

BEFORE THE SUBCOMMITTEE ON INTELLECTUAL PROPERTY
COMMITTEE ON THE JUDICIARY
UNITED STATES SENATE

Are Reforms to Section 1201 Needed and Warranted?

Testimony of Seth D. Greenstein, Constantine Cannon LLP

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Chairman Tillis, Ranking Member Coons, and Members of the Subcommittee:

Thank you for inviting me to testify today concerning the strengths and shortfalls of Section 1201, addressing circumvention of technological protection measures used to protect copyrighted works. Although the views I present today are my own, they are informed by my experiences over the last 25 years representing clients with respect to the development and licensing of technological protection measures, and the operation of Section 1201 in the marketplace and the courts. Some of my clients have benefitted from Section 1201, as Congress envisioned. Others have sought and obtained exemptions in the Section 1201 Triennial Review process, as Congress intended.

But regrettably, some of my clients have been unfairly harmed by abuses of Section 1201 to stifle competition for non-copyrightable products—outcomes that Congress likely had not foreseen in 1998. Congress intended Section 1201 to protect copyrights, not business models. The Triennial Review process offers incomplete relief from these abuses; even the courts fall short in their ability to rectify the harm caused by DMCA misuse.

My testimony first recounts some historical background to the Section 1201 anti-circumvention provisions, and then provides examples of how Section 1201 has been improperly leveraged for anticompetitive purposes. In the final section, I suggest reforms to Section 1201 that would ameliorate such abuses while preserving Congress' core intentions. In summary:

- Congress should allow the Librarian to make exemptions permanent. Any exemption the Librarian has twice approved should presumptively continue, as after six years such practices are likely to be unobjectionable. As a presumption, any proponent could seek to expand it; and any opponent could seek to limit or eliminate it.
- Second, to enable consumers and small businesses to competitively repair consumer products with embedded software, Congress should allow them to access the means to circumvent. An exemption to circumvent does not guarantee the ability to do so. Accordingly, Congress should amend Section 1201 so that Sections 1201(a)(2) and (b) shall not apply to any person that manufactures or distributes the means to circumvent as used in support of a granted exemption for the purpose of enabling lawful repair of products whose functions are controlled by embedded software. At minimum, Congress should empower the Librarian, through the Triennial Review process, to also grant exemptions to liability for such manufacture and distribution of circumvention means, when granting a Section 1201(a) exemption for purposes of such lawful repair.
- Third, to provide a meaningful deterrent and remedies for DMCA misuse, Congress should make the Section 1203(c)(2) provision on “Actual damages” reciprocal. Otherwise, a plaintiff that loses its DMCA claim still wins by eliminating sales of competitors’ products, deterring new market entry, and maintaining supracompetitive monopoly pricing for years.

Historical Context for Section 1201

For decades, in the committee rooms of Congress and federal courtrooms, consumers and consumer electronics companies and recording and motion picture companies debated whether

personal recording from analog recorders was or was not fair use. Following the Supreme Court *Betamax* decision pronouncing that consumer analog “time-shift” recording of television programming was fair use,¹ movie studios found profit from sales of prerecorded videos playable on the VCRs they once sought to ban. Given this symbiotic relationship, content industries and consumer electronics companies together looked for alternatives to re-litigating the analog issues in the rapidly-approaching digital environment.

Recognizing that digital content can be copied repeatedly without the perceptible loss of quality in serial analog reproduction, the recording industry and consumer electronics companies arrived at a technological solution that allowed consumers to make a first generation of personal copies, but prohibited digitally copying those copies. Congress embodied that technology solution in the Audio Home Recording Act of 1992. However, the AHRA did not apply to computing products;² and with the release of the MP3 format and the Apple iPod, computing devices became the dominant means for acquiring, consuming, and sharing sound recordings.

In the mid-1990s, with the encouragement of Senators Hatch and Leahy, the motion picture, information technology, and consumer electronics industries began discussing how to avoid repeating a *Betamax* war in the digital environment. Motion picture companies made clear they would only release content to consumers in digital form—such as on DVD and by digital transmission—with technological protection measures (“TPMs”). The goal was to create technologies sufficiently robust to “keep honest people honest,” without imposing significant

¹ *Sony Corp. of Amer. v. Universal City Studios*, 464 U.S. 417 (1984) held, by one vote, after reargument, that Sony could not be liable for contributory copyright infringement by marketing the Betamax analog VCR because time-shift videotaping of broadcast television was fair use. CTA President and CEO Gary Shapiro aptly has called this decision “the Magna Carta” of the consumer electronics industry and of consumers’ digital rights.

² *Alliance of Artists and Recording Companies v. Denso Int’l Amer., et al.*, 947 F.3d 849 (D.C. Cir. 2020); *Recording Ind. Ass’n of Amer. v. Diamond Multimedia Systems*, 180 F. 3d 1072 (9th Cir. 1999).

cost and complexity on products that consumers needed to be affordable. By 1996, the CSS Content Scrambling System protected the first commercially-released movies on Digital Versatile Discs. Technologies such as High-bandwidth Digital Content Protection (“HDCP”)³ and Digital Transmission Content Protection (“DTCP”)⁴ followed, so that content encrypted on disc or via transmission would remain protected between devices in the home and personal network against unauthorized copying or retransmission.

All understood that, sooner than later, every TPM will be circumvented. Copyright owners therefore needed a legal backstop against circumvention and the unrestrained proliferation of circumvention tools. In Congress and, with the urging of the United States, internationally at WIPO, governments took up the challenge of articulating a framework for legal protections against TPM circumvention.

But TPMs can only offer rough-justice answers to nuanced questions. While precluding activities offensive to copyright policies, TPMs also inevitably thwart legitimate activities that are consistent with copyright law, including personal and educational fair uses of copyrighted works, creation of interoperable software, advancement of security research, and more.⁵

When crafting the DMCA, Congress could have drafted Section 1201 to proscribe only those circumvention activities that promote infringement, and expressly permit circumvention for non-infringing purposes. This approach would have been consistent with the WIPO treaty obligations, which require “adequate legal protection and effective legal remedies” against circumvention of TPMs that restrict acts with respect to copyrighted works “which are not

³ See Digital Content Protection, <https://digital-cp.com/>

⁴ See Digital Transmission Licensing Administrator, LLC, <https://www.dtcp.com/>

⁵ Consumer electronics companies addressed these shortcomings with licensing terms—“no tools without rules.” This approach, embodied in Section 1201(k) and in later digital technologies, approximated customary consumer time-shifting through “encoding rules,” permitting consumers to make a personal copy from subscription video channels, but preventing copying from pre-recorded or pay-per-view media.

authorized by the authors concerned *or permitted by law.*⁶ Non-infringing conduct, such as under limitations and exceptions for fair use, accessibility, education, and library preservation, was thus *not* necessarily subject to the anticircumvention provision of the WIPO Treaties.

Technology companies and public interest groups told Congress that existing laws (including laws proscribing copyright law and theft of cable and satellite signals) sufficiently complied with these WIPO treaty obligations. But at the urging of content industries, Congress enacted a version of Section 1201(a) proscribing the act of circumvention itself, where the TPM effectively controls access to or protects a right of a copyright owner in a work.

Four compromises made this approach tolerable to the technology industries. First, out of concern for TPMs' anticipated adverse effect on fair use, Congress adopted a "fail-safe" procedure whereby those adversely affected by the access control provisions of Section 1201(a) could seek regulatory exemptions under the Section 1201(a)(1)(B)-(C) process.⁷ Congress also delayed the effective date of Section 1201(a) for two years, to allow development of a sufficient record as to how TPM implementations affected both availability of copyrighted works and their lawful uses. *Id.* Second, Congress enacted specific exceptions to limit specific known adverse impacts of Section 1201 on technological development, such as exceptions for libraries, interoperability, law enforcement, and security research, in Sections 1201(d)-(j). Third, based on concerns about freezing technology and product design, Congress added Section 1201(c)(3), to assure that the passive marking of content could not require technology products to read and respond to the markings in a disabling manner. Finally, and crucially, the technology industries assessed Section 1201 as part of a package with Section 512—under which copyright owners had

⁶ WIPO Copyright Treaty, Article 11 (1996) (emphasis added), <https://wipolex.wipo.int/en/text/295157>. See also WIPO Performances and Phonograms Treaty, Article 18 (1996), <https://wipolex.wipo.int/en/text/295477>.

⁷ H. Rep. No. 105-551 Pt. 2, at 35-39 (1998).

the obligation to initiate and substantiate take-down notices, while service providers could obtain safe harbor protections without any affirmative duty (absent “red-flag” knowledge) to police their sites. The balance of Section 512 protections for online services made technology companies more willing to trust that the pro-copyright owner approach of Section 1201, coupled with exemptions and Triennial Review, might ameliorate the risks.

Section 1201 in Operation

Section 1201 began working as anticipated – for better and for worse. In the “for better” category, copyright owners released more digital content with TPMs—on discs, online, and via cable and satellite transmission. The first cases brought under Section 1201(a) and (b) confirmed the value of Section 1201 to copyright owners, finding defendants liable for circumventing TPMs that protected audiovisual content streaming online⁸ and on DVD.⁹ These cases at the “core” of the DMCA continue to succeed today.¹⁰

⁸ *RealNetworks, Inc. v. Streambox, Inc.*, No. C99-2070P, 2000 U.S. Dist. LEXIS 1889 (W.D. Wash. Jan. 18, 2000) (enjoining Streambox “VCR” which records TPM-protected streamed content as likely to violate Section 1201(a)(2) and (b)(1), but not “Ripper” that transcodes RealNetworks format into other formats, finding the format alone was not a TPM).

⁹ *Universal City Studios, Inc. v. Corley*, 273 F. 3d 429 (2d Cir. 2001).

¹⁰ See: Cases involving TPMs for motion pictures: *Disney Enterprises, Inc. v. VidAngel, Inc.*, 869 F. 3d 848 (9th Cir. 2017) (purchase of DVD and Blu-ray discs does not authorize circumvention by online streaming service offering expurgated versions of motion pictures); *RealNetworks, Inc. v. DVD Copy Control Ass’n*, 641 F. Supp. 2d 913 (N.D. Cal. 2009) (enjoining distribution of software that circumvents TPMs to copy movies to hard drives under Section 1201(a)(2) and (b)(2)); 321 *Studios v. MGM Studios*, 307 F. Supp. 2d 1085 (N.D. Cal. 2004) (finding distribution of software to copy DVDs violated Section 1201(a)(2) and (b)(1));

Cases involving video games: *MDY Indus., LLC v. Blizzard Entertainment, Inc.*, 629 F. 3d 928 (9th Cir. 2010) (finding distribution of program that automatically plays lower levels of massively multiplayer online video game violated Section 1201(a)(2) but not (b)(1)); *Davidson & Associates v. Jung*, 422 F. 3d 630 (8th Cir. 2005) (finding Section 1201 violation by circumvention of secret handshake between video game and server to access game); *Sony Comp. Entm’t Amer. v. Divineo, Inc.*, 457 F. Supp. 2d 957 (N.D. Cal. 2006); *Sony Comp. Entm’t Amer. v. Filipiak*, 406 F. Supp. 2d 1068 (N.D. Cal. 2005) (assessing \$2500 damages per game console modification chip sold).

Cases involving software: *Synopsys, Inc. v. Azurengine Technologies, Inc.*, 401 F. Supp. 3d 1068 (S.D. Ca. 2019) (granting temporary restraining order against use of counterfeit keys to circumvent software access controls over design software tools); *Apple Inc. v. Psystar Corp.*, 673 F. Supp. 2d 931

In the first Triennial Review, the Librarian approved only two exemptions: to access lists of websites blocked by filtering software, and to access literary works (including computer software) that fail to permit access because of malfunction, damage, or obsolescence.¹¹ Among the reasons why there were so few exemptions in the first round, many of the requested exemption requests did not define a “class” of non-infringing uses; and many comments appeared to express concerns with restrictive licensing terms rather than the TPMs themselves.

For worse, companies began to leverage Section 1201 to eliminate competition for the repair of consumer and office products whose functions are controlled by software embedded in microchips within the products. In *Chamberlain Group v. Skylink Tech., Inc.*, the Federal Circuit rejected Section 1201 claims asserted by a garage door opener manufacturer against the maker of a universal replacement clicker. 381 F. 3d 1178 (Fed. Cir. 2004). While the court reached the right outcome, it interpreted Section 1201 to only prohibit circumventions that result in or facilitate infringement: “the DMCA emphatically *did not* “fundamentally alter” the legal landscape governing the reasonable expectations of consumers or competitors.” *Id.*, at 1194.

In *Lexmark v. Static Control Components*, a computer printer manufacturer began inserting software into microchips on their toner cartridges. The chips registered depletion of toner in the cartridge, so that if the printer detected refilling and reuse of the cartridge, the printer stopped working. Static Control Components, a family-run technology company in Sanford, North Carolina, developed a replacement chip that enabled these cartridges to be repaired, refilled, and reused for far less than the cost of a new cartridge. Lexmark sued Static Control, claiming copyright infringement and violations of the DMCA by circumventing TPMs on the

(N.D. Cal. 2009) (finding violation of Section 1201(a)(2) and (b)1) by distributing software that modified Apple’s Mac operating system OS X).

¹¹ Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, 65 Fed. Reg. 64555 (Oct. 27, 2000), <https://www.copyright.gov/fedreg/2000/65fr64555.pdf>

toner cartridge chip and in the printer. The district court entered a preliminary injunction against Static Control's sale of the chips. The Sixth Circuit reversed, finding no copyright infringement, and no DMCA violations either: the TPM on the cartridge chip did not protect copyrightable software; and the TPM for the printer prevented only the functional use of the printer software, but did not prevent the software from being accessed, copied, and read without circumvention.¹² Moreover, the Court held that Static Control likely had the right under Section 1201(f) to circumvent the TPMs for the purpose of developing its own compatible software.

Judge Merritt's concurring opinion in that case presciently described the current predicament—how abuse of Section 1201 by Lexmark and others could stifle lawful repair for a panoply of consumer products:

If we were to adopt Lexmark's reading of the statute, manufacturers could potentially create monopolies for replacement parts simply by using similar, but more creative, lock-out codes. *Automobile manufacturers, for example, could control the entire market of replacement parts for their vehicles by including lock-out chips.* Congress did not intend to allow the DMCA to be used offensively in this manner, but rather only sought to reach those who circumvented protective measures "for the purpose" of pirating works protected by the copyright statute. Unless a plaintiff can show that a defendant circumvented protective measures for such a purpose, its claim should not be allowed to go forward.¹³

Proponents and critics of Section 1201 alike lauded the *Static Control* decision, and the opinion is often cited by the Copyright Office and other courts as having correctly interpreted and applied Section 1201. Yet, *Static Control* also illustrates key shortcomings of Section 1201.

First, small companies being sued under the DMCA are forced to either capitulate quickly or put their businesses at risk. It did not escape Static Control's attention that the DMCA imposed potential damages under Section 1203(c) of up to \$2,500 per chip, for a chip that cost

¹² *Lexmark Int'l Inc. v. Static Control Components, Inc.*, 387 F.3d 522 (6th Cir. 2004). The Court analogized this ineffective TPM to locking the back door with the front door open. (Note: I served as counsel to Static Control in the district court and on appeal.)

¹³ *Id.*, 387 F.3d 552 (emphasis added).

just a few dollars. Fortunately, Static Control was the rare company with the wherewithal and fortitude to fight, knowing that its business and the industry were at stake. If Lexmark succeeded, other printer manufacturers would soon follow suit.

Second, companies that abuse Section 1201 and lose the lawsuit still may win in the short run. TPMs take months to circumvent, giving the original manufacturer monopoly profits before competitive entry forces prices down. And even though Static Control ultimately prevailed, the district court injunction remained in place for nearly two years until reversed on appeal—costing Static Control millions of dollars in lost sales and engineering expenses. None of these is recoverable under the DMCA.

Third, the Librarian’s exemption process is no panacea for DMCA abuses:

- A triennial review provides no relief to companies sued in the “off” years. Static Control was sued by Lexmark on December 30, 2002, two weeks after the deadline to seek exemptions from the Librarian. In January 2003, Static Control petitioned the Copyright Office to accept their late exemption request,¹⁴ and Static Control was grateful that they did accept it.
- The Librarian cannot solve every abuse of Section 1201(a)(1) through a rulemaking exemption. After accepting Static Control’s petition, the Librarian found Static Control’s request could fall within the scope of the existing Section 1201(f) reverse engineering exception to promote interoperability. As such, the Librarian was unable to grant a Section 1201(a) exemption where a specific statutory exemption might suffice, and Static Control had to pursue its defenses only in court.

¹⁴ Petition of Static Control to Consider New Information (Jan. 23, 2003), <https://cdn.loc.gov/copyright/1201/2003/petitions/static.pdf>. The Office received 338 comments, virtually all supporting the petition.

- The Section 1201 Triennial Review applies only to alleged violations of Section 1201(a)(1). Lexmark sued Static Control also under Sections 1201(a)(2) and 1201(b) for making and selling chips that others could use to circumvent Lexmark’s “secret handshake” TPM.

Whether viewing these shortcomings as evidence of statutory design or design flaws, they nevertheless have real-life consequences for companies, for competition, and for the development of jurisprudence under the DMCA. Had Skylink or Static Control lacked the means to litigate these cases, or had the courts failed to correctly interpret Section 1201, the state of the law and the tenor of this hearing might be quite different today.

Despite these early court losses, companies persisted in filing Section 1201 suits against other repair and aftermarket services. In the context of computer services repair, the Federal Circuit vacated a preliminary injunction and found no likelihood of success in showing a violation of Section 1201 where the TPM prevented competitors from servicing data storage units, rather than protecting the copyrighted software.¹⁵ In the automotive context, courts have dismissed Section 1201 claims where the TPMs protected only non-copyrightable facts in a database¹⁶ or the electronic control modules rather than the software embedded within them.¹⁷ Concerning software, a court found that unencrypted “embedding bits” did not constitute an effective TPM over use of TrueType fonts in the Acrobat program.¹⁸ In the financial services

¹⁵ *Storage Tech. v. Custom Hardware Engin. & Consult.*, 421 F. 3d 1307 (Fed. Cir., 2005).

¹⁶ *Ford Motor Co. v. Autel U.S. Inc.*, Case No. 14-13760 (E.D. Mich. July 1, 2016).

¹⁷ *General Motors LLC v. Dorman Prods., Inc.*, Case No. 15-12917 (E.D. Mich. Sept. 30, 2016).

Recently, a case alleging circumvention of TPMs that upgraded or “tuned” software embedded in control units of marine engines was settled by consent decree. The sparse recitation of facts is unclear whether the DMCA claim may have been based on distribution of copied and modified software rather than just a modification tool, or whether the DMCA claim reflects plaintiff’s effort to stifle otherwise lawful competition. *Brunswick Corp. v. Simon Performance Tech.*, Case No. 3:20-cv-00889-BEN-AHG (S.D. Cal. July 7, 2020).

¹⁸ *Agfa Monotype Corp. v. Adobe Sys.*, 404 F. Supp. 2d 1030 (N.D. Ill. 2005).

field, a court dismissed a DMCA claim where passwords were used to obtain access to noncopyrightable financial data.¹⁹ In other cases, courts applied Section 1201 despite clear evidence that the true target of the TPM was protection of a business model rather than a copyrighted work.²⁰ With greater integration of functional control software into consumer products came a new proliferation of TPMs—in cars,²¹ tractors,²² medical devices,²³ low-cost ink-jet printers,²⁴ even coffee brewing pods.²⁵

¹⁹ *FMHUB LLC v. Muniplatform LLC*, Civ. No. 19-15595 (D. N.J. Aug. 10, 2020).

²⁰ *See, Ticketmaster LLC v. RMG Technologies, Inc.*, 507 F. Supp. 2d 1096 (C.D. Cal. 2007) (finding Section 1201(a) violation by TPM used “to ensure that ticket buying over the website is fair and equitable”).

²¹ Pete Bigelow, “General Motors says it owns your car’s software,” (May 20, 2015), <https://www.autoblog.com/2015/05/20/general-motors-says-owns-your-car-software/>.

²² “*See* Comments of American Farm Bureau Federation, *et al.* Regarding a Proposed Exemption under 17 U.S.C. § 1201 (Dec. 18, 2017) <https://www.copyright.gov/1201/2018/comments121817/class7/class-07-initialcomments-afbf-ncga-nfu.pdf>; Rian Wainstreet, “America’s Farmers Are Becoming Prisoners to Agriculture’s Technological Revolution,” (Mar. 8, 2018), https://motherboard.vice.com/en_us/article/a34pp4/john-deere-tractor-hacking-big-data-surveillance; Jason Bloomberg, “John Deere’s Digital Transformation Runs Afoul of Right-To-Repair Movement,” (Apr. 30, 2017), <https://www.forbes.com/sites/jasonbloomberg/2017/04/30/john-deeres-digital-transformation-runs-afoul-of-right-to-repair-movement/#2b24e29e5ab9>. *See* License Agreement for John Deere Embedded Software, https://www.deere.com/privacy_and_data/docs/agreement_pdfs/english/2016-10-28-Embedded-Software-EULA.pdf.

²³ A recent report cited medical device manufacturer restrictions similar to those used by Apple and John Deere are being used to restrict access to diagnostic information and service manuals. U.S. PIRG, “Hospital Repair Restrictions (July 2020),” https://uspig.org/sites/pirg/files/reports/Hospital_Repair_Restrictions_USPEF_7.8.20b.pdf. *See* Courtney Linder, “Hospitals Need to Fix Ventilators. Why Won’t Manufacturers Let Them?” *Popular Mechanics* (April 14, 2020), <https://www.popularmechanics.com/science/health/a32144222/hospitals-ventilators-right-repair-covid-19/>. In April, State treasurers from Delaware, Pennsylvania, Rhode Island, Illinois, and Colorado had to urge medical device manufacturers to release repair manuals for their ventilators. *See* <https://www.patresury.gov/newsroom/archive/2020/04-14-Call-On-Manufacturers.html>. S. 4473, the “Critical Medical Infrastructure Right-to-Repair Act,” would address certain of these issues, including the ability to circumvent TPMs on certain medical equipment relating to COVID-19 and to preserve the right to seek exemptions for such circumvention through the Triennial Review process. <https://www.congress.gov/116/bills/s4473/BILLS-116s4473is.pdf>

²⁴ Alex Hern, “HP ‘timebomb’ prevents inkjet printers from using unofficial cartridges,” *The Guardian* (Sept. 20, 2016), <https://www.theguardian.com/technology/2016/sep/20/hp-inkjet-printers-unofficial-cartridgessoftware-update>.

²⁵ Karl Bode, “Keurig Will Use DRM In New Coffee Maker To Lock Out Refill Market” (March 3, 2014), <https://www.techdirt.com/articles/20140227/06521826371/keurig-will-usedrm-new-coffee-maker-to-lock-out-refill-market.shtml>.

With greater abuse of TPMs came greater need for new exemptions through the Triennial Review. In 2006, the Librarian approved circumvention to permit cell phone owners to “unlock” technologies that restricted them from changing cell phone carriers operating over technologically-compatible cellular networks, and to undo the short-lived Sony CD “root kit” technology that created security vulnerabilities on user computers.²⁶ The Register extended that unlocking exemption in 2010²⁷ and 2012²⁸ by permitting circumvention to enable interoperability of third-party software apps with the phone’s operating system (colloquially known as “jailbreaking”). The Librarian found “the proponent’s fair use argument is compelling and consistent with the congressional interest in interoperability.”²⁹ However, the Register limited the unlocking exemption in 2012 to only older “legacy” phones, believing sufficient alternatives to an exemption existed for new units.³⁰

Congress took notice. In 2014, Congress passed unanimously S. 117, the Unlocking Consumer Choice and Wireless Competition Act (“Unlocking Act”), which restored and made permanent an exemption for cell phone unlocking, and ensured that consumers who lacked the knowledge and expertise to unlock the phones themselves could direct others to do the unlocking for them or their family members, in order to connect the phone to a rival wireless network.

²⁶ Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, Dkt. RM 2005-11, 71 Fed. Reg. 68472, 68480 (Nov. 27, 2006), <https://www.govinfo.gov/content/pkg/FR-2006-11-27/pdf/E6-20029.pdf>.

²⁷ Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, Dkt. RM 2008-8, 75 Fed. Reg. 43825, 43839 (Jul.27, 2010), <https://www.govinfo.gov/content/pkg/FR-2010-07-27/pdf/2010-18339.pdf>.

²⁸ Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control , Technologies, Dkt. RM 2011-7, 77 Fed. Reg. 65260, 65278 (Oct. 26, 2012), <https://www.govinfo.gov/content/pkg/FR-2012-10-26/pdf/2012-26308.pdf>.

²⁹ 75 Fed. Reg. at 43829-43830.

³⁰ 77 Fed. Reg. at 65265-65266.

Congress also took note of the coming Internet of Things. On October 22, 2015, Senate Judiciary Committee Chairman Grassley and Ranking Member Leahy asked the Copyright Office to prepare a “comprehensive review” of the implications of copyright law with respect to “the ubiquity of copyrighted software in everyday products.”

Days later, in 2015, the Register added a new exemption permitting circumvention of computer programs embedded in motorized land vehicles, to allow the diagnosis, repair or lawful modification of a vehicle function; and extended unlocking and jailbreaking exemptions to other portable computing devices (such as tablets and smart watches) and smart televisions.³¹ It would seem, on the surface, cars and cell phones could hardly be more different. But the common thread is that these TPMs impermissibly protect business models, not copyright. The Register’s studies of Software-Enabled Consumer Products³² and of Section 1201³³ in 2016 and 2017, respectively, described at length comments from multiple industry and public interest groups confirming the need to scrutinize the anticompetitive attempts of original equipment manufacturers (“OEMs”) to leverage the DMCA’s powerful proscriptions and remedies.

How Congress Can Reform Section 1201 to Restore Its Intent

The 2020-2021 Triennial process is underway. Using the streamlined process adopted by the Librarian, proponents have asked to renew these exemptions for motorized land vehicles, and to extend the principles underlying this repair exemption generally to all products with embedded software. Petitions filed earlier this month seek new circumvention exemptions to

³¹ Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control , Technologies, Dkt. 2014-07, 80 Fed. Reg. 65944, 65962-65963 (Oct. 28, 2015) (“2015 Rulemaking”), <https://www.govinfo.gov/content/pkg/FR-2015-10-28/pdf/2015-27212.pdf>.

³² Software-Enabled Consumer Products, A Report of the Register of Copyrights (December 2016), <https://www.copyright.gov/policy/software/software-full-report.pdf>.

³³ Section 1201 of Title 17, A Report of the Register of Copyrights (June 2017) <https://www.copyright.gov/policy/1201/section-1201-full-report.pdf>.

facilitate diagnosis, maintenance, and repair of medical devices;³⁴ diagnosis, repair, or modification of other software-enabled devices;³⁵ and repair of video game consoles.³⁶

The Register’s Section 1201 Report recommended that Congress consider amending Section 1201 to provide the Librarian, and ultimately the public, with further flexibility to streamline the exemptions process and make the exemptions more accessible to their intended beneficiaries. Speaking solely from my perspective as a practitioner, I can support the thrust of the Register’s recommendations, but suggest Congress should go further, and it can do so without imperiling the intended purposes of Section 1201.

1. A Modest Procedural Proposal

The Librarian’s streamlined renewal process eliminates some of the undue effort and expense previously required by the Triennial Review process. This already has proved its value inasmuch as these renewal exemptions overwhelmingly have been filed by public interest and consumer groups, who are often represented pro bono by law school clinics. Yet, the Section 1201 Report also noted that the current statutory scheme prevents the Librarian from adopting additional procedural efficiencies. *Id.* at 141.

Congress can go further, and it should, in one of two directions. As shown by the Unlocking Act, Congress can make certain exemptions permanent. Permanent exemptions would

³⁴ Petition of Summit Imaging, Inc., <https://www.copyright.gov/1201/2021/petitions/proposed/New%20Pet.%20-%20Summit%20Imaging.pdf>.

³⁵ Petition of Electronic Frontier Foundation, <https://www.copyright.gov/1201/2021/petitions/proposed/New%20Pet.%20-%20Electronic%20Frontier%20Foundation%20-%20202.pdf>; Petition of iFixit, Repair.org, and Public Knowledge, <https://www.copyright.gov/1201/2021/petitions/proposed/New%20Pet.%20-%20Repair.org%20&%20iFixit.pdf>.

³⁶ Petition of iFixit and Public Knowledge, <https://www.copyright.gov/1201/2021/petitions/proposed/New%20Pet.%20-%20iFixit%20&%20Public%20Knowledge.pdf>.

provide certainty to the marketplace and the public that the exempt conduct complies with the law. However, this approach may unintentionally freeze innovation within the safety zone of the granted exemption, and stifle dynamic growth of technologies and their uses. The Librarian and the courts may hesitate to expand the exemption beyond the snapshot of congressional intent represented by a statutory exemption, and may view the limits of one statutorily-recognized exemption as handcuffing the scope of other exemptions.³⁷ Thus, if Congress takes this route, it should build some reasonable flexibility into the exemption or specify that the Librarian can further extend the exemption in a Triennial Review.

A simpler alternative is to amend the process so that, once an exemption has been approved twice, it presumptively remains in effect so that proponents would no longer need to affirmatively petition to maintain it. There is unlikely to be further objection to an exemption and circumvention practices that have become standard for six years. As a presumption, any proponent could seek to expand upon it; and any opponent could seek to limit or eliminate it. This would significantly reduce the burden and expense of the Triennial process on the Librarian and for the public.

2. Congress Should Facilitate Access to the Means of Circumvention in Support of Exemptions for Lawful Repair.

Since its inception, Section 1201 has suffered the legal fiction equating an exemption to circumvent with the ability to circumvent. While Section 1201(a) and (b) do not preclude members of the exempt class from exercising self-help by creating circumvention means, in reality, few members of the exempted classes have the knowledge or wherewithal to benefit from

³⁷ For example, the Librarian initially viewed Congress' permission to circumvent TPMs at the direction of others in the Unlocking Act as an implicit constraint against granting similarly justified permissions for other exemptions, such as for automotive electronic control units. 2015 Rulemaking, 80 Fed. Reg at 65954, <https://www.govinfo.gov/content/pkg/FR-2015-10-28/pdf/2015-27212.pdf>

the exemption on their own. This is particularly true for exemptions covering the repair of complex and often highly-regulated consumer products, which typically requires specialized equipment and in-depth knowledge; and even then, months of effort that can only be rationalized where the economic or social benefits far outweigh the costs.

As a result, the repair exemptions have brought equal parts frustration and benefit to their intended beneficiaries. Without access to circumvention tools, many repair shops and consumers still must rely on parts and/or services supplied only by the manufacturers and their dealerships—costing consumers billions of dollars annually. In some cases and for other exemptions, exemption beneficiaries locate circumvention tools from overseas or unauthorized sources, and copyright owners have simply looked the other way. None of these alternatives should be truly palatable to Congress. Denying beneficiaries their ability to circumvent thwarts congressional intent underlying the Triennial process and upsets the balance Congress tried to strike in Section 1201; while forcing lawful users to use unauthorized circumvention tools breeds disrespect for the law.

The Section 1201 Report acknowledged this conundrum, and recommended that Congress amend 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. In the absence of such an amendment, in the 2018 Rulemaking, the Librarian indirectly addressed the ability to seek third-party assistance in the act of circumvention by eliminating the requirement that the circumvention be “undertaken by the authorized owner” and, instead, simply requiring that the items subject to the circumvention be “lawfully acquired.”³⁸ This

³⁸ 2018 Rulemaking, 83 Fed. Reg. at 54022.

allowed experts, retained by owners, to stand in the owners' shoes as lawful users. But this could not always help either the owners or the experts to obtain the necessary tools.

Consequently, the Register's recommendations do not go far enough. To maintain, repair, and modify consumer products with embedded software, businesses need access to circumvention tools. Which means, in practical terms, a third party must be allowed to create the circumvention means and interoperable replacement parts and software, and to provide it to those who perform the repairs for the consumer.

This is not to suggest Congress should permit the creation of circumvention tools for every exemption and all technological protection measures—far from it. But in the case of functional software embedded in repairable consumer products, like cars, tractors, medical devices, printer cartridges, and garage door openers, circumvention solutions can be provided that enable marketplace competition to repair physical products and functions without simultaneously threatening the market for an independently-marketed copyrighted work (such as a motion picture or application software package). The goal should be to narrowly circumvent the particular software that controls the physical function of the product—distinguishing, as an example, the firmware that controls the motor that spins a Blu-ray disc from the motion picture stored on the disc or the AACS encryption technology that protects the motion picture content against unauthorized access or copying. For the vast majority of consumer products, this is a bright-line exercise. Their embedded software is used only to control physical product functionality, not to perform or display other copyrighted works. And circumvention of their special-purpose TPMs poses no palpable risk for circumvention of widely-used TPMs for other computer programs or products; indeed, different TPMs are used for different makes, models,

and sometimes vehicles. Thus, the tool to circumvent a TPM for a Ford module will not work on a GM module, an Apple iPhone, or a Blu-ray player.

Accordingly, Congress should amend Section 1201 so that “Section 1201(a)(2) and (b) shall not preclude the manufacture, importation, offer, provision, or trafficking in a technology, product, service, device, component, or part thereof, with respect to its use to circumvent a technological measure in support of an exemption granted pursuant to Section 1201(a)(1)(D) for the purpose of enabling diagnosis, maintenance, repair, replacement or lawful modification of parts of products whose functions are controlled by embedded software.” This amendment would permit such trafficking with respect to the use of the circumvention means for an exempt class. It would not sanction trafficking in these technologies for any other purpose.

If Congress is unwilling to enact such an exemption directly by statute, it should empower the Librarian to grant such circumvention tool exemptions notwithstanding the provisions of Section 1201(a)(2) and (b), and require the Librarian to issue such exemptions concurrent with the grant and renewal of the Section 1201(a)(1) exemptions. Any other process would give the OEM a three-year monopoly on maintenance and repairs, by which time the OEM will likely have avoided the exemption by changing its TPMs. The Librarian also could be given the flexibility to condition that right to make and distribute circumvention means if the OEM makes a circumvention tool available under fair, reasonable, and non-discriminatory terms.

3. Congress Should Enact Remedies for DMCA Misuse.

As noted above, companies forced to defend against unfounded DMCA claims incur substantial losses in addition to attorney fees, including exclusion from the market, lost sales, loss of convoyed sales (i.e., lost sales that would ordinarily would have been made but for the unavailability of the enjoined products), and loss of business reputation. Attorney fees and costs

may be awarded in such circumstances under Section 1203(b)(4) and (5), respectively, but damages under Section 1203(c) are available only with respect to the violation of Section 1201, not to the defendant as a “prevailing party.”

No purposes or policies underlying the Copyright Act and DMCA are served where a party asserts Section 1201 using a TPM that does not effectively protect a copyrighted work. In such cases, that party effectively seeks to protect a business model rather than a copyrighted work or a right emanating from copyright law. Yet, the losing plaintiff still wins. Just by bringing suit, the OEM may quash sales of competitors’ products, deter new market entry, and maintain supracompetitive monopoly pricing until the case is resolved. As in the case of *Static Control*, that injury period could extend for years, from the filing of suit through appeal, and cause millions of dollars in damages to lawful competitors.

This proposal parallels existing judicial remedies for copyright misuse,³⁹ but recognizes an important difference between the two. Both copyright and DMCA misuse focus on the attempt to leverage copyright protection for anticompetitive purposes. A finding of copyright misuse renders the underlying copyright unenforceable while the misuse persists, depriving the copyright owner of any economic benefits from the alleged infringer or any other person based on the misuse of a government grant. In the case of DMCA abuse, however, the TPM may not protect a copyrighted work at all, so another remedy is necessary.

³⁹See, e.g., *United States v. Loew's, Inc.*, 371 U.S. 38, 47-48 (1962); *OMEGA SA v. Costco Wholesale Corp.*, 776 F.3d 692, 699-706 (9th Cir. 2015) (Wardlaw, J. concurring); *Assessment Techs. of WI, LLC v. WIREdata, Inc.*, 350 F.3d 640 (7th Cir.2003); *DSC Communications Corp. v. DGI Technologies, Inc.*, 81 F.3d 597 (5th Cir.1996); *Lasercomb America, Inc. v. Reynolds*, 911 F.2d 970 (4th Cir.1990).

Accordingly, to rectify such DMCA misuse, Congress should make the Section 1203(c)(2) provision on “Actual damages” reciprocal. That would provide a meaningful deterrent against baseless or bad faith assertion of the powerful Section 1201 remedies against lawful competitors, and appropriately compensate those defendants who have been unfairly subjected to suit under Section 1201 without any basis in copyright or the DMCA.

Thank you again for inviting me to testify on reforms that Congress should implement to set Section 1201 back on its proper course. None of these suggested changes would interfere with the uses of Section 1201 contemplated by Congress. They would merely restore the DMCA to its original intent, consistent with its underlying purpose to support copyright, not to stymie lawful competition.