 113–144, sec. 2(b), 128 Stat. 1751, 1751 (2014).

⁷ 2015 Final Rule, 80 FR at 65952.

For purposes of focusing the discussion, the Office invites comment on whether there are specific formulations of such an exemption that could serve as helpful starting points for further consideration of legislation. For example, Congress could consider adoption of a permanent exemption for purposes of diagnosis, maintenance, and repair. Such legislation could provide that a person who has lawfully obtained the right to use a computer program may circumvent a TPM controlling access to that program, so long as the circumvention is undertaken for purposes of diagnosis, maintenance, or repair. Are existing legal doctrines or statutes, such as the current language addressing machine maintenance and repair in section 117(c),⁸ the doctrine of repair and reconstruction in patent law,⁹ case law addressing refurbishment under trademark law,¹⁰ or “right to repair” bills introduced into various state legislatures,¹¹ helpful to inform the appropriate scope of repair in this context? To what extent would the combination of such an exemption with the current language of 1201(f)¹²—which allows circumvention for purposes of facilitating interoperability under certain circumstances—adequately address users’ concerns regarding section 1201’s impact on consumer activities?

Please also comment upon whether it would be advisable to consider, in addition to diagnosis, maintenance, or repair, an exemption to explicitly permit circumvention for purposes of engaging in any lawful modification of a computer program. Such an exemption could allow circumventions undertaken to make non-infringing adaptations, including, for example, uses permitted under section 117(a) and/or the fair use doctrine.¹³ Please address whether this broader formulation would, or would not, be

⁸ 17 U.S.C. 117(c).

⁹ See *Aro Mfg. Co. v. Convertible Top Replacement Co.*, 365 U.S. 336 (1961); see also *Aro Mfg. Co. v. Convertible Top Replacement Co.*, 377 U.S. 476 (1964).

¹⁰ See *Champion Spark Plug Co. v. Sanders*, 331 U.S. 125 (1947); see also *Karl Storz Endoscopy-America, Inc. v. Fiber Tech Med., Inc.*, 4 F. App’x 128, 131–32 (4th Cir. 2001) (“[T]he Lanham Act does not apply in the narrow category of cases where a trademarked product is repaired, rebuilt or modified at the request of the product’s owner,” so long as “the owner is not, to the repairer’s knowledge, merely obtaining modifications or repairs for purposes of resale.”).

¹¹ See, e.g., H.R. 3383, 189th Gen. Ct. (Mass. 2015); S. 3998B, 2015 Leg., Reg. Sess. (N.Y. 2015); Assemb. 6068A, 2015 Leg., Reg. Sess. (N.Y. 2015); Legis. B. 1072, 104th Leg., 2d Sess. (Neb. 2016); H.R. 1048, 89th Leg., Reg. Sess. (Minn. 2015); see also Mass. Gen. Laws ch. 93K (2013).

¹² 17 U.S.C. 1201(f).

¹³ See 17 U.S.C. 117(a), 107.

likely to result in economically harmful unauthorized uses of copyrighted works.

With either formulation, would concerns over enabling unauthorized uses be mitigated by conditioning the exemption on the circumventing party not engaging in any unauthorized use of a copyrighted work other than the accessed computer program, or by limiting the exemption to computer programs that are “not a conduit to protectable expression”—*i.e.*, those that do “not in turn create any protected expression” when executed?¹⁴ In the United Kingdom, for example, the prohibition on circumvention specifically excludes TPMs applied to computer programs, but does apply in at least some circumstances where copyrighted content is generated by a computer program (*e.g.*, graphical content in video games).¹⁵ The Office is particularly interested in any information or perspectives on the impact of the UK law and how operating under it contrasts or not with the U.S. experience. Alternatively, should the exemption be limited to computer programs in particular categories of devices?

The Office is interested in commenters’ views on the advisability of these various approaches. Which of these models, if any, would facilitate users’ ability to engage in permissible uses of software, while preserving congressional intent in supporting new ways of disseminating copyrighted materials to users?¹⁶ Responding parties are also encouraged to suggest alternate formulations, keeping in mind the Office’s goal of focusing discussion on this topic.

d. Obsolete Technologies. In prior rulemakings, the Copyright Office and the Librarian of Congress have considered multiple petitions to permit circumvention of an access control mechanism protecting a given class of works that fails to permit access because of malfunction, damage, or obsolescence.¹⁷ The Office has

¹⁴ *Lexmark Int’l, Inc. v. Static Control Components, Inc.*, 387 F.3d 522, 548 (6th Cir. 2004).

¹⁵ Copyright, Designs and Patents Act 1988, c. 48, § 296ZA (UK); see *Nintendo Co. Ltd. v. Playables Ltd.* [2010] EWHC 1932 (Ch) (Eng.) (construing related anti-trafficking provision).

¹⁶ See 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 4th, 1998, at 6 (Comm. Print 1998).

¹⁷ See, e.g., Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, 65 FR 64556, 64564–66, 64574 (Oct. 27, 2000) (“2000 Recommendation and Final Rule”); Exemption to Prohibition on Circumvention of Copyright Protection Systems for

recommended, and the Librarian has adopted, multiple exemptions after finding that the definition of “obsolete” in section 108 captures the circumstances under which such an exemption was justified, *i.e.*, where the access control “is no longer manufactured or is no longer reasonably available in the commercial marketplace.”¹⁸ The Office is interested in commenters’ views on whether Congress should consider a legislative amendment to permit circumvention of such faulty access controls, or whether there are other specific changes or additional provisions that Congress may wish to consider to address this issue.

e. International Considerations. In addition to the questions on specific proposals provided above, please discuss the interaction of these proposals with existing international obligations of the United States, including free trade agreements.

2. Proposed Amendments to Existing Permanent Exemptions

Some parties expressed the view that the existing permanent exemptions for security testing, encryption research, and reverse engineering¹⁹ do not adequately accommodate good-faith research into malfunctions, security flaws, and vulnerabilities in computer programs.²⁰ The Office invites comment on whether legislation to address this concern may be warranted, and if so, on specific changes that should be considered. In particular, the Office

requests commenters’ views on the following topics:

a. In the 2015 rulemaking, the Register recommended, and the Librarian of Congress adopted, an exemption that permits circumvention of TPMs controlling access to computer programs in the following circumstances:

(i) . . . the circumvention is undertaken on a lawfully acquired device or machine on which the computer program operates solely for the purpose of good-faith security research and does not violate any applicable law, including without limitation the Computer Fraud and Abuse Act of 1986, as amended and codified in title 18, United States Code; . . . and the device or machine is one of the following:

(A) A device or machine primarily designed for use by individual consumers (including voting machines);

(B) A motorized land vehicle; or

(C) A medical device designed for whole or partial implantation in patients or a corresponding personal monitoring system, that is not and will not be used by patients or for patient care.

(ii) For purposes of this exemption, “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 a controlled 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.²¹

The Office is interested in commenters’ views on whether this language would be appropriate for adoption as a permanent exemption, or whether there are specific changes or additional provisions that Congress may wish to consider.

b. The exemption for security testing under section 1201(j) is limited to activities undertaken “with the authorization of the owner or operator of [the] computer, computer system, or computer network.”²² In the 2015 rulemaking, the Register noted that in some cases “it may be difficult to identify the relevant owner” for purposes of this requirement and that “it may not be feasible to obtain authorization even where there is an identifiable owner.”²³ Echoing those concerns, one group of commenters argued that the authorization requirement should be eliminated, while another urged Congress to provide

greater clarity in situations involving multiple owners. Please assess whether legislation may be appropriate in this area and discuss any specific legislative proposals that you believe should be considered.

c. Section 1201(j) provides a two-factor framework to determine whether a person qualifies for the security testing exemption.²⁴ In the 2015 rulemaking, the Register noted that these factors “would appear to be of uncertain application to at least some” security research activities.²⁵ Some commenters advocated the removal of one or both of these factors from the statute.²⁶ Please assess the advisability of such changes, or discuss any other specific legislative proposals you believe should be considered.

d. The exemption for encryption research in section 1201(g) is similarly limited to activities qualifying under a four-factor framework that includes making “a good faith effort to obtain authorization” before the circumvention.²⁷ In the 2015 rulemaking, the Register noted that meeting these requirements “may not always be feasible” for researchers.²⁸ Please assess whether legislation may be appropriate in this area and discuss any specific legislative proposals that you believe should be considered.

e. Section 1201(f) permits circumvention for the “sole purpose” of identifying and analyzing elements of computer programs necessary to achieve interoperability.²⁹ In the 2015 rulemaking, the Register noted that “section 1201(f)(1) is limited to circumvention solely for the identification and analysis of program elements necessary for interoperability, and does not address circumvention after that analysis has been performed.”³⁰ Please assess whether legislation may be appropriate in this area and discuss any specific legislative proposals that you believe should be considered.

3. Anti-Trafficking Provisions

Commenters offered differing views regarding the role of the anti-trafficking provisions under sections 1201(a)(2) and 1201(b). User groups expressed

²⁴ 17 U.S.C. 1201(j)(3).

²⁵ 2015 Recommendation at 309.

²⁶ The proposed Breaking Down Barriers to Innovation Act of 2015 would eliminate the two-factor framework, as well as the multifactor framework under section 1201(g)(3). H.R. 1883, 114th Cong. sec. 3(c)(3), 3(e)(2) (2015); S. 990, 114th Cong. sec. 3(c)(3), 3(e)(2) (2015).

²⁷ 17 U.S.C. 1201(g)(2)(C).

²⁸ 2015 Recommendation at 307.

²⁹ 17 U.S.C. 1201(f).

³⁰ 2015 Recommendation at 337 n.2295.

Access Control Technologies, Final Rule, 68 FR 62011, 62013–16 (Oct. 31, 2003) (“2003 Final Rule”); Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, 71 FR 68472, 68474–75, 68480 (Nov. 27, 2006) (“2006 Final Rule”); Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, 75 FR 43825, 43833–34, 43839 (July 27, 2010) (“2010 Final Rule”); 2015 Final Rule, 80 FR at 65955, 65961.

¹⁸ 17 U.S.C. 108(c); *see, e.g.*, 2000 Recommendation and Final Rule, 65 FR at 64565–66; Recommendation of the Register of Copyrights in RM 2002–4; Rulemaking on Exemptions from Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies 40 (Oct. 27, 2003); 2003 Final Rule, 68 FR at 62013–14; Recommendation of the Register of Copyrights in RM 2005–11; Rulemaking on Exemptions from Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies 36 & n.105 (Nov. 17, 2006); 2006 Final Rule, 71 FR at 68475.

¹⁹ 17 U.S.C. 1201(f), (g), (j).

²⁰ Similarly, in the 2015 rulemaking, the Register noted that section 1201(j) “does not seem sufficiently robust in light of the perils of today’s connected world.” U.S. Copyright Office, Section 1201 Rulemaking: Sixth Triennial Proceeding to Determine Exemptions to the Prohibition on Circumvention 3 (2015), <http://copyright.gov/1201/2015/registerrecommendation.pdf> (“2015 Recommendation”).

²¹ 2015 Recommendation at 319–20; 2015 Final Rule, 80 FR at 65956.

²² 17 U.S.C. 1201(j)(1).

²³ 2015 Recommendation at 309.

concern that, to the extent these provisions prohibit third parties from providing assistance to beneficiaries of exemptions, or prohibit the making and distribution of necessary tools, they undermine beneficiaries' practical ability to engage in the permitted conduct. Copyright owners, however, cautioned against amendment of the anti-trafficking provisions, arguing that because circumvention tools may be used for lawful and unlawful purposes alike, it would be impossible to ensure that tools manufactured and distributed pursuant to an exemption, once available in the marketplace, would be employed solely for authorized uses. The Office is interested in receiving additional views on this topic, and specifically invites comment on the following issues:

a. A few parties argued that section 1201 contains an implied right permitting a beneficiary of a statutory or administrative exemption to make a tool for his or her own use in engaging in the permitted circumvention. What are commenters' views regarding this interpretation of the statute? To what extent, if any, does the statutory prohibition on the "manufacture" of circumvention tools affect the analysis?³¹ If such a right is not currently implied, or the question is uncertain, should Congress consider amending the statute to expressly permit such activity, while maintaining the prohibition against trafficking in such tools?

b. Some parties suggested that, in certain circumstances, third-party assistance may fall outside the scope of the anti-trafficking provisions and therefore may be permissible under current law. What are commenters' views regarding this interpretation of the statute? Are there forms of third-party assistance that do not qualify as a "service" within the meaning of sections 1201(a)(2) and 1201(b)(1)? If so, what considerations are relevant to this analysis?

Dated: September 21, 2016.

Maria A. Pallante,

Register of Copyrights, U.S. Copyright Office.

[FR Doc. 2016-23167 Filed 9-26-16; 8:45 am]

BILLING CODE 1410-30-P

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

[Notice: (16-068)]

NASA International Space Station Advisory Committee; Meeting

AGENCY: National Aeronautics and Space Administration (NASA).

ACTION: Notice of meeting.

SUMMARY: In accordance with the Federal Advisory Committee Act, Public Law 92-463, as amended, the National Aeronautics and Space Administration announces a meeting of the NASA International Space Station (ISS) Advisory Committee. The purpose of the meeting is to review all aspects related to the safety and operational readiness of the ISS, and to assess the possibilities for using the ISS for future space exploration.

DATES: Monday, October 31, 2016, 2:00-3:00 p.m., Local Time.

ADDRESSES: NASA Headquarters, Glennan Conference Room (1Q39), 300 E Street SW., Washington, DC 20546.

Note: 1Q39 is located on the first floor of NASA Headquarters.

FOR FURTHER INFORMATION CONTACT: Mr. Patrick Finley, Office of International and Interagency Relations, (202) 358-5684, NASA Headquarters, Washington, DC 20546-0001.

SUPPLEMENTARY INFORMATION: This meeting will be open to the public up to the seating capacity of the room. This meeting is also accessible via teleconference. To participate telephonically, please contact Mr. Finley at (202) 358-5684 before 4:30 p.m., Local Time, October 26, 2016. You will need to provide your name, affiliation, and phone number.

Attendees will be requested to sign a register and to comply with NASA security requirements, including the presentation of a valid picture ID to Security before access to NASA Headquarters. Due to the Real ID Act, Public Law 109-13, any attendees with driver's licenses issued from non-compliant states/territories must present a second form of ID. [Federal employee badge; passport; active military identification card; enhanced driver's license; U.S. Coast Guard Merchant Mariner card; Native American tribal document; school identification accompanied by an item from LIST C (documents that establish employment authorization) from the "List of the Acceptable Documents" on Form I-9]. Non-compliant states/territories are: American Samoa, Minnesota, Missouri, and Washington. Foreign nationals attending this meeting will be required

to provide a copy of their passport and visa in addition to providing the following information no less than 10 working days prior to the meeting: Full name; gender; date/place of birth; citizenship; passport information (number, country, telephone); visa information (number, type, expiration date); employer/affiliation information (name of institution, address, country, telephone); title/position of attendee; and home address to Mr. Finley via email at patrick.t.finley@nasa.gov or by telephone at (202) 358-5684. U.S. citizens and Permanent Residents (Green Card holders) can provide full name and citizenship status 3 working days prior to the meeting to Mr. Finley. It is imperative that the meeting be held on this date to accommodate the scheduling priorities of the key participants.

Patricia D. Rausch,

*Advisory Committee Management Officer,
National Aeronautics and Space Administration.*

[FR Doc. 2016-23242 Filed 9-26-16; 8:45 am]

BILLING CODE 7510-13-P

NATIONAL SCIENCE FOUNDATION

Agency Information Collection Activities: Comment Request

AGENCY: National Science Foundation.

ACTION: Submission for OMB review; comment request.

SUMMARY: The National Science Foundation (NSF) has submitted the following information collection requirement to OMB for review and clearance under the Paperwork Reduction Act of 1995, Public Law 104-13. This is the second notice for public comment; the first was published in the **Federal Register** at 81 FR 36962, and no comments were received. NSF is forwarding the proposed renewal submission to the Office of Management and Budget (OMB) for clearance simultaneously with the publication of this second notice. The full submission (including comments) may be found at: <http://www.reginfo.gov/public/do/PRAMain>. Comments regarding (a) whether the collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility; (b) the accuracy of the agency's estimate of burden including the validity of the methodology and assumptions used; (c) ways to enhance the quality, utility and clarity of the information to be collected; (d) ways to minimize the burden of the collection of information on those who are to

³¹ See 17 U.S.C. 1201(a)(2), (b)(1).

APPENDIX B **COMMENTING PARTIES AND
ROUNDTABLE PARTICIPANTS**

**Parties Who Submitted Initial Comments in Response
to the December 29, 2015 Notice of Inquiry**

1. ACM US Public Policy Council
2. ACT | The App Association
3. Alliance of Automobile Manufacturers
4. American Association of Law Libraries
5. American Foundation for the Blind
6. American Intellectual Property Law Association
7. Anderson, Marjorie
8. Anonymous, Anonymous
9. Anonymous, Brandon
10. Association of American Publishers, Motion Picture Association of America & Recording Industry Association of America
11. Association of American Universities, American Council on Education, Association of Public and Land-Grant Universities & Educause 1
12. Authors Alliance
13. Auto Care Association 1
14. Brickel, Joshua
15. BSA | The Software Alliance
16. Center for Democracy & Technology
17. Competitive Carriers Association
18. Consumer Technology Association
19. Consumers Union
20. Copyright Alliance
21. Cyberlaw Clinic at Harvard Law School
22. Decherney, Peter

23. Devorah, Carrie
24. DIYAbility
25. Dulaney, John
26. DVD Copy Control Association & Advanced Access Content System Licensing Administrator, LLC
27. Electronic Frontier Foundation
28. Entertainment Software Association
29. Freeman, Jay
30. Ganivet, Nicolas
31. Howes, Timothy
32. Hunt, Otto
33. Hunt, Peter
34. iFixit
35. Institute of Scrap Recycling Industries, Inc.
36. International Documentary Association, Film Independent & Kartemquin Educational Films
37. Kernochan Center for Law, Media and the Arts
38. Knowledge Ecology International
39. Koberidze, Maryna
40. Learning Disabilities Association of America
41. Library Copyright Alliance
42. Massachusetts Institute of Technology Libraries, Massachusetts Institute of Technology Press & Massachusetts Institute of Technology Office of Digital Learning
43. Microsoft Corporation
44. Mozilla
45. New America's Open Technology Institute
46. New Media Rights

47. Olivo, Peter
48. Organization for Transformative Works
49. Oster, David
50. Owners' Rights Initiative
51. Pearson, Timothy
52. Public Knowledge
53. R Street Institute
54. R Street Institute, FreedomWorks & Niskanen Center
55. Rapid7, Bugcrowd & HackerOne
56. Robbins, Rico
57. Rocha, Matias
58. Romeo, Dominic
59. Silas, Shelia
60. Society of American Archivists
61. Software and Information Industry Association 1
62. Static Control Components, Inc. 1
63. Starelikemckeehen Poker Club
64. University of Virginia Library
65. USC Intellectual Property and Technology Law Clinic
66. Westbay, Michael
67. Yeates, Nick
68. Ymous, Anon

**Parties Who Submitted Reply Comments in Response
to the December 29, 2015 Notice of Inquiry**

1. Alliance of Automobile Manufacturers
2. American Automobile Association
3. Association of American Publishers, Motion Picture Association & Recording Institute Association of America
4. Blocher-Smith, Ethan
5. Copyright Alliance
6. Decherney, Peter
7. Duan, Charles
8. DVD Copy Control Association & Advanced Access Content System Licensing Administrator, LLC
9. Electronic Frontier Foundation
10. Entertainment Software Association
11. International Association of Scientific Technical and Medical Publishers
12. International Documentary Association, Film Independent, Kartemquin 1 Filmmaker Project, Indie Caucus, The National Alliance for Media Arts and Culture, New Media Rights & Women in Film & Video
13. Library Copyright Alliance
14. Public Knowledge
15. Software and Information Industry Association
16. USC Intellectual Property and Technology Law Clinic

**Parties Who Submitted Additional Comments in Response
to the September 27, 2016 Notice of Inquiry**

1. American Association of Law Libraries
2. American Foundation for the Blind, American Council of the Blind, National Federation of the Blind, Learning Ally & Samuelson-Glushko Technology Law & Policy Clinic
3. Anonymous, Anonymous
4. Association of American Publishers, Entertainment Software Association, Motion Picture Association of America & Recording Institute Association of America
5. Association of Equipment Manufacturers & Equipment Dealers Association
6. Author Services, Inc.
7. Authors Alliance
8. Auto Care Association
9. BSA | The Software Alliance
10. Center for Democracy & Technology
11. CERT Coordination Center
12. Cohen, Misha
13. Competitive Carriers Association
14. Consumer Technology Association
15. Copyright Alliance
16. DVD Copy Control Association & Advanced Access Content System Licensing Administrator, LLC
17. Ehrhart, Brian
18. Electronic Frontier Foundation
19. Eshom, Jeff
20. Flit, Mike 1

21. Free Software Foundation
22. Hawley, Andy
23. Institute of Scrap Recycling Industries, Inc.
24. International Imaging Technology Council & Static Control Components, Inc.
25. Izquierdo, Cecilio
26. Josephs, John
27. Kalfus, Eleni
28. Library Copyright Alliance
29. Maciulski, Victoria
30. Matthews, Edward
31. Motor & Equipment Manufacturers Association
32. Mozilla
33. Oeth, Michael
34. Owners' Rights Initiative
35. Public Knowledge
36. Rapid7, Bugcrowd, HackerOne & Luta Security
37. Repair Association & iFixit
38. Schechter, Michael
39. Security Researchers
40. Society of American Archivists
41. Software and Information Industry Association 1
42. Software Preservation Network
43. University Library of the University of Illinois at Urbana-Champaign

**Parties Who Submitted Reply Comments in Response
to the September 27, 2016 Notice of Inquiry**

1. Association of American Publishers, Entertainment Software Association, Motion Picture Association of America & Recording Institute Association of America
2. Auto Care Association
3. Consumers Union
4. Copyright Alliance
5. DVD Copy Control Association & Advanced Access Content System Licensing Administrator, LLC
6. Electronic Frontier Foundation
7. Horton, Michael
8. Kenney, Kevin
9. Kernochan Center for Law, Media and the Arts
10. Lu, Yifan
11. New York Intellectual Property Law Association
12. Public Knowledge
13. Repair Association & iFixit
14. Software and Information Industry Association 1

**Participants in the Washington, DC Hearings
(May 19–20, 2016)**

1. Adler, Allan (Association of American Publishers)
2. Band, Jonathan (Library Copyright Alliance)
3. Besek, June M. (Kernochan Center for Law, Media & the Arts)
4. Butler, Brandon (University of Virginia Library)
5. Castillo, Sofia (Association of American Publishers)
6. Cazares, Gabe (National Federation of the Blind)
7. Cox, Krista L. (Association of Research Libraries)
8. Decherney, Peter (University of Pennsylvania)
9. Dow, Troy (The Walt Disney Company)
10. Geiger, Harley (Rapid7)
11. Goldman, Andrew (Knowledge Ecology International)
12. Greene, Robyn (New America's Open Technology Institute)
13. Greenstein, Seth (Auto Care Association)
14. Koberidze, Maryna (LL.M. Graduate (IP Law))
15. Kupferschmid, Keith (Copyright Alliance)
16. Love, James (Knowledge Ecology International)
17. Lowe, Aaron (Auto Care Association)
18. Manners, Derek (National Federation for the Blind)
19. McClure, Sam (Institute of Scrap Recycling Industries, Inc.)
20. Mohr, Chris (Software & Information Industry Association)
21. Panjwani, Raza (Public Knowledge)
22. Perry, David M. (Blank Rome LLP)
23. Pierre-Louis, Stanley (Entertainment Software Association)

24. Schwartz, Robert S. (Consumer Technology Association)
25. Sheffner, Ben (Motion Picture Association of America)
26. Slover, George P. (Consumers Union)
27. Turnbull, Bruce H. (DVD Copy Control Association & Advanced Access Licensing Administration, LLC)
28. Tushnet, Rebecca (Organization for Transformative Works)
29. Weissenberg, Brian (Institute of Scrap Recycling Industries, Inc.)
30. Williams, Matthew (Association of American Publishers, Motion Picture Association of America & Recording Industry Association of America)
31. Zuck, Jonathan (ACT | The App Association)

**Participants in the San Francisco, CA Hearings
(May 25, 2016)**

1. Chertkof, Susan (Recording Industry Association of America)
2. Gellis, Cathy (Digital Age Defense)
3. Golant, Ben (Entertainment Software Association)
4. LaBarre, Scott (National Federation of the Blind)
5. Lerner, Jack I. (International Documentary Association, Film Independent & Kartemquin Educational Films)
6. McClure, Sam (American Federation for the Blind)
7. Metalitz, Steve (Association of American Publishers, Motion Picture Association of America & Recording Industry Association of America)
8. Quinn, Brian (American Foundation for the Blind)
9. Reed, Chris (Fox Entertainment Group)
10. Riley, Chris (Mozilla)
11. Samuelson, Pamela (UC Berkeley School of Law)
12. Sheffner, Ben (Motion Picture Association of America)
13. Stoltz, Mitch (Electronic Frontier Foundation)
14. Wiens, Kyle (iFixit & Repair.org)
15. Wolfe, Michael (Authors Alliance)

APPENDIX C ABBREVIATIONS

Abbreviations

AAA	American Automobile Association
AALL	American Association of Law Libraries
AAP	Association of American Publishers
AAP, MPAA & RIAA	Association of American Publishers, Motion Picture Association of America, Inc. & Recording Industry Association of America
AAP, ESA, MPAA & RIAA	Association of American Publishers, Entertainment Software Association, Motion Picture Association of America, Inc. & Recording Industry Association of America
AAU, ACE, APLU & EDUCAUSE	Association of American Universities, American Council on Education, Association of Public and Land-Grant Universities & EDUCAUSE
ACT	ACT The App Association
AEM & EDA	Association of Equipment Manufacturers & Equipment Dealers Association
AFB	American Foundation for the Blind
AIPLA	American Intellectual Property Law Association
Auto Alliance	Alliance of Automobile Manufacturers
Auto Care	Auto Care Association
BSA	BSA The Software Alliance
CDT	Center for Democracy & Technology
CERT	CERT Coordination Center
CTA	Consumer Technology Association
Cyberlaw Clinic	Cyberlaw Clinic at Harvard Law School
DVD CCA & AACSLA	DVD Copy Control Association & Access Content System Licensing Administrator, LLC
EFF	Electronic Frontier Foundation

ESA	Entertainment Software Association
IPT USC	USC Intellectual Property and Technology Law Clinic
ISRI	Institute of Scrap Recycling Industries, Inc.
Joint Filmmakers I	International Documentary Association, Film Independent & Kartemquin Educational Films
Joint Filmmakers II	International Documentary Association, Film Independent, Kartemquin Educational Films, Independent Filmmaker Project, Indie Caucus, The National Alliance for Media Arts and Culture, New Media Rights & Women in Film and Video
KEI	Knowledge Ecology International
Kernochan Center	Kernochan Center for Law, Media and the Arts at Columbia Law School
LCA	Library Copyright Alliance
LDAA	Learning Disabilities Association of America
MEMA	Motor and Equipment Manufacturers Association
Microsoft	Microsoft Corporation
MIT	Massachusetts Institute of Technology Libraries, Massachusetts Institute of Technology Press & Massachusetts Institute of Technology Office of Digital Learning
MPAA	Motion Picture Association of America, Inc.
NMR	New Media Rights
NYIPLA	The New York Intellectual Property Law Association
ORI	Owners' Rights Initiative
OTI	New America's Open Technology Institute
OTW	Organization for Transformative Works
RIAA	Recording Industry Association of America
SAA	Society of American Archivists
Security Researchers	Andrea Matwyshyn, Steve Bellovin, Matt Blaze, Alex Halderman & Nadia Heninger

SIIA Software and Information Industry Association

USACM ACM U.S. Public Policy Council

