



UNITED STATES COPYRIGHT OFFICE

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

**Reply Comment of the Electronic Frontier Foundation  
Regarding Class 7: Repair, Diagnosis, and Modification**

**March 14, 2018**

### **ITEM A. COMMENTER INFORMATION**

The Electronic Frontier Foundation (“EFF”) is a member-supported, nonprofit public interest organization devoted to maintaining the traditional balance that copyright law strikes between the interests of rightsholders and the interests of the public. Founded in 1990, EFF represents over 44,000 dues-paying members, including consumers, hobbyists, artists, writers, computer programmers, entrepreneurs, students, teachers, and researchers, who are united in their reliance on a balanced copyright system that ensures adequate incentives for creative work while promoting innovation, discouraging censorship, and enabling broad and equal access to information in the digital age.

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### **ITEM B. PROPOSED CLASS ADDRESSED**

Proposed Class 7: Computer Programs—Repair

### **ITEM C. OVERVIEW**

Software-enabled devices are both ubiquitous and vital to modern life, which is why owners’ ability to repair, diagnose, and modify their devices is equally vital. Interference with owners’ control over devices as diverse as appliances, vehicles, toys, computers, and environmental automation is one of the most deleterious side-effects of Section 1201(a)(1). The Copyright Office has already identified “a particularly broad-based need” for an exemption covering repair and maintenance of software-enabled devices.<sup>1</sup>

The breadth of the examples of lawful repair and modification that are negatively impacted by the ban on circumvention mirrors the breadth of responses the Office received in response to the

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<sup>1</sup> *Section 1201 of Title 17: A Report of the Register of Copyrights* (June 2017) at v (“Section 1201 Report”).

Section 1201 Report. They show both a broad-based need for circumvention and a general absence of opposition outside of a few narrow categories. Opposition to this proposed class falls into three categories: (1) motor vehicle systems; (2) entertainment media players such as DVD players and video game consoles; and (3) opposition to an exemption for modification, as distinct from repair. An exemption for repair of most devices, then, is uncontroversial.

EFF agrees with Auto Care Association that the present restrictions on the repair of motor vehicles are onerous and unjustified, and we refer the Office to Auto Care's comments on that issue. These reply comments will address the other specific objections to an expanded exemption.

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

As described in the initial comments, the TPMs that interfere with repair, diagnosis, and modification of software-enabled devices consist of hardware and software that restrict access to data about the state of a device, or that restrict modification of software or settings on a device.

#### **ITEM E. ASSERTED ADVERSE EFFECTS ON NONINFRINGING USES**

##### **1. The Record Demonstrates that the Proposed Class Meets the Statutory Test, Requiring an Exemption to Issue.**

Section 1201's ban on circumventing access controls impedes noninfringing repair and modification activities for software-enabled devices. As the Register concluded in the Section 1201 Report, "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."<sup>2</sup> The examples presented by EFF run the gamut from networked lightbulbs to entertainment devices to general-purpose computers and environmental control systems. This broad showing demonstrates that the exemption is needed to address the adverse impact on those who seek to make these uses.

An exemption is mandatory upon a showing of adverse impact on non-infringing uses of these devices. The statute provides that the ban on circumvention "shall not apply" to users of copyrighted works when the Librarian determines that such users are adversely impacted.<sup>3</sup> And the statute requires that the Librarian "shall publish" each class of works for which adverse impact is shown.<sup>4</sup>

The proponents of class 7 have made such a showing. First, it is undisputed that most of the software used in devices is protected by copyright. Second, the use of that software as needed for diagnosis, repair, and modification is overwhelmingly likely to be non-infringing under the fair use doctrine, the idea/expression dichotomy, or the software exception codified at 17 U.S.C. § 117.<sup>5</sup>

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<sup>2</sup> Section 1201 Report at 88.

<sup>3</sup> 17 U.S.C. § 1201(a)(1)(B).

<sup>4</sup> 17 U.S.C. § 1201(a)(1)(D).

<sup>5</sup> Opening Comments of EFF, ORI, and ASCDI at 7-10.

Third, the proposed exemption meets each of the statutory factors, demonstrating an adverse effect.<sup>6</sup> In particular, an exemption for repair, diagnosis, and modification increases the availability for use of embedded software by restoring software-enabled devices to working order, and by adding new functionality to such devices.

Fourth and lastly, Section 1201's ban on circumvention is the cause of this adverse effect. Uncertainty over the applicability of Section 1201(a)(1), along with claims by rightsholders stating that the statute bans many activities done in the course of repair and modification, hinders lawful and important activities.<sup>7</sup> By creating obstacles to self-repair and independent repair businesses, this cloud of uncertainty raises the cost of repairs. This allows manufacturer-owned and -approved repair technicians and parts suppliers to raise prices artificially.<sup>8</sup> These anti-competitive effects mean that the existence of warranty service and manufacturer-approved service do not eliminate this adverse effect. Barriers to repair and modification also lead to early obsolescence, which contributes to the growing problem of e-waste.<sup>9</sup>

Thus, proponents have established the four elements of an exemption request as enumerated in the Section 1201 Report.<sup>10</sup> As the Register clarified in that report, there are no other factors that proponents must address.<sup>11</sup>

## **2. No Opposition Has Been Registered as to the Vast Majority of Devices and Uses Contemplated by the Proposed Class.**

Aside from certain motor vehicle systems and media playback devices, there has been no opposition to an exemption for diagnosis and repair of software-enabled devices. Nor did opponents of the proposed exemption object to the renewal of the existing exemption for motor vehicle repair, diagnosis, and modification. Of the nine specific examples described in the first-round comments of EFF, ORI, and ASCDI, only one (video game consoles) is discussed in opposition comments.

This lack of opposition is consistent with the Register's observation in 2017: "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

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<sup>6</sup> *Id.* at 12-13.

<sup>7</sup> *See* Section 1201 Report at 88-89.

<sup>8</sup> *See, e.g.*, Initial Comments of American Farm Bureau Federation, et al. at 14 (access controls on farm equipment "leave[] farmers literally at the mercy of dealers who are in a position to charge exorbitant prices to accommodate their customers' urgent needs."); Initial Comments of Auto Care Association at 2 (the status quo forces independent repair technicians "to purchase OEM-approved tools and parts at OEM-imposed prices").

<sup>9</sup> "E-waste is the Toxic Legacy of our Digital Age," iFixit, <https://ifixit.org/ewaste> (accessed March 14, 2018).

<sup>10</sup> Section 1201 Report at 114.

<sup>11</sup> *Id.* at 114 ("The Copyright Office does not agree that the rulemaking has ever required exemption proponents to demonstrate nine separate factors.").

offered by the manufacturer.”<sup>12</sup> That conclusion was based on extensive written commentary and live testimony, and nothing in the record of this rulemaking contradicts it.

### **3. Although Specific Media Playback Devices Raise Issues Not Common to the Proposed Class, an Exemption Including Them is Still Warranted.**

The majority of opposition comments focus on particular media player devices: DVD and Blu-Ray players,<sup>13</sup> automobile entertainment systems,<sup>14</sup> and video game consoles.<sup>15</sup> These opponents make clear that their concern is not with all modification of software-enabled devices, but only modifications that are connected to the infringement of copyrighted entertainment media.

The ability to repair, diagnose, and modify software-enabled media viewing devices is equal in importance to other software-enabled devices. Game consoles, for example, are expensive devices. A Sony Playstation 4 console with 1TB of storage costs \$399,<sup>16</sup> while a Microsoft Xbox One X is \$499.<sup>17</sup> The proposed exemption will make repair of these devices more affordable by limiting manufacturers’ ability to constrain repair markets.

Moreover, many devices, including vehicles, smartphones, and game consoles, combine the delivery of entertainment content with other critical functions. For example, Harman International notes in its opposition that “telematics and entertainment systems” are “thoroughly integrated into land vehicles.”<sup>18</sup> They “often enable, support, and/or access critical vehicle safety functionality” and manage “consumer data.”<sup>19</sup> The remote disabling of a Jeep Cherokee by security researchers in 2015 was accomplished through a telematics and entertainment system.<sup>20</sup> These examples show that the ability to repair, diagnose, and modify these critical functions of an expensive and complex device is no less vital in devices that contain entertainment features.

For similar reasons, MPAA’s proposal to exclude devices “used to access expressive works”<sup>21</sup> sweeps too broadly. Many important, complex, and valuable software-enabled devices can be used to access entertainment content, but are also used for numerous unrelated purposes. MPAA’s

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<sup>12</sup> Section 1201 Report at 92.

<sup>13</sup> Opposition Comment of DVD CCA and AACLS LA at 2.

<sup>14</sup> Opposition Comment of Auto Alliance at 10-11; Opposition Comment of Harman International at 2.

<sup>15</sup> Opposition Comment of Entertainment Software Association at 4-5.

<sup>16</sup> [https://www.amazon.com/PlayStation-4-Pro-1TB-Console/dp/B01LOP8EZC/ref=sr\\_1\\_3?s=videogames&ie=UTF8&qid=1520997481&sr=1-3&keywords=sony%2Bplaystation&th=1](https://www.amazon.com/PlayStation-4-Pro-1TB-Console/dp/B01LOP8EZC/ref=sr_1_3?s=videogames&ie=UTF8&qid=1520997481&sr=1-3&keywords=sony%2Bplaystation&th=1) (accessed March 13, 2018).

<sup>17</sup> [https://www.amazon.com/Xbox-One-X-1TB-Console/dp/B074WPGYRF/ref=sr\\_1\\_4?s=videogames&ie=UTF8&qid=1520997605&sr=1-4&keywords=microsoft+xbox+one](https://www.amazon.com/Xbox-One-X-1TB-Console/dp/B074WPGYRF/ref=sr_1_4?s=videogames&ie=UTF8&qid=1520997605&sr=1-4&keywords=microsoft+xbox+one) (accessed March 13, 2018).

<sup>18</sup> Harman at 2.

<sup>19</sup> *Id.*

<sup>20</sup> Andy Greenberg, “Hackers Remotely Kill a Jeep on the Highway—With Me In It,” *Wired* (July 21, 2015), <https://www.wired.com/2015/07/hackers-remotely-kill-jeep-highway/>.

<sup>21</sup> MPAA at 12.

suggestion would leave barriers to repair in place for smartphones, PCs, and other general-purpose computing devices. Thus, even if the Register excludes pure entertainment devices such as DVD and Blu-Ray players and game consoles from an expanded repair exemption, it should not exclude multipurpose devices such as vehicles, smartphones, and PCs that are capable of being used to access media.

#### **4. The Exemption Must Allow for Noninfringing Modification.**

If copyright law is to serve its purpose of promoting innovation and the dissemination of new works, it must accommodate modification and improvement of digital technology. Traditionally, limitations on the scope of copyright such as fair use and the idea-expression dichotomy have protected these values. In the context of Section 1201, this rulemaking must provide that breathing room for innovation.

As EFF illustrated in its opening comments, legitimate modifications include customizing drones to serve a new purpose, altering litter box software to allow use of “unauthorized” cleaning fluid, installing custom radio firmware, and more. Many of these uses address anticompetitive tying concerns, by enabling the use of third-party consumables or peripheral devices without permission from the manufacturer, or by enabling interoperability with other devices. Modifying device software in order to enable new uses is the essence of a transformative use under the fair use doctrine.<sup>22</sup>

Aside from video game consoles, opponents have not contested the lawfulness of the specific examples cited in EFF’s opening comments. Adding new capabilities to one’s camera drone or enabling the ability to use third-party consumables in an appliance are non-infringing uses, along with many other examples.

MPAA et al. assert that an exemption to permit modification of embedded software is tantamount to “depriving copyright owners of the exclusive right to modify their software.”<sup>23</sup> Their argument ignores the law. The exclusive right to prepare derivative works is limited by the fair use doctrine, *particularly* for functional works such as software.<sup>24</sup> MPAA’s statement underscores the need for an exemption for non-infringing modifications. Congress established this rulemaking process explicitly to create a “safety valve” for non-infringing uses of works, including modifications to software, with the goal that the circumvention ban would not interfere with otherwise lawful uses. The Register must ensure that the imposition of access controls does not transform the limited right to prepare derivative works into an absolute right to prevent modification.

#### **5. The Exemption Must Not Preclude Third-Party Assistance.**

The Copyright Office can and must grant exemptions to 1201(a)(1) for non-infringing activities, even when done on behalf of another.

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<sup>22</sup> See *Sony Computer Entm’t v. Connectix Corp.*, 203 F.3d 596, 606 (holding that copying of code in order to “afford[] opportunities for game play in new environments” was a fair use).

<sup>23</sup> MPAA at 10.

<sup>24</sup> *Sony*, 203 F.3d at 606.

After declining to recommend an exemption for circumvention “on behalf of” a vehicle owner in 2015, the Office clarified its position on third-party assistance. In the Section 1201 Report, the Register stated a willingness to consider broader classes of users, in order to alleviate the acknowledged difficulties faced by device owners who are not able to repair or modify their own devices without help.<sup>25</sup> The Register should do so here, for two reasons.

First, nothing in the statute or its legislative history, nor any court decision, limits “users of a copyrighted work,” as that term is used in Section 1201(a)(1), to owners of copies, nor to owners of devices. A repair technician who runs the software on a device in the course of a repair is also a user of that software. DVD CCA and AACCS LA agree that a repair exemption “can be reasonably applied to an expert repair person where that person is the ‘user’ of a tool for the exempted purpose.”<sup>26</sup>

Second, the scope of prohibited trafficking under Sections 1201(a)(2) and (b) has not been clearly defined by the courts. As DVD CCA and AACCS LA observe, an exemption “can be formulated in terms of authorizing the use of tools that may circumvent by users who may include expert repair personnel . . . but not authorize activities that are prohibited under the anti-trafficking provisions of the DMCA.”<sup>27</sup> Including repair technicians and other service providers within a 1201(a)(1) exemption will protect and encourage repair and modification that does *not* constitute trafficking. That Sections 1201(a)(2) and (b) may prohibit *some* activities relating to third-party repair and modification must not prevent the Register from granting a 1201(a)(1) exemption to permit those that do not.

The approach outlined in the 1201 Report will allow courts to decide cases about the contours of 1201(a)(2) and (b) that today would be resolved on broader 1201(a)(1) grounds, due to the Copyright Office’s failure to exempt non-infringing circumvention on behalf of another. If the Office refuses to grant exemptions on the ground that some services may cross a line that has yet to be clearly marked by the courts, then the courts will never do so, and legitimate third-party activity will remain suppressed. This result would be contrary to the Librarian’s mandate to address adverse effects on non-infringing uses.

While MPAA and Auto Alliance assert that third-party assistance with repair, diagnosis, or modification that requires circumvention is *always* a “circumvention service” prohibited by Sections 1201(a)(2) and (b), they provide no support for that assertion. This is unsurprising, as no court has so held. Defining all third-party assistance as prohibited trafficking would render the express limitations of Sections 1201(a)(2) and (b) largely or entirely superfluous. For the reasons identified in the Report and this proceeding, an exemption should not categorically preclude third-party assistance.

In conclusion, the Register should recommend an exemption for repair, diagnosis, and modification of software-enabled devices.

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<sup>25</sup> Section 1201 Report at 61-62.

<sup>26</sup> DVD CCA at 3.

<sup>27</sup> *Id.*

**ITEM F. DOCUMENTARY EVIDENCE**

This Reply does not include documentary evidence.