

posed, it is most applicable to **Question #11 of the 1201 study** (“Please identify any pertinent issues not referenced above that the Copyright Office should consider in conducting its study.”).¹ We also highlight where portions of this comment may also be applicable to other questions asked, such as **Question #2 of the 1201 study** (“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?”), to which we respond unequivocally, for the following reasons, that it should not.²

II. The Overarching Issue Relevant to Both Studies

The essential question raised by both studies is, “What is copyright law doing here?” Copyright law can be traditionally understood to create limited monopolies of a limited set of exclusive rights for limited times for the authors of creative works. And, to the extent that it is not precluded by doctrines such as merger, *scènes à faire* or the idea/expression dichotomy, software may in some cases be deemed an independent, creative work. But the questions contemplated by both studies are not limited to exploring the bounds of that potential copyrightability of software.

What this comment addresses is where the issues transcend the question of the copyrightability for software and instead investigate the role copyright law plays in affecting how people may use and develop computing technology in general. It is that question there that requires the most attention, and, indeed, alarm.

¹ It is also applicable to **Question #2 of the software study** (“Whether, and to what extent, the design, distribution, and legitimate uses of products are being enabled and/or frustrated by the application of existing copyright law to software in everyday products”).

² **Question #3 of the 1201 study** asks whether Section 1201 should be adjusted to allow for a presumption of renewal of previous exemptions, to which we would say yes. In fact, there should be a presumption of validity for all sought exemptions. Relatedly, **Question #4 of the 1201 study** contemplates shifting burdens from proponents of a class to opponents, which we would also agree is a needed improvement. However, small changes like these are mere Band-Aids that do not adequately address the fundamental problem of copyright inserting itself in how technology is used and developed, which is what our comment challenges.

The problem was illustrated in the most recent 1201 rulemaking. There were essentially two types of classes for which exemptions were sought: exemptions that would enable non-infringing consumption of copyrighted works, and exemptions seeking the ability to bypass a technical protective measure (“TPM”) preventing access to the computing logic of onboard hardware (which, for brevity, will generally be referred to as “hardware” or “computing logic” throughout). While we would of course advocate for liberal granting of exemptions of the former, it is the latter type of classes on which this comment focuses.

What we saw was essentially a regulatory land-grab by copyright law to insert itself over the legal ability of people to use the computing devices legitimately available to them as they would choose. The rationale for this insertion appeared to be as follows: because software is ostensibly copyrightable, and because software sits between the hardware and the user’s ability to control the function of the hardware, the anti-circumvention provisions of 1201 were implicated because modifying the software meant bypassing the TPM controlling access to the underlying computing logic of the device that ran the copyrighted software.

Everything about that presumption needs to be challenged. The difficulty with doing it within these studies, however, is that they search for solutions within copyright law, when these are problems created by copyright having extended its reach far beyond where it was intended and entitled to be in the first place. The better answer is ultimately to get copyright out of the way.

III. Comments applicable to each study

(1) Copyright law should not interfere with how people may freely use, modify or transfer electronic devices generally.

Underpinning the software study is the presumption that copyright is necessary to incentivize the creation of software. This presumption must be questioned. Given that software, particularly embedded software, is so often bound up in directing the technical

operation of companion hardware, significant restraint should be exercised before allowing monopoly rights in the software affect what the legitimate possessor of the object it runs can do with it.

This restraint is particularly warranted in the case of software-enabled consumer products. As the most recent 1201 rulemaking itself demonstrated, there is no longer any meaningful difference between a computer as one was understood at the time the DMCA was passed and any other device capable of computing logic. There are now TV-shaped computers, car-shaped computers, pacemaker-shaped computers, toaster-shaped computers,³ even sneaker-shaped computers,⁴ and more.⁵ Chips capable of processing electronic signals are cheap and something that can be added to essentially any object. Although as of now the computing logic that each resulting device runs may be tailored to the intended purpose of each such device (for instance, smart TVs are designed to do different things than smart medical devices) the distinctions are not meaningful ones, and they are definitely not meaningful for purposes of copyright law. In all these examples software is controlling the operation of onboard computing logic, and nothing about that particular device's operation, be it what the manufacturer intended or otherwise, should affect the question of whether copyright is needed to regulate that operation. In all such cases the answer should be no.

The increasing convergence between formerly non-computerized objects and “smart” versions illustrates why there should be this limitation on the role of copyright. Copyright is designed to be a solution to market failure, or the situation where no one

³ See, e.g., the “Breville Die-Cast 2-Slice Smart toaster” marketed for its “intelligent” ability to know just how much to brown bread. <http://www.brevilleusa.com/die-cast-2-slice-smart-toastertm.html> (last reviewed Feb. 12, 2016).

⁴ See, e.g., the Sketchers 10900L “Game Kicks” sneaker, which feature a “[f]ully functional game feature!” where “[f]our colorful flowers light up and make sounds in a classic 'match the pattern' game.” The shoe also comes with “a [r]eset button and [a] sound on/off button.” <https://www.skechers.com/en-us/style/10900/game-kicks/gumt> (last reviewed Feb. 12, 2016).

⁵ See various other examples of “more,” including computer-shaped air conditioners, clothes washers, and lightbulbs at <http://www.crookedbrains.net/2014/03/smart-and-awesome-wi-fi-gadgets.html> (last reviewed Feb. 12, 2016).

will make the investment in creating an expressive work if the sole basis for potentially profiting from that effort can easily be usurped by another party. The prototypical example is a book, where the intrinsic value of the book is the expression contained within, not the physical object containing it. Such is not the case, however, regarding embedded software in objects capable of computing logic. In these cases it is the object, or device itself, that is what's valuable.

The producers of these physical objects are selling physical objects that do things, be it toasting bread, shielding feet, or merely processing electrons as any computing device does. The devices compete on the market based upon their objects' ability to do what the consumer wants to put them to, at the cost the consumer is willing to pay, more optimally than those of their competitors. Thus there is no need to artificially insulate the manufacturer from competitive market forces with a copyright monopoly, particularly not when such a monopoly will consequently hobble how a user can purchase, use, or adapt the product in the way that they might choose. Even to the extent that embedded software may be somewhat copyrightable, that copyrightability should not serve to limit the control people have over the physical goods they choose to have in their lives.

In fact, it is anathema to copyright that it should even have begun to: even in the case of a book, under the first sale doctrine the owner of a physical book had traditionally retained the right to dispose of it as he chose, regardless of the copyright status of the expressive content within. It should not require a statutory amendment to ensure that people can dispose of the other objects in their lives freely as well, even electronic devices with embedded software, but to the extent that it may, we support legislation such as the You Own Devices Act, which aims to restore that important freedom to users.

(2) Section 1201 should not interfere with how people may freely use, modify or transfer electronic devices generally.

Incongruously attached to the copyright statute is Section 1201. Ostensibly it is intended to prohibit the interference with "digital rights management" ("DRM")

mechanisms controlling the access to digital copies of copyrighted works. In practice, however, it effectively chills behaviors that have nothing to do with copyright or the infringement thereof.

The first problem stems from the overbroad definition of what constitutes a TPM. It is problematic enough when it is DRM that obstructs access to a work, particularly when that access is non-infringing or otherwise legitimate. This problem is aggravated by the fact that Section 1201 does not actually punish an infringing use of a work – other sections of the copyright statute provide punitive consequences for that infringement – but rather the mere act of circumventing a TPM, regardless of why it was done. Worse, it imposes not just a civil sanction but a potentially criminal one, and it is a sanction that can attach even when the circumvention was done in furtherance of a non-infringing use or one with no connection to a use of a copyrighted work at all.

As we see from these rulemakings, Section 1201 is presumed to reach all sorts of circumventions done by people simply trying to fully use, modify, or otherwise explore the computing logic of the devices they legitimately possess. Whether it is to be able to connect a mobile device to another network, discover the vulnerabilities of a medical device, repair a broken tractor, or simply ensure that one's TV is not spying on them, Section 1201 deters all these non-copyright activities because of the overly expansive definition of a TPM. A default assumption appears to have evolved that for all intents and purposes a TPM is anything that controls *any* access, including access to the computing logic of a device. This definition appears to be predicated on the fact that a TPM may itself be a piece of software, and software may be copyrighted, even though the circumvention has little to do with affecting the exclusive rights of whatever copyright that software might have.⁶ In other words, presumptions are built upon presumptions, first by presuming that embedded software controlling computing device is itself eligible

⁶ See discussion Part II.1 *supra* of why the entitlement of software to copyright should be extremely limited.

for copyright, and then by considering that copyright to be the copyright interest Section 1201 is intended to protect, when it is not. The software is merely the TPM, not the thing that the TPM is designed to control access to.

The Section 1201 study contemplates a number of improvements to the statute that might offer some relief: presumptive renewal of previously granted exemptions (**Question #3**), reducing the enormous burdens of petitioning for, and substantiating, needed exemptions (**Question #4**), and creating permanent exemptions (**Questions #8 & #9**). These changes would help alleviate some of the difficulty faced by the public to obtain the legal relief necessary to perform the circumventions of TPMs for non-infringing activities, including activities simply involving the ability of legitimate possessors of computing devices to freely use them as they so choose, including in ways that don't affect a copyright interest. But, as noted in footnote 4 *supra*, these proposed changes are not enough, particularly where these non-infringing activities in no way implicate copyright interests. Every exemption sought, even if ultimately granted, represents a use that has already been chilled, and no amount of hardcoded exemptions baked into the statute will ever be able to cover all the uses that have yet to be imagined.

The 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, making it absolutely clear that Section 1201 has no place regulating circumventions involving access to computing logic, is needed. Hardcoding activities such as "security research" is simply not sufficient to keep up with a rapidly changing technology frontier. Computing faculties are becoming better, faster, and more ubiquitous all the time. There is no way for the Copyright Office to keep up, nor should it have to.

Question #2 asks how non-copyright interests should be accommodated during a 1201 rulemaking proceeding, as if it in any way makes sense to empower the Librarian of Congress via the Copyright Office to act as a gatekeeper entitled to either bless, or

effectively forbid, any of the purposes for which someone might want to bypass a TPM, particularly when those purposes are simply to get access to the computing logic of a device. Neither the Librarian nor the Office is endowed with the authority or expertise to be an all-purpose evaluator of how people use their computing technology or judge its effects. On the contrary, the more present non-copyright issues, the more important it is that copyright law *not* interfere with those uses, and *especially* not when that interference is motivated by the desire to protect society from unwanted consequences arising from technology use and development. First, there are many other regulatory bodies, state and federal, capable and indeed better able, to address whatever harm that may arise from innovation. And secondly, the ubiquity of computing devices in an increasing, even infinite number of items, illustrates the critical need for people to have complete dominion over them, to discover the full extent of their effects and vulnerabilities.⁷ The Copyright Office is not in the position to police when bad actors have deployed software on their devices that spy on users⁸ or cheat on emissions tests.⁹ But the public is, and it must be unambiguously legally able to.

⁷ Few would likely have ever argued that a parent should not be able to adjust their child's footwear as needed. The mere introduction of a microchip to that shoe should not make that parent suddenly legally unable to do so.

⁸ *See, e.g.*, Trevor Timm, "The Government Just Admitted It Will Use Smart Home Devices for Spying," *The Guardian*, Feb. 9, 2016, available at <http://www.theguardian.com/commentisfree/2016/feb/09/internet-of-things-smart-devices-spying-surveillance-us-government>.

⁹ *See, e.g.*, Karl Russell, Guilbert Gates, Josh Keller, and Derek Watkins, "How Volkswagen Got Away With Diesel Deception," *New York Times*, Jan. 6, 2016, *available at* <http://www.nytimes.com/interactive/2015/business/international/vw-diesel-emissions-scandal-explained.html>.

IV. Conclusion

Both studies skirt around the ultimate issue: the role and purpose of copyright (and consequently the agency charged with administering it). Copyright law derives its constitutional authority from the progress clause, which charges it to advance the progress of science and the useful arts. Anything that copyright law attempts to do must always be tested against that directive (and limitation). When, as we see now, copyright is interfering with that progress, chilling people's ability to use and develop technology as they would freely choose, it cannot pass that test. The statute defining copyright's reach must therefore be changed to remove it from the path of progress.

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Respectfully submitted,

/s/ Michael W. Godwin

Michael W. Godwin
(DC Bar # 432639)
1050 17th St. NW #1150
Washington, DC 20036
mgodwin@rstreet.org

*General Counsel for the R Street
Institute*

Dated: March 1, 2016

Respectfully submitted,

/s/ Ryan Hagemann

Ryan Hagemann
820 First St. NE #675
Washington, DC 20002
rhagemann@niskanencenter.org

*Technology and Civil Liberties Policy
Analyst for the Niskanen Center*

Dated: March 1, 2016

Respectfully submitted,

/s/ Wayne T. Brough, Ph.D.

Wayne T. Brough, Ph.D.
400 North Capitol St. NW #765
Washington, DC 20001
wbrough@freedomworks.org

*Chief Economist and Vice President of
Research at FreedomWorks*