



September 21, 2012

Ms. Maria Pallante
Register of Copyrights
Library of Congress
James Madison Memorial Building
Washington, DC 20540-3120

Re: Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access
Control Technologies, RM 2011-7

Dear Ms. Pallante:

The National Telecommunications and Information Administration (NTIA), an agency of the U.S. Department of Commerce, submits this letter to you to continue the statutorily required consultative process that NTIA has undertaken with you and your staff in connection with Section 1201(a)(1)(C) of the Digital Millennium Copyright Act (DMCA).¹ NTIA is the President's principal advisor on telecommunications and Internet policies pertaining to the nation's economic and technological advancement.² NTIA promotes "the benefits of technological development in the United States for all users of telecommunications and information facilities."³ NTIA appreciates the opportunity to provide its input into this process.

Pursuant to the DMCA, our input to you reflects our core mission to advance the President's goal of promoting ubiquitous, open, state-of-the-art, and affordable broadband Internet access.⁴

¹ 17 U.S.C. § 1201(a)(1)(C). This section sets forth the required consultative process which is that "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 . . ."

² National Telecommunications and Information Administration Organization Act, 47 U.S.C. § 902(b)(2)(D), (I) (2009).

³ 47 U.S.C. § 901(c)(1).

⁴ See e.g., Testimony of The Honorable Lawrence E. Strickling, Assistant Secretary for Communications and Information, National Telecommunications and Information Administration, United States Department of Commerce, Before the Committee on Small Business, United States House of Representatives, Hearing entitled "Digital Divide: Expanding Broadband Access to Small Businesses" (July 18, 2012), <https://www.ntia.doc.gov/speechtestimony/2012/testimony-assistant-secretary-strickling-digital-divide-expanding-broadband-acc>.

Facilitating the creation of innovative online content, services, and technologies is vital to achieving this goal and U.S. economic prosperity.⁵ It is important that the legal environment ensures that content that is created is protected from infringement and piracy, which copyright law provides. It is also essential that the legal environment be adequately open and flexible so that ideas flourish and grow into businesses that create jobs and fuel the economy. Policies that balance the legitimate concerns of users, content creators, and entrepreneurs will best promote technological innovation and consumer freedom and discourage illegal copying and distribution.⁶

NTIA believes that the exercise of reviewing proposed exemptions to the prohibition against circumvention of access controls every three years is an essential application of that balance. From the past proceedings to the present, we have witnessed an innovation explosion, with new opportunities, businesses, devices, and technologies entering the market almost daily – most of which were not contemplated when Congress enacted the DMCA.⁷ NTIA notes that the past exemptions granted by the Librarian have contributed to a healthy, robust environment that has encouraged innovation both with adequate protections for copyrighted works and with exemptions that permitted non-infringing uses.⁸ The Register’s recommended approach, which tailors exemptions based on demonstrated harm to a particular use or user while also limiting the adverse consequences that may result from the creation of an exempted class, strikes the right balance between protecting the rights of the copyright holder and facilitating non-infringing uses as envisioned by the authors of this triennial process.⁹

⁵ The Department of Commerce declared the following core policy in its work regarding the Internet: “Recognizing the vital importance of the Internet to U.S. prosperity, education, and political and cultural life, the Department has made it a top priority to ensure that the Internet remains open for innovation.” Inquiry on Copyright Policy, Creativity, and Innovation in the Internet Economy, Docket No. 100910448–0448–01, Notice of Inquiry, 75 Fed. Reg. 61419 (Oct. 5, 2010).

⁶ See e.g., Commerce Secretary Gary Locke, Remarks at the Copyright Policy in the Internet Economy Symposium (July 1, 2010), <https://www.ntia.doc.gov/speechtestimony/2010/remarks-copyright-policy-internet-economy-symposium>.

⁷ Several commenters noted this balance, such as the following: “Congress intended this proceeding to provide a safeguard against the bleak prospect that the introduction of legal protections for access controls might lead to a marketplace characterized by ‘less access, rather than more, to copyrighted materials that are important to education, scholarship, and other socially vital endeavors.’ . . . Congress also recognized, however, that access controls “support new ways of disseminating copyrighted materials to users, and to safeguard the availability of legitimate users of those materials by individuals.” Joint Comments of the Association of American Publishers, American Society of Media Photographers, Business Software Alliance, Entertainment Software Association, Motion Picture Association of America, Picture Archive Council of America, Recording Industry Association of America (*Joint Creators and Copyright Owners Comments*), Docket No. RM 2011-7, http://www.copyright.gov/1201/2012/comments/Steven_J_Metalitz.pdf. (*Citing* Staff of House Committee on the Judiciary, 105th Cong. Section-by-Section Analysis of H.R. 2281 as Passed by the United States House of Representatives on August 4, 1998, at 36.)

⁸ Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, Docket No. RM 2008-8, Final Rule, 75 Fed. Reg. 43825 (July 27, 2010)(*2010 Final Rule*) <http://www.copyright.gov/fedreg/2010/75fr43825.pdf>.

⁹ Letter from Lawrence E. Strickling, Assistant Secretary, NTIA, to Marybeth Peters, Register of Copyrights (November 4, 2009)(*Strickling Letter 2009*), <http://www.copyright.gov/1201/2010/NTIA.pdf> at 2; see also Letter from Nancy J. Victory, Assistant Secretary, NTIA, to Marybeth Peters, Register of Copyrights (Aug. 11, 2003), <http://www.ntia.doc.gov/other-publication/2003/ntia-letter-register-copyrights-regarding-dmca>.

NTIA has conducted an extensive review and analysis of the record before the Register, including the proposed exemptions, comments, reply comments, hearing transcripts and post-hearing questions and answers. In applying its particular expertise and experience to each proposed exemption, NTIA offers the following observations and recommendations.

A. Class 1 – Public Domain Works

The Open Book Alliance (OBA) proposes an exemption for public domain literary works that are made available in digital form and are protected by access controls.¹⁰ According to OBA, Google imposes Technological Protective Measures (TPMs) that strictly limit use on library websites of books it has copied under agreements with such libraries.¹¹ Additionally, OBA claims that Google requires the libraries providing it with public domain works to limit their sharing of those works with third parties.¹² OBA asserts that these restrictions effectively restrict online access to public domain works, and only serve to benefit Google’s business interest to the detriment of the online community.¹³

A work in the public domain is a creative work that is not protected by copyright and which can be freely used by everyone.¹⁴ NTIA shares OBA’s concern that the implementation of TPMs restricts universal access to such material. As OBA notes, these restrictions may have a negative impact on educational institutions and research organizations, and may result in other adverse effects to the public.¹⁵ This “chilling” effect in turn discourages use of material that, by definition, should be widely accessible to any member of the public.

NTIA notes that the Copyright Office previously opined on this issue in the 2010 proceeding and stated:

Works in the public domain are not affected by the prohibition on circumvention. Section 1201(a)(1), in part, states: “No person shall circumvent a technological measure that effectively controls access to a work protected under this title.” A work in the public domain is not a work “protected under this title.” Therefore, Section 1201 does not prohibit circumvention of a technological

¹⁰ Comments of the Open Book Alliance (*OBA Comments*), Docket No. RM 2011-7, http://www.copyright.gov/1201/2011/initial/open_book_alliance.pdf. In the alternative, OBA seeks a clarification that the provisions of 17 U.S.C. § 1201(a) do not apply to TPMs placed on digital copies of literary works in the public domain. NTIA does not express an opinion regarding this request and limits its view only to the proposed exemption.

¹¹ See *OBA Comments* at 3. According to OBA, Google has acquired and processed over 15 million books, out of which 3 million are in the public domain. *Id.*

¹² See *OBA Comments* at 4. OBA reports that Google has contracts or agreements with over 14 domestic and international libraries. *Id.*

¹³ *Id.*

¹⁴ See e.g., Lolly Gasaway, When U.S. Works Pass Into the Public Domain, University of North Carolina, <http://www.unc.edu/~unclng/public-d.htm> (last visited Aug. 13, 2012); Copyright and Fair Use, Public Domain, South Louisiana Community College, <http://libguides.southlouisiana.edu/content.php?pid=328614&sid=2688291> (last visited Aug. 13, 2012).

¹⁵ *OBA Comments* at 7.

protection measure when it simply controls access to a public domain work; in such a case, *it is lawful* to circumvent the technological protection measure and *there is no need* for an exemption.¹⁶

NTIA concurs with this determination of the Copyright Office that an exemption to circumvent TPMs in public domain works is not needed.¹⁷

B. Class 2 – e-Book Accessibility for Persons with Disabilities

The American Council of the Blind and the American Foundation for the Blind (ACB/AFB) propose an exemption for “literary works distributed electronically... that are generally inaccessible to those with blind or other print disabilities.”¹⁸ NTIA supports this proposed exemption, which expands on the existing exemption for making e-books accessible to the visually impaired.¹⁹ The new language further assists visually impaired Americans by including all literary works where circumvention is required for accessibility purposes, as opposed to the current, narrower exemption that compels users to obtain another edition of the work if an accessible version exists, even if accessing this alternative edition would require purchasing another device.²⁰

Due to a lack of widespread device compatibility with the plethora of different electronic formats for literary works, an accessible version of a work in a different format is often not a viable alternative to circumvention. Proponents note, for example, that while “Apple’s iBooks application is the only mainstream e-book reader that is accessible to individuals who are blind or visually impaired,” books purchased from Apple are readable only on the company’s iPad, iPhone, and iPod Touch devices.²¹ Visually impaired Americans who own e-readers or tablets produced by other companies are limited to the often insufficient accessibility features currently available for literary works that are compatible with their devices. In many cases, there is no

¹⁶ 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 at 256, (*2010 Register of Copyright Recommendation*) (June 11, 2010), <http://www.copyright.gov/1201/2010/initialed-registers-recommendation-june-11-2010.pdf>.

¹⁷ In addition, NTIA questions whether the technological measures discussed by OBA actually protect access to a literary work. It may be that the technological measures merely act as “search filtering tools” that sort out results effectuated in search engines. In other words, the TPM may create a difficulty in finding the public work, but does not prevent access to the work once found. *See OBA Comments* at 5-7.

¹⁸ Joint Comments of the American Council of the Blind and the American Foundation for the Blind, Docket No. RM 2011-7, http://www.copyright.gov/1201/2011/initial/american_foundation_blind.pdf. (*ACB/AFB Comments*). It is important to note that this proposed exemption was met with little or no opposition on the record. The Joint Creators have expressed concern with the expansion discussed here. *Joint Creators and Copyright Owners Comments* at 17-18.

¹⁹ *See* 37 C.F.R. § 201.40(b)(6).

²⁰ *See ACB/AFB Comments* at 4-5.

²¹ *Id.* at 8, 10.

accessible alternative version of a work available on a particular device that a particular visually impaired person happens to own.²²

Requiring visually impaired Americans to invest hundreds of dollars in an additional device (or even multiple additional devices), particularly when an already-owned device is technically capable of rendering literary works accessible, is not a reasonable alternative to circumvention and demonstrates an adverse effect of the various access controls used.²³ Therefore, NTIA supports adoption of the expanded exemption for the next three years, and strongly encourages the market to obviate any future need for this exemption by making literary works more accessible to users with disabilities, ideally in an interoperable manner.²⁴

The ACB/AFB proposal expands the contemplated class of work from the current exemption, referring to it as “literary works, distributed electronically.”²⁵ The existing exemption uses a somewhat different phrasing, introducing the class of work as “literary works distributed in ebook format.”²⁶ NTIA prefers the new, more generic language as it more precisely resolves the harm demonstrated in the record. Literary works are distributed electronically in a wide range of formats, not all of which are necessarily widely understood to constitute an “ebook format.” In addition to the differing formats used in the popular online book stores (e.g., Amazon’s Kindle Store, Apple’s iBookstore, and Barnes & Noble’s NOOK Book Store), literary works are sometimes made available in the Portable Document Format (PDF), as Hypertext Markup Language (HTML), and in a range of proprietary formats.²⁷ To the extent that such works otherwise fit within the contemplated class, including the presence of access controls that interfere with the use of assistive technologies for the visually impaired, they should be included regardless of format.

C. Class 3 – Interoperability of Third-Party Applications in Gaming Consoles

Proponents request an exemption allowing users to circumvent access controls embedded in video game consoles to execute any lawfully acquired software applications. While NTIA supports the innovative spirit epitomized by independent developers and researchers whose

²² *Id.*, at 8-10. For example, the ACB and AFB note that e-books purchased in the Barnes & Noble NOOK format are “completely inaccessible to blind users.” As well, the Kindle has used a TPM that blocks access to persons with disabilities for all but certain public domain titles.

²³ In effect, the TPM requires persons to purchase additional devices to read desired books that are not available in accessible format on their device. NTIA concurs with the proponents that this is unacceptable. *Id.* at 10.

²⁴ *Strickling Letter 2009* at 13.

²⁵ *Id.* at 1.

²⁶ *2010 Final Rule* at 43839. NTIA notes that the proponents appear to have misunderstood the final rule issued by the Librarian in 2010, when he granted the exemption for another three years. At that time, he stated the following sound policy: “... the Register has learned that, even where books are published electronically for the general public, the digital format used or licensed may be employed in a way that is incompatible with Braille readers and other assistive technologies on which blind and print-disabled persons rely. In the long run, this incompatibility may lead to delays, cost challenges and standards issues that may off-set the long-awaited benefits of digital media. Copyright and content issues cannot be divorced from the general goal of ensuring that hardware devices are designed with accessibility in mind.” NTIA concurs with this analysis.

²⁷ See Finding E-books: A Guide, U.S. Library of Congress, *available at* <http://www.loc.gov/rr/program/bib/ebooks/devicesformats.html> (last visited Aug. 13, 2012).

needs proponents contemplate in this class, the evidence in the record is insufficient to support the considerable breadth of the proposed class.²⁸ Access controls on console boot loaders²⁹ and firmware programs prevent users from installing alternative operating systems and unauthorized games.³⁰ The record is not clear that an exemption is warranted for enabling interoperability with unauthorized applications or for installing an unauthorized operating system. Proponents offer some examples of researchers needing to install unauthorized operating systems to make use of certain consoles' substantial computing power, but there is compelling evidence suggesting reasonable alternatives exist to conducting research on game consoles.³¹ Personal computer (PC) technology has evolved so that consoles may no longer offer any computing advantage over traditional PCs.³² Furthermore, opponents have demonstrated that console manufacturers are willing to work with researchers to meet computing needs, and NTIA encourages them to continue such efforts.³³

Proponents also assert a need for independent (“homebrewed”) application developers to circumvent access controls on video game consoles.³⁴ NTIA recognizes that independent developers often advance innovation for the public benefit.³⁵ However, NTIA is also cognizant of the proposal's likely negative impact on the underlying business model that has enabled significant growth and innovation in the video game industry.³⁶ NTIA takes into consideration that console manufacturers depend on game sales and licenses to recoup development costs, and that widespread circulation of games unapproved by the console makers could conceivably negatively affect the video game market. Independent developers can request authorization from manufacturers to authorize users to install their applications without circumventing any access

²⁸ See Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, Docket No. RM 2011-7, Notice of Proposed Rulemaking, 76 Fed. Reg. 78866, 78867 (Dec. 20, 2011) (2011 NPRM), <http://www.copyright.gov/fedreg/2011/76fr78866.pdf>.

²⁹ See PC Magazine Encyclopedia, http://www.pcmag.com/encyclopedia_term/0,1237,t=boot+loader&i=38843,00.asp. (A boot loader is “a program that loads the operating system into memory.”).

³⁰ Comments of the Electronic Frontier Foundation (*EFF Comments*) at 19-20, Docket No. RM 2011-7, <http://www.copyright.gov/1201/2011/initial/eff.pdf>.

³¹ *EFF Comments*, at 20-23; Comments of the Entertainment Software Association (ESA Comments) at 11-12, Docket No. RM 2011-7, http://www.copyright.gov/1201/2012/comments/Lindsey_Tonsager.pdf; *Joint Creators and Copyright Owners Comments* at 27 (“they may purchase personal computers that accomplish the same functions or request permission from console manufacturers to install an alternate operating system”).

³² *ESA Comments* at 11-12.

³³ *Joint Creators and Copyright Owners Comments* at 27.

³⁴ *EFF Comments* at 24-28.

³⁵ Independent developers have created console applications that can turn TVs into interactive whiteboards or transform consoles into web servers. They've also designed tools that allow users to backup game files and enable File Transfer Protocol (FTP) functionality. *Id.* at 26-28.

³⁶ *ESA Comments* at 30-35; *Joint Creators and Copyright Owners Comments* at 28; see also Testimony of Christian Genetski, General Counsel, Entertainment Software Association, Section 1201 Rulemaking Hearing, Before the Copyright Office Panel, California Hearing (May 17, 2012) at 20, http://www.copyright.gov/1201/hearings/2012/transcripts/section_1201_rulemaking_hearing_%2005-17-2012.pdf. (For example, noting “over 1 million downloads of infringing versions of 250 select console games in just the first quarter of 2012.”).

controls.³⁷ Proponents have cited the difficulty independent developers face in obtaining such authorizations.³⁸ NTIA encourages console manufacturers to create less burdensome game authorization processes that will empower independent developers to deliver more easily their content to the marketplace, and notes that continued difficulty in this regard will strengthen future requests for exemptions.

Although NTIA does not endorse the originally contemplated version of the proposed class, we believe proponents have demonstrated that access controls used in video game consoles restrict access to highly functional elements of code that inhibit users' ability to repair or replace hardware components on their own.³⁹ Console owners may need to obtain unlicensed repairs when the console is out of warranty or when the console and authorized replacement parts are no longer on the market.⁴⁰ In this situation, the console owner is clearly harmed, the device is inoperable without the repair and the owner of the device has no other option but to circumvent the access controls in order to repair the device.⁴¹

Unique identifiers embedded in console hardware prevent consoles from recognizing unauthorized hardware components.⁴² Users must access, and then copy or replace, the unique identifiers to successfully integrate new or modified components with the original console.⁴³ Making *de minimis* modifications to these functional aspects of firmware code does not implicate content owners' exclusive rights.⁴⁴ To the extent that these TPMs protect a copyrighted work in the non-functional elements of the firmware code, an exemption is necessary to fulfill the noninfringing purpose of altering the code to make repairs to the console. Accordingly, a narrow exemption limited to unauthorized repairs would not undermine console manufacturers' existing business models or hinder innovation in the video game industry. Because NTIA believes only an exemption for repairs is warranted at this time, NTIA suggests the Copyright Office consider exempting the following class of works from the prohibition against circumvention:

³⁷ *Joint Creators and Copyright Owners Comments* at 26-27.

³⁸ *EFF Comments* at 24-25.

³⁹ See Response Letter from Andrew Huang, PhD, to the U.S. Copyright Office regarding Proposed Exemption 3 (*Huang Class 3 Response Letter*), Docket No. RM 2011-7, http://www.copyright.gov/1201/2012/responses/andrew_huang_response_letter_regarding_exemption_3.pdf. (“Video game console hardware consists of multiple subcomponents. Manufacturers often assign electronic IDs to certain system subcomponents, including hard drives, optical disk drives, and peripherals such as game controllers and memory cards. Unfortunately, these are all items subject to frequent wear-out, loss, and/or routine damage.”).

⁴⁰ *Id.* (“Replacing a worn-out, lost or damaged component requires bypassing the ID check to prevent the user from being locked out of his or her console. Since the ID check is performed by the secured operating system within the console, bypassing the ID check often requires or involves jailbreaking parts of the system. This is true even if the ID is merely a serial number, as the original serial number is remembered by the secured operating system, and bypassing or recovering this record requires a jailbreak.”).

⁴¹ See e.g., Comment of Kyle Wiens, CEO iFixit, http://www.copyright.gov/1201/2012/comments/Kyle_Wiens.pdf (arguing that an exemption permitting repairs of this nature would extend the life of consoles and other devices).

⁴² *Huang Class 3 Response Letter* at 1.

⁴³ *Id.*

⁴⁴ See *EFF Comments* at 30-33; see also *Sega Enterprises Ltd. v. Accolade, Inc.*, 977 F.2d 1510 (9th Cir. 1992) (holding the functional authorization elements of a computer program are not copyrightable). Individuals making repairs do not alter or copy any copyrightable elements of the firmware.

Computer programs that enable video game console hardware to operate with the console operating system, when circumvention is initiated by the owner of the console for the purpose of repairing or replacing malfunctioning hardware, for systems that are obsolete or no longer covered by manufacturer warranty.

NTIA believes this use – repairing a device – is a non-infringing use consistent with exemptions granted in past proceedings, such as for dongles.⁴⁵ In this case, obsolescence of a game system means that the system is no longer manufactured, or that replacement or repair is no longer reasonably available in the commercial marketplace.⁴⁶ An example of the latter is a console that is no longer covered by manufacturer’s warranty, or where the manufacturer no longer accepts the device for repair.⁴⁷ This exemption would not authorize circumvention outside this narrow class for other repairs, replacement, or upgrading of hardware or software or for other purposes.⁴⁸

D. Class 4 – Interoperability of Software in Personal Computers

In view of NTIA’s strong support for growing the technology economy and for promoting the free flow of information, we appreciate proponents’ concern for “software developers who wish to produce and adapt free software for use on personal computing devices, as well as device owners who seek more control over their personal computing through the use of free software.”⁴⁹ However, based on the record and research into the Secure Boot feature of the Unified Extensible Firmware Interface (UEFI), which is the sole access control mechanism contemplated in connection with this proposed class, NTIA does not support granting the exemption at this time.

⁴⁵ For example, in 2010 the Librarian granted the dongle exemption using the following wording: “Computer programs protected by dongles that prevent access due to malfunction or damage and which are obsolete. A dongle shall be considered obsolete if it is no longer manufactured or if a replacement or repair is no longer reasonably available in the commercial marketplace.” *2010 Final Rule* at 43839.

⁴⁶ See e.g., *Comments of James Evans Turner*, http://www.copyright.gov/1201/2012/comments/James_Evans_Turner.pdf (noting the following in support of this exemption for repairs: “Millions of game consoles are rendered useless after hardware component failures, especially mechanical components like optical drives and hard drives. These systems are usually thrown away and end up in a landfill, contributing to the world-wide electronic waste problem. Through jailbreaking, even devices with failed components can continue to be useful. For example: By installing a hard drive and modified memory card into a Sony PS2, it can run software even when the built-in optical disc drive stops working (a problem that has affected millions of early units).”).

⁴⁷ A valid repair would also include fixing security flaws or installing security updates when they are no longer available for the device. See e.g., *Comments of Keith D. Jackson*, http://www.copyright.gov/1201/2012/comments/Keith_Jackson.pdf.

⁴⁸ Opponents have argued that this exemption, in any form, could have the unintended consequence of encouraging its use for other purposes such as facilitating piracy. This scenario is possible with each exemption granted by the Librarian, but also is an essential element of the balancing of harms to particular users versus possible negative market effects required in this proceeding. 17 U.S.C. § 1201 (a)(C). In this case, NTIA believes that balance weighs in favor of permitting this very narrow exemption for repairs of obsolete systems and that negative effects on the market will be minimal, in any.

⁴⁹ *Comments of the Software Freedom Law Center (SFLC Comments)*, Docket No. RM 2011-7, <http://www.copyright.gov/1201/2011/initial/sflc.pdf>.

NTIA is not convinced that Secure Boot constitutes “a technological measure that effectively controls access to a work” protected by U.S. copyright law.⁵⁰ Although Microsoft’s Windows Hardware Certification Program requires manufacturing partners to implement Secure Boot and pre-install Microsoft’s signing key, it is important to note that neither Secure Boot nor UEFI as a whole is actually part of the Windows 8 operating system.⁵¹ The UEFI specification is developed by the Unified EFI Forum, a non-profit trade organization led by a wide range of companies, including AMD, Apple, Dell, IBM, Intel, and Microsoft.⁵² There is no evidence that Secure Boot restricts access to Windows 8 or any other work for purposes of protecting copyright. An overview of Secure Boot on the Forum’s web site focuses on the feature’s benefits as a security mechanism, emphasizing the threat of malware posing as legitimate operating systems.⁵³ Secure Boot merely uses digital signatures to verify that an operating system came from a trusted source. The feature does nothing to ensure that users are properly licensed to use the operating system being loaded. If the operating system’s digital signature can be verified using a key installed in the firmware, UEFI will allow it to boot regardless whether the software is licensed or pirated, and even regardless of whether it is protected by copyright law or released into the public domain. Furthermore, Windows 8 is compatible with millions of existing personal computers that lack Secure Boot because the operating system does not rely on it as an access control.

Both proponents and opponents appear to agree with NTIA’s analysis of Secure Boot. In its initial comments, the Software Freedom Law Center notes that “[t]o the extent the firmware lock being circumvented merely prevents unauthorized operating systems from running, it does not protect access to a copyrighted work of the device producer, but rather prevents access to a competing copyrighted work to which the device owner has a license.”⁵⁴ Secure Boot, if implemented in a fashion that prevents installing new keys or disabling the feature, serves only to prevent alternative operating systems from loading and not to restrict access to the one originally provided. Furthermore, the Business Software Alliance states that Secure Boot was created “to combat the massive threat to consumers and businesses posed by malware and viruses,” and “not to ‘control... access to a work protected under’” U.S. copyright law.⁵⁵ Given that neither the purpose nor the function of Secure Boot is to control access to a copyrighted work, NTIA concludes that an exemption is not appropriate under the DMCA.

⁵⁰ See 17 U.S.C. § 1201(a)(1)(A).

⁵¹ Response Letter from the Software Freedom Law Center regarding Proposed Exemption 4 (*SFLC Class 4 Letter*), Docket No. RM 2011-7 (July 9, 2012), available at http://www.copyright.gov/1201/2012/responses/sflc_response_letter_regarding_exemption_4.pdf.

⁵² Unified EFI Forum, About Page, <http://www.uefi.org/about/> (last visited Sept. 6, 2012).

⁵³ Jeff Bobzin, Implementing a Secure Boot path with UEFI 2.3.1 (July 2011), http://www.uefi.org/learning_center/UPFS11_P2_SecureBoot_Insyde.pdf (last visited Sept. 6, 2012).

⁵⁴ *SFLC Comments* at 11.

⁵⁵ Business Software Alliance, Letter to David Carson (July 10, 2012) at 2 (*BSA July Letter*), http://www.copyright.gov/1201/2012/responses/bsa_response_letter_regarding_exemption_4.pdf.

E. Class 5 – Interoperability of Third-Party Applications in Mobile Devices (“Jailbreaking”)

The Electronic Frontier Foundation (EFF) requests a continuation of the current exemption that allows the circumvention of access controls to enable a wireless phone to become interoperable with unauthorized but lawfully obtained applications, a practice customarily known as “jailbreaking.”⁵⁶ EFF also seeks to expand the current exemption to include tablets⁵⁷ in addition to smartphones, which were the subject of the previous exemption.⁵⁸ EFF asserts that modifying device-operating software to permit interoperability with independently created software is a non-infringing use, and that the Librarian should grant the exemption because technological restrictions “harm competition, innovation, and consumer-choice.”⁵⁹ The Joint Creators and Copyright Owners oppose both requests, claiming that “circumvention related to mobile phones and tablets increases piracy of applications and is detrimental to the secure and trustworthy innovative platforms that mainstream consumers demand.”⁶⁰

As a preliminary matter, NTIA interprets “interoperability” in a matter consistent with the Register’s interpretation of the word during the previous proceeding. In making her recommendation to the Librarian, the Register concluded that “when one jailbreaks a smartphone in order to make the operating system on that phone interoperable with an independently created application that has not been approved by the maker of the smartphone or the maker of its operating system, the modifications that are made purely for the purpose of such interoperability are fair uses.”⁶¹ The Register clearly understood that proponents were referring to applications that have been written to the particular specifications of the smartphone platform, but that had not been granted official approval by the manufacturer or operating system maker. While in other contexts, “interoperability” may refer to *cross-platform* compatibility (e.g., running an application designed for Android phones on an iPhone), NTIA believes the proponents are using this word in the same fashion as understood during the previous proceeding.

⁵⁶ EFF refers to this practice as “jailbreaking,” while the Joint Creators and Copyright Owners call it “platform hacking.” *EFF Comments* at 2; *Joint Creators and Copyright Owners Comments* at 19. Although “platform hacking” is more descriptive, to remain consistent with customary usage by the technological community, NTIA will refer to this practice as “jailbreaking.”

⁵⁷ EFF defines a tablet as “a personal mobile computing device, typically featuring a touchscreen interface, that contains hardware technically capable of running a wide variety of programs that is designed with technological measures that restrict the installation or modification of programs on the device, and is not marketed primarily as a wireless telephone handset.” See Email from Marcia Hoffman, Senior Staff Attorney, Electronic Frontier Foundation to Ben Gallant (June 6, 2012), http://www.copyright.gov/1201/2012/responses/eff_letter_regarding_exemption_5_definition_tablet.pdf.

⁵⁸ EFF has not provided a definition of “smartphone.” Nevertheless, NTIA finds the following definition sufficient for purposes of this proceeding: A smartphone is a device that lets a user make telephone calls, but also adds features that, in the past, a user has found only on a personal digital assistant or a computer, such as the ability to send and receive e-mail and edit documents. See Liane Cassavoy, *What Makes a Smartphone Smart*, ABOUT.COM, http://cellphones.about.com/od/smartphonebasics/a/what_is_smart.htm (last visited Aug. 13, 2012).

⁵⁹ *EFF comments* at 3-6.

⁶⁰ *Joint Creators and Copyright Owners* at 19. Although Joint Creators and Copyright Owners also assert that EFF has failed to establish that the conduct at issue is not covered by §1201(f), NTIA does not comment on whether §1201(f) applies and limits its response as to the applicability of §1201(c).

⁶¹ *2010 Final Rule* at 43830.

NTIA notes that the record shows substantial and unprecedented support for this exemption in this proceeding.⁶² The Copyright Office received over 600 individual comments from the general public, as well as a petition signed by over 25,000 individuals who seek to continue the ability to jailbreak their devices.⁶³ Moreover, the record indicates many non-infringing uses that can be accomplished after jailbreaking. Many use jailbreaking to personalize their phones and to install third-party software applications, increase functionality, or change system settings.⁶⁴ Users also jailbreak (or “root,” in Android nomenclature) their devices to customize them for certain personal or work uses such as to increase privacy and security settings.⁶⁵ Researchers, software developers, and computer engineers jailbreak devices to identify security flaws and to create their own applications.⁶⁶ Some consumers resort to jailbreaking because their devices are older and no longer supported by the manufacturer.⁶⁷

⁶² The jailbreaking exemption was endorsed by a petition signed by over 8,215 people in the 2010 proceeding. The current record contains a similar petition supporting the exemption with over 27,000 signatures.

⁶³ See e.g., *Comments of Andrew Huang 2*, http://www.copyright.gov/1201/2012/comments/Andrew_Huang_2.pdf (this comment includes names of individuals as co-signers that support both proposed exemptions 3 and 5, as a means “to innovate and take advantage of the device’s full potential”; these signatures were evidentially gathered at a website: jailbreakingisnotacrime.org).

⁶⁴ See e.g., *Comments of Alexander Alarcon*, http://www.copyright.gov/1201/2012/comments/Alex_Alarcon.pdf (he jailbroke his phone to be able to change system settings, functionality, and obtain unavailable applications such as a stock application); *Comments of Brandon Nelson*, http://www.copyright.gov/1201/2012/comments/Brandon_Nelson.pdf (he jailbroke his iPhone to increase the phone’s speed and access to SMS (ability to send a text), email, and other functionality); *Comments of Brian Johnson*, http://www.copyright.gov/1201/2012/comments/Brian_Johnson.pdf (he jailbroke his Motorola Droid X to be able increase functionality such as editing calendar pages; he also jailbroke his HP Touchpad tablet to be able to upload a new OS since the tablet has been discontinued by the manufacturer); *Comments of Austin J. Salazar*, http://www.copyright.gov/1201/2012/comments/Austin_J_Salazar.pdf (he jailbroke his iPhone to obtain an application not available at the Apple Store that encrypts private or sensitive information such as credit card information).

⁶⁵ See e.g., *Comments of Shawn P. Thomas*, http://www.copyright.gov/1201/2012/comments/Shawn_%20P_Thomas.pdf (he jailbroke his iPod Touch and Android to customize and enhance usability); *Comments of Cameron Miller*, http://www.copyright.gov/1201/2012/comments/Cameron_Miller.pdf (she jailbroke her iPhone to get around settings and install certain communications software that are incompatible with handling of healthcare and academic records); *Comments of Rhona Mahony*, http://www.copyright.gov/1201/2012/comments/Rhona_Mahony.pdf (she jailbroke her and her daughter’s phones to keep identity and location private and to encrypt voice and data for work and personal use).

⁶⁶ See e.g., *Comments of Edward DeMeulle*, http://www.copyright.gov/1201/2012/comments/Edward_DeMeulle.pdf (permit developers to experiment with new ideas); *Comments of Ian Darke*, http://www.copyright.gov/1201/2012/comments/Ian_Darke.pdf (IT professional that jailbroke his iPhone to upload an application that permits him to access his work’s Virtual Private Network, an application for which is not otherwise available); See e.g., *Comments of James Evans Turner*, http://www.copyright.gov/1201/2012/comments/James_Evans_Turner.pdf (he jailbroke his iPhone to install security patches before the manufacturer provides a fix and may be used when the manufacturer no longer supplies fixes.); *Comments of James Coleman*, http://www.copyright.gov/1201/2012/comments/James_Coleman.pdf (he uses to write custom software applications); *Comments of Kacey Coughlin*, http://www.copyright.gov/1201/2012/comments/Kacey_Coughlin.pdf (IT professional and applications developer jailbreak devices to test apps and code, customize settings, increase security, and kill processes to better troubleshoot.).

⁶⁷ See e.g., *Comments of Adam Thiede*, http://www.copyright.gov/1201/2012/comments/Adam_Thiede.pdf (he jailbroke an older Android device to be able to upload more current firmware and OS obtained from the

Equally noteworthy, the record is also now better developed than the 2010 proceeding, when the market for mobile applications was relatively nascent.⁶⁸ In the three years since the Librarian adopted the current exemption, the number of mobile applications has grown at an exponential rate.⁶⁹ The evidence makes it clear that the mobile application market has thrived, and continues to do so, despite – and possibly in part because of – the current exemption. Furthermore, the record indicates that the current exemption has not hampered or deterred innovation; to the contrary, while in 2010 the focus was primarily on Apple’s iPhone,⁷⁰ customers currently benefit from a much greater choice in mobile devices from an increasing number of manufacturers and distributors. In fact, the number of mobile phones in use now exceeds the U.S. population.⁷¹ Many adults have more than one wireless device, including smartphones, tablets, and wireless cards.⁷² In sum, it would be difficult to suggest, given considerable evidence to the contrary, that the exemption has harmed device manufacturers or software developers.⁷³

The only opponents of this class in the current proceeding are the Joint Creators and Copyright Owners who assert that circumvention of access controls to allow software interoperability increases piracy and is detrimental to secured platforms.⁷⁴ However, NTIA is not convinced that such claims weigh against the need for an exemption for two reasons. First,

community); *Comments of Mark W. Rigler, Ph.d.*

http://www.copyright.gov/1201/2012/comments/Mark_W._Rigler.pdf (he jailbroke in order to download applications that enhance memory and performance of an older phone).

⁶⁸ The record in 2010 with regards to this exemption was primarily aimed at Apple and its newly released product, the iPhone. *See generally 2010 Register’s of Copyright Recommendation* at 77-105.

⁶⁹ In 2008, the reported number of mobile applications (apps) was approximately 8,000. The 100,000-apps milestone was passed in December 2009 and, as of December 2011, the number of apps exceeded one million. *See Shelly Freierman, One Million Apps, and Counting*, NEW YORK TIMES, Dec. 11, 2011, *available at* <http://www.nytimes.com/2011/12/12/technology/one-million-apps-and-counting.html>; *see also* Sonja Hickey, *2012 Prediction: Number of Mobile Apps Increases by Factor of 10*, APM DIGEST, Jan. 5, 2012, *available at* <http://apmdigest.com/2012-prediction-number-of-mobile-apps-increases-by-factor-of-10> (noting that the number of applications available across all four major smartphone platforms (iOS, Android, BlackBerry, and Windows), as of December 5, 2011, is 987,863. That’s an estimate of 2,000 applications being released daily).

⁷⁰ Library of Congress, *Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies (2010 Librarian Order)*, Docket No. RM 2008–8, *Final Rule*, 75 Fed. Reg. 43825, 43828 (July 27, 2010) (exemptions codified at 37 C.F.R. § 201.40(b)(1)-(6)), *available at* <http://www.copyright.gov/fedreg/2010/75fr43825.pdf>.

⁷¹ Cecilia Kang, *Number of Cell Phones Exceeds US Population – CTIA Trade Group*, WASHINGTON POST, Oct. 11, 2011, *available at* http://www.washingtonpost.com/blogs/post-tech/post/number-of-cell-phones-exceeds-us-population-ctia-trade-group/2011/10/11/gIQARNcEcL_blog.html (highlighting that the number of mobile devices rose nine percent in the first six months of 2011, to 327.6 million — more than the 315 million people living in the U.S., Puerto Rico, Guam and the U.S. Virgin Islands. Wireless network data traffic rose 111 percent, to 341.2 billion megabytes, during the same period).

⁷² *Id.*

⁷³ NTIA also notes that mobile apps development has evolved into an international phenomenon. The global market now generates billions of dollars in revenue as demonstrated by a year-old study, which found that worldwide mobile application store revenue is projected to surpass \$15.1 billion in 2011, both from end users buying applications and applications themselves generating advertising revenue for their developers. This is a 190 percent increase from 2010 revenue of \$5.2 billion. *See* Press Release, Gartner Says Worldwide Mobile Application Store Revenue Forecast to Surpass \$15 Billion in 2011 (Jan. 26, 2011), *available at* <http://www.gartner.com/it/page.jsp?id=1529214>.

⁷⁴ *Joint Creators and Copyright Owners Comments* at 19.

these assertions strike a similar chord to those raised in the 2010 proceeding, when Apple was concerned with its reputation and further believed that jailbreaking would “breach the integrity of the iPhone’s ecosystem.”⁷⁵ A few years later, the record now shows that the iPhone has enjoyed tremendous popularity and continues to be one of the most popular mobile devices among users today.⁷⁶ Second, the exemption also has not prevented other manufacturers from introducing new devices fostering innovation and competition. Consumers in today’s mobile market enjoy a vast array of choices both as to devices and services. Therefore, at this juncture, the detrimental effects the opponents allege are speculative in nature.

Having analyzed the record, NTIA is persuaded that designating a class of works that would continue to permit jailbreaking for purposes of interoperability will not adversely affect “the market for or value of the copyrighted works” and will provide relief from the harm proponents demonstrate.⁷⁷ Accordingly, NTIA supports the proposed EFF exemption with a few modifications as supported by the record:

Current Exemption⁷⁸

Computer programs that enable wireless telephone handsets to execute software applications, where circumvention is accomplished for the sole purpose of enabling interoperability of such applications, when they have been lawfully obtained,⁷⁹ with computer programs on the telephone handset.

Proposed Exemption

Computer programs that enable wireless telephone handsets or tablets to execute lawfully obtained software applications, where circumvention is undertaken for the purpose of enabling interoperability of such applications with computer programs on the device.

⁷⁵ 2010 Librarian Order at 43830. NTIA also notes that Apple did not oppose the current proposal to continue the exemption.

⁷⁶ Several reports highlight the popularity of Apple’s iPhone and other Apple products. See e.g., Andre Coutts, *Apple iPhone More Popular Than All Android Smartphones in U.S. Combined in 4Q: Report*, DIGITAL TRENDS, Jan. 25, 2012, <http://www.digitaltrends.com/mobile/apple-iphone-more-popular-than-all-android-smartphones-in-us-combined-in-q4-report> (highlighting that Apple’s market share has doubled over the past year alone, while Android devices have fallen about 5 percent, from a high of 50 percent); Nielsen Wire, *More US Consumers Choosing Smartphones as Apple Closes the Gap on Android*, Jan. 18, 2012, <http://blog.nielsen.com/nielsenwire/consumer/more-us-consumers-choosing-smartphones-as-apple-closes-the-gap-on-android>; John Paczkowski, *Daddy, I Want an iPhone Now!*, ALLTHINGS.D, Apr. 4, 2012, <http://allthingsd.com/20120404/daddy-i-want-an-iphone-now> (noting that 40 percent of teens that don’t have an iPhone are expecting to buy one in the next six months).

⁷⁷ 17 U.S.C. § 1201(a)(1)(C)(iv).

⁷⁸ 37 C.F.R. § 201.40(b)(2).

⁷⁹ NTIA considers the new language in the proposed exemption to be simpler while still making it clear that circumvention is meant to enable the use of lawfully obtained applications. However, NTIA would not be opposed to including this phrase in the final exemption: “when they have been lawfully obtained.”

Wireless Telephone Handsets or Tablets

NTIA is persuaded that the modified language better reflects today's technology.⁸⁰ Additionally, this exemption should apply across platforms and devices where it is necessary to jailbreak or root devices. The record is clear that this exemption is needed for multiple platforms (including, for example, both Android and Apple devices), on both mobile phones and tablets.⁸¹ Moreover, NTIA believes that this change will serve to minimize any confusion on the part of the user. Therefore, NTIA suggests the inclusion of the language "wireless telephone handsets or tablets" to dispel any uncertainty and to further meet current consumer expectations.

Device

The modification is suggested to maintain consistency with the previous change. The term "device" is meant to include both wireless telephone handsets and tablets.

Definition of Tablet

After reviewing the record, NTIA supports EFF's proffered definition of "tablet," noting that this definition appropriately does not constrain the physical dimensions of such a device:

...[A] personal mobile computing device, typically featuring a touchscreen interface, that contains hardware technically capable of running a wide variety of programs and is not marketed primarily as a wireless telephone handset or as a smartphone.⁸²

F. Class 6 – Mobile Phone Unlocking for Network Interoperability

As NTIA noted in the previous proceeding in 2010, proposed exemptions for unlocking mobile phones "raise important issues at the intersection of competition, communication, and copyright law."⁸³ That statement was true then and remains true today. Proponents request renewal of the current exemption to maintain the ability of users to unlock their wireless devices

⁸⁰ *EFF Comments* at 2-4.

⁸¹ The record provides examples of all types of devices and the various non-infringing uses and should remain general. See e.g., *Comments of Josh McCullough*, http://www.copyright.gov/1201/2012/comments/Josh_McCullough.pdf (he states, in part, that he has an Android phone called "an HTC Evo 4G on the Sprint network, and within one month of purchasing it in March 2011 I had rooted the phone and installed a custom software/operating system called Cyanogenmod that allowed my phone to run more smoothly, save internal memory, erase unwanted applications that were included with the factory-stock operating system, and modify the user interface outside the limitations of the stock software.")

⁸² Email from Marcia Hoffman, Senior Staff Attorney, EFF, to Ben Golant, June 6, 2012, http://www.copyright.gov/1201/2012/responses/eff_letter_regarding_exemption_5_definition_tablet.pdf. This definition is intended to include the Apple iPod Touch as well as the iPad and other similar devices, no matter the size.

⁸³ *Strickling Letter 2009* at 8.

to connect to the provider of their choice.⁸⁴ Proponents also seek an expansion of the current language to include all wireless devices, and both data and voice networks.⁸⁵ CTIA, the primary opponent of this proposed class, rejects any further expansion of the current language and has instead proposed to narrow the scope of the exemption.⁸⁶

The record continues to support the conclusions made by the Librarian in the 2010 proceedings. First, proponents have presented a *prima facie* case that “the prohibition on circumvention has had an adverse effect on noninfringing uses of firmware on wireless telephone handsets.”⁸⁷ This is the same type of activity that was at issue in both the 2006 and 2010 proceedings, when the Librarian granted exemptions.⁸⁸ Second, while opponents claim that access controls on network operability protect rights granted by copyright law, it continues to be clear that “the primary purpose of the locks is to keep consumers bound to their existing networks, rather than to protect the rights of copyright owners in their capacity as copyright owners.”⁸⁹ Therefore, after analyzing the evidence introduced by the parties, NTIA is persuaded that an exemption continues to be necessary to permit consumers affected by access controls to unlock their phones.

Alternatives to Circumvention

CTIA argues that alternatives to circumvention now available to consumers make an exemption unnecessary. They discuss at least two alternatives: (1) wireless carriers have implemented policies allowing consumers to unlock mobile phones in certain limited

⁸⁴ Comments of Consumers Union (*CU Comments*) at 2, Docket No. RM 2011-7, http://www.copyright.gov/1201/2011/initial/consumers_union.pdf; Comments of Youghioghenny Communications, LLC (*Youghioghenny Comments*) at 1, Docket No. RM 2011-7, http://www.copyright.gov/1201/2011/initial/youghioghenny_comm.pdf; Comments of MetroPCS Communications, Inc. (*MetroPCS Comments*) at 1, Docket No. RM 2011-7, <http://www.copyright.gov/1201/2011/initial/metropcs.pdf>; Comments of RCA – The Competitive Carriers Association (*RCA Comments*) at 1, Docket No. RM 2011-7, <http://www.copyright.gov/1201/2011/initial/rca.pdf>.

⁸⁵ *CU Comments* at 2-5; *Youghioghenny Comments* at 2-5; *MetroPCS Comments* at 4-8; *RCA Comments* at 7-11.

⁸⁶ Comments of CTIA – The Wireless Association (*CTIA Comments*) at 63, Docket No. RM 2011-7, http://www.copyright.gov/1201/2012/comments/Bruce_G._Joseph.pdf. The Joint Creators and Copyright Owners take no position on this proposed class, but recommend that “the Register... proceed[s] cautiously and only recommend a narrowly tailored exemption, if the proponents meet their burden.” *Joint Creators and Copyright Owners Comments* at 32.

⁸⁷ *2010 Librarian Order* at 43830.

⁸⁸ See *2010 Librarian Order* at 43830-32; see also Library of Congress, Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, Docket No. RM 2005–11, *Final Rule*, 71 Fed. Reg. 68472, 68476 (Nov. 27, 2006), available at <http://www.copyright.gov/fedreg/2006/71fr68472.pdf> (*2006 Librarian Order*).

⁸⁹ *2010 Librarian Order* at 43831; *2006 Librarian Order* at 68476 (the Librarian similarly concluded then that “the access controls do not appear to actually be deployed in order to protect the interests of the copyright owner or the value or integrity of the copyrighted work; rather, they are used by wireless carriers to limit the ability of subscribers to switch to other carriers, a business decision that has nothing whatsoever to do with the interests protected by copyright”).

circumstances;⁹⁰ and (2) consumers can now purchase a wider range of unlocked devices.⁹¹ NTIA does not believe either option to be a fully viable alternative to circumvention.

While the record does show that some carriers are unlocking wireless devices on behalf of their customers, it also indicates that carriers generally will only perform this service under certain conditions. Those conditions include, for example, minimum days of continuous service,⁹² the expiration of handset exclusivity associated with the carrier,⁹³ a minimum usage of credit,⁹⁴ or prior proof of purchase.⁹⁵ While such policies may, in some circumstances, provide an alternative to circumvention, the evidence presented in the record does not obviate the need for an exemption for several reasons. First, it is unlikely that these policies will serve a large portion of device owners. For example, the common denominator present in the cited terms and conditions is that the owner of the phone must be a current “customer” or “subscriber” of the carrier requested to unlock the phone.⁹⁶ This requirement excludes those that obtain a device from a family member, relative, friend, or other lawful source; those users must then resort to the current exemption to unlock such devices, especially if they cannot locate the original proof of purchase. Second, some carriers refuse to unlock certain devices. For example, until recently⁹⁷ AT&T’s terms deemed the Apple iPhone as “not eligible to be unlocked.”⁹⁸ An exemption is thus warranted to allow iPhone users, as well as users of other devices excluded by such policies, to unlock their devices.⁹⁹ Third, an exemption continues to be needed because some of the policies cited dictate that, in order to unlock a device, the carrier must have the necessary code or the ability to reasonably obtain it, therefore it is possible for a consumer to meet the unlocking policy and still be unable to have his device unlocked if the carrier does not possess or is unable to obtain the required information.¹⁰⁰

⁹⁰ See *CTIA Comments* at 8-10 (CTIA introduced the policies of Verizon Wireless, AT&T, T-Mobile, Virgin Mobile, and MetroPCS).

⁹¹ See *CTIA Comments* at 44.

⁹² See *CTIA Comments* at 8-10 (e.g., T-Mobile generally requires a minimum of 40 days of service, and 60 days and at least \$10.00 or a prior refill within the last 30 days if it’s a prepaid account; AT&T requires 90 days and the customer’s account to be current and in good standing).

⁹³ See *CTIA Comments* at 8-10.

⁹⁴ See *CTIA Comments* at 8-10. (e.g., T-Mobile requires \$10.00; Virgin Mobile prepaid customers can have their phones unlocked if they have spent at least \$80.00 of recharge credit).

⁹⁵ See *CTIA Comments* at 8-10.

⁹⁶ See *CTIA Comments* at 8-10.

⁹⁷ News reports indicate that AT&T will now unlock iPhones under certain circumstances. NTIA is encouraged by this development, but does not change its position with respect for the need of the exemption for the reasons detailed above. See e.g., <http://thenextweb.com/mobile/2012/04/08/atts-iphone-unlock-process-detailed-a-quick-online-chat-apple-does-the-unlocking-requires-imei-only/>.

⁹⁸ *Id.* at 9 (AT&T also notes that “certain other devices” are not eligible to be unlocked but does not disclose exactly which devices).

⁹⁹ See e.g., *Comments of Nancy Wallis (Comments of Nancy Wallis)*, http://www.copyright.gov/1201/2012/comments/Nancy_Wallis.pdf (she lives in Montana and purchased a used iPhone, which she had to unlock and change from the original carrier to a local one.)

¹⁰⁰ *CTIA Comments* at 8-9.

NTIA is not persuaded that the current availability of unlocked devices or carriers unlocking devices warrants denying this exemption.¹⁰¹ First, carriers may not unlock certain devices. For example, proponents note that certain carriers have policies locking devices to their network or will not unlock certain devices or provide codes for unlocking.¹⁰² Next, proponents further point out that while at least one carrier sells certain phones that are unlocked, many legacy phones and even prepaid phones are still locked to this carrier. While NTIA does not advocate here that all phones must be unlocked in order to obviate the need for this exemption, the record demonstrates that the majority of phones remain locked.¹⁰³ Additionally, circumstances may dictate the need to unlock to connect to an available carrier, even when a currently owned device is ineligible for carrier unlocking. For example, customers may relocate or live in an area without coverage or with poor coverage and desire to switch carriers for better service.¹⁰⁴

CTIA has further indicated that “[u]nlocked (unsubsidized) phones are freely available from third party providers – many at very low prices.”¹⁰⁵ CTIA then suggests that “[i]f a consumer seeks to connect to a preferred wireless carrier, phones that will enable him or her [to] do so are readily available in the marketplace for a fee.”¹⁰⁶ Therefore, “there is no reason to create an exemption to the statutory prohibition simply to enable the user to keep using the old phone.”¹⁰⁷

Therefore, in determining whether a proposal is a viable alternative to circumvention of access controls, the Register should consider not just whether there are other devices available to achieve the non-infringing use, but also whether users can avail themselves of the suggested alternatives without encountering significant barriers. For example, these barriers may include prohibitive costs to unlock, lack of attractive or popular devices for unlocking, or requiring the consumer to purchase a new device. In particular, NTIA does not support the notion that it is an appropriate alternative for a current device owner to be required to purchase another device to switch carriers.¹⁰⁸

In sum, NTIA commends the decisions of certain wireless companies to provide an alternative to circumvention and encourages others to follow suit. Not only do these policies avoid the need to circumvent in some circumstances, but they also help those users that may not

¹⁰¹ The Federal Communications Commission reports that “most handsets sold in the United States are “locked,” meaning that they normally will operate only on a single wireless network.... The ability of a consumer to unlock a handset depends on the service provider.” *Implementation of Section 60029b) of the Omnibus Budget Reconciliation Act of 1993; Annual Report and Analysis of Competitive Market Conditions With Respect to Mobile Wireless, Including Commercial Mobile Services, Fifteenth Report*, 26 FCC Record 9664, at 152 (*FCC Fifteenth Report*) http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-11-103A1.pdf.

¹⁰² Reply Comments of MetroPCS Communications, Inc. on the Notice of Proposed Rulemaking, Docket No. RM 2011-07 (March 2, 2012) (*MetroPCS Reply Comments*), http://www.copyright.gov/1201/2012/comments/reply/metropcs_communications.pdf (citing to AT&T policies).

¹⁰³ *FCC Fifteenth Report* at 152.

¹⁰⁴ *Comments of Nancy Wallis* at 1; *MetroPCS Reply Comments* at 19.

¹⁰⁵ *Id.* at 5.

¹⁰⁶ *Id.* at 44.

¹⁰⁷ *Id.*

¹⁰⁸ *RCA Comments* at 3 (citing *FCC Fifteenth Report* at 152).

have the necessary technological skills or required equipment to unlock their devices. However, at this juncture, an exemption remains necessary.

Exemption Language

Having analyzed the record and the different proposals submitted, NTIA recommends that the Librarian designate a class of works that would continue to permit circumvention to allow network interoperability in wireless devices because such exemption will not adversely affect “the market for or value of the copyrighted works,” and will provide relief from the harm detailed by the proponents.¹⁰⁹ Accordingly, the following exemption accepts several of the proposed modifications to the 2010 exemption, but also strikes a balance with the opponents’ concerns and the current state of the marketplace. As the underlined text indicates below, the proposed exemption is substantially similar to the one the Librarian adopted in 2006 and 2010.¹¹⁰

Current Exemption¹¹¹

Computer programs, in the form of firmware or software, that enable used wireless telephone handsets to connect to a wireless telecommunications network, when circumvention is initiated by the owner of the copy of the computer program solely in order to connect to a wireless telecommunications network and access to the network is authorized by the operator of the network.

Proposed Exemption

Computer programs, in the form of firmware or software (including data used by those programs) that enable used wireless devices to connect to a wireless network that offers telecommunications and/or information services, where circumvention is initiated by the owner of the copy of the computer program to connect to a wireless network that offers telecommunications and/or information services and access to the network is authorized by the operator of the network.

Data Used by Those Programs

NTIA is persuaded by proponents that the language “including data used by those programs” is warranted to provide clarity, because “the required adjustments for [network] interoperability often do not require changing large sections of code but, rather, accessing and changing the data that is used by such code.”¹¹² This rationale is consistent with the Librarian’s 2010 determination that such minor alterations of data do not rise to the level of infringing the rights

¹⁰⁹ 17 U.S.C. §1201(a)(1)(C)(iv).

¹¹⁰ See *2010 Librarian Order* at 43829; *2006 Librarian Order* at 68479-80.

¹¹¹ 37 C.F.R. § 201.40(b)(3).

¹¹² See *Youghioghenny Comments* at 2; *MetroPCS Comments* at 4 (MetroPCS asserts that such modifications are consistent with the 2010 conclusions of the Librarian and the Copyright office).

of copyright owners.¹¹³ NTIA is persuaded by the record that such rationale remains sound and supports the modification.

Wireless Devices

Regarding “wireless devices,” NTIA is persuaded by proponents that the modification is needed to better reflect the current marketplace and to avoid confusion.¹¹⁴ The line that distinguishes a mobile phone from other wireless devices is increasingly disappearing,¹¹⁵ and this effect is only exacerbated by the introduction of tablets and devices characterized as “hybrids”¹¹⁶ that are fully capable of connecting to wireless communications networks. This change is intended to ensure that the exemption can be utilized by the owners of wireless devices that are capable of connecting to a wireless communications carrier, including but not limited to smartphones, tablets, and hybrid devices.

NTIA does not concur with the opponents’ claim that a case must be made for *each* device before an exemption for unlocking purposes is granted.¹¹⁷ This proceeding requires the Librarian to “publish any class of copyrighted works for which the Librarian has determined . . . that noninfringing uses by persons who are users of a copyrighted work are, or are likely to be, adversely affected, and the prohibition [against circumvention] shall not apply to such users with respect to such class of works.”¹¹⁸ Thus, the focus is to determine the particular “class of copyrighted works” that would be exempted from the prohibition against circumvention, not to ascertain where such works may appear. Simply put, the purpose of this exemption is to allow any device technically and otherwise legally capable of connecting to a wireless communications network to do so, despite the presence of relevant access controls that prevent such ability. Accordingly, NTIA supports the modification.

Wireless Network that Offers Telecommunications and/or Information Services

Proponents suggest changing the current “telecommunications network” language to “communications networks” for clarification purposes. Consumers Union proposes the modification with the understanding that “both telecommunications and information services fall under the umbrella of ‘communications network’.”¹¹⁹ Likewise, MetroPCS seeks the change to eliminate “ambiguity surrounding whether data-centric devices . . . can be unlocked for the purposes of substantially operating over a competing carrier’s data network.”¹²⁰ Given that the

¹¹³ *2010 Librarian Order* at 43831 (“[w]hen specific codes or digits are altered to identify the new network to which the phone will connect, those minor alterations of data [] do not implicate any of the exclusive rights of copyright owners”).

¹¹⁴ *CU Comments* at 2; *Youghioghenny Comments* at 2; *MetroPCS Comments* at 4-5.

¹¹⁵ *CU Comments* at 2; *Youghioghenny Comments* at 2; *MetroPCS Comments* at 4-5.

¹¹⁶ Devices such as the Samsung Galaxy Note are marketed as “offering the best of a smartphone with the best of a tablet” thereby rendering a hybrid or a “phablet.” See Melissa Daniels, *Galaxy Note “Phablet” is a Hybrid Hit*, MOBILEEDIA (Mar. 28, 2012), available at <http://www.mobiledia.com/news/135375.html>.

¹¹⁷ *Joint Creators and Copyright Owners Comments* at 33; *CTIA Comments* at 53-55.

¹¹⁸ 17 U.S.C. § 1201(c).

¹¹⁹ *CU Comments* at 4-5.

¹²⁰ *MetroPCS Comments* at 6.

networks of wireless carriers are now able to increasingly serve as the conduit for the transmission of different type of information including voice signals, text messages, and Internet data, NTIA is persuaded that the better terminology in current commerce is “wireless network that offers telecommunications and/or information services.” NTIA notes that this language is a departure from what either the proponents or the opponents advocate, but the term “communications network” is not a settled term in the law, and our proposed language is more consistent with the Telecommunications Act nomenclature.¹²¹ This additional language both captures the essence of what the proponents are seeking and reflects the current state of the wireless industry.

G. Classes 7 and 8 – Audiovisual Works for Educational Purposes, Documentaries, Multimedia e-Books, and Noncommercial Videos

The current exemption permits circumvention for (1) educational use by college and university professors and film and media studies students; (2) documentary films; and (3) noncommercial videos.¹²² This exemption embodies the values of the triennial proceeding, which is aimed at promoting non-infringing uses such as fair use. NTIA is cognizant of the piracy issues presented by the opponents, but emphasizes that these exemptions are neither aimed at, nor capable of, legalizing infringement of copyrighted works. NTIA also finds it compelling that the current version of this exemption has been in place for six years, with some limited expansion in 2010, and opponents have not presented any evidence of abuse or harm to content owners over that time period. To the contrary, the record indicates that the current exemption is working as intended.¹²³

Opponents argue there are sufficient alternatives to circumventing online video and fixed-disc media, including screen capture software, cell phone capture, license agreements, and video

¹²¹ See 47 U.S.C. § 153(24) (“The term ‘information service’ means the offering of a capability for generating, acquiring, storing, transforming, processing, retrieving, utilizing, or making available information via telecommunications”); 47 U.S.C. § 153(53) (“The term ‘telecommunications service’ means the offering of telecommunications for a fee directly to the public”); 47 U.S.C. § 153(50) (“The term ‘telecommunications’ means the transmission, between or among points specified by the user, of information of the user’s choosing, without change in the form or content of the information as sent and received.”)

¹²² 37 C.F.R. § 201.40 (b)(1)(i)-(iii).

¹²³ *EFF Comments* at 38-43; Comments of the University of Michigan Library (*U.Michigan Comments*) at 1-4, Docket No. RM 2011-7, http://www.copyright.gov/1201/2011/initial/levine_u_michigan_library.pdf (citing multiple uses of audiovisual works in the arts and sciences); Comments of the International Documentary Association [sic] *et al.* (*IDA Comments*) at 4-6, Docket No. RM 2011-7, http://www.copyright.gov/1201/2011/initial/IDA_Mark_Berger.pdf; Comments of Peter Decherney *et al.* (*Decherney Comments*), Docket No. RM 2011-7, http://www.copyright.gov/1201/2011/initial/peter_decherney.pdf (noting that “[t]he current exemption has been used to teach courses in subjects as varied as Biology, South Asian Studies, English, History, Art History, Communication, Film, Law, Drama, and Sociology. As a result of this exemption, professors have cut down on the time previously spent switching discs and clicking through menus and advertisements; it has improved the quality of clips that can be used in class; and it has allowed both professors and media studies students to make clips from films, television shows, and DVD extras that are not available in other formats and are extremely valuable for teaching. Most importantly, the exemption has permitted professors and media studies students to take advantage of presentation and editing software that enables them to show clips side-by-side, mix clips with stills and text on the same screen, and annotate clips with voiceover narration and/or hand-drawn notes.”).

clip websites.¹²⁴ NTIA staff were able to experience firsthand some of these contemplated alternatives during presentations held at the Copyright Office with the parties involved. After taking those options into consideration, however, NTIA does not believe that there exist sufficient alternatives to obviate the need for an exemption due to several factors. Generally, the technological alternatives produce low-quality videos, and associated license agreements often impose significant content limitations on the final work product. Documentarians and filmmakers are particularly hindered by poor quality video, which does not meet the industry’s strict technical standards.¹²⁵ As for educators and students, screen capture software and hardware may not be universally available due to high costs and tight budgets,¹²⁶ and even those educators and students that are able to access such software and hardware may find the quality insufficient for the pedagogical purpose and distracting in a classroom setting.¹²⁷ Finally, proponents argue that video clip websites offer too limited of a selection to serve fair use needs in most cases.¹²⁸ Furthermore, proponents have introduced evidence supporting the conclusion that copyright license negotiations are expensive and burdensome, especially when the licensee seeks to critique the copyrighted work.¹²⁹ Proponents note that these burdens alone provide ample reason to support exemptions for documentary filmmakers, consistent with the Register’s previous recommendation.¹³⁰

Therefore, with the following consideration, NTIA supports a continuation of the current exemption as well as several proposed expansions described below.

Current Exemption¹³¹	Classes 7 and 8 Proposed Exemption
Motion pictures on DVDs that are lawfully made and acquired and that are protected by	Motion Pictures <u>and other similar audiovisual works</u> ¹³² on DVDs <u>or delivered via</u>

¹²⁴ See e.g., Comments of the DVD Copy Control Association (*DVDCCA Comments*), Docket No. RM 2011-7, <http://www.copyright.gov/1201/2012/comments/DVD%20CCA.pdf>.

¹²⁵ *IDA Comments* at 15.

¹²⁶ See Transcript, Hearing on Exemption to Prohibition on Circumvention of Copyright Protections Systems for Access Control Technologies, Section 1201 – Digital Millennium Copyright Act, 105 (June 4, 2012) (*June 4 Transcript*), http://www.copyright.gov/1201/hearings/2012/transcripts/section%20_1201%20_06-04-2012.pdf (mentioning the higher costs of better quality software). Proponents also suggest many educators might not have the technical knowledge to operate screen capture software. *Id.* at 112.

¹²⁷ Comments of the Media Education Lab at the Harrington School of Communication and Media at the University of Rhode Island (*URI Comments*) at 10-11, Docket No. RM 2011-7, http://www.copyright.gov/1201/2011/initial/media_edu_lab.pdf; *June 4 Transcript* at 32.

¹²⁸ Reply Comments of Peter Decherney *et al.* (*Decherney Reply*) at 5-6, Docket No. RM 2011-7, http://www.copyright.gov/1201/2012/comments/reply/peter_decherney.pdf.

¹²⁹ *Decherney Reply* at 9-10; *IDA Comments* at 15-17 (One presenter described numerous difficulties in attempting to get permission to utilize ten seconds of the motion picture “Toy Story.”).

¹³⁰ This may include Errors and Omission insurance, which by itself may impose a burden on some filmmakers, but should be utilized when available. See *Decherney Reply* at 7 (“media insurers issue fair use endorsements on E&O insurance, but only when supported by both an opinion letter from an attorney asserting that the use of the copyrighted materials comports with the doctrine of fair use and an independent assessment by the media insurance company.”).

¹³¹ 37 C.F.R. § 201.40(b)(1)(i)-(iii).

¹³² Some proponents propose the use of the term “audiovisual works” while others propose the use of “motion picture” to define the class of work contemplated for this exemption. NTIA believes the former term better reflects

the Content Scrambling System when circumvention is accomplished solely in order to accomplish the incorporation of short portions of motion pictures into new works for the purpose of criticism or comment, and where the person engaging in circumvention believes and has reasonable grounds for believing that circumvention is necessary to fulfill the purpose of the use in the following instances:

- (i) Educational uses by college and university professors and by college and university film and media studies students;
- (ii) Documentary filmmaking;
- (iii) Noncommercial videos

Internet Protocol that are lawfully made and acquired when circumvention is accomplished solely in order to incorporate short portions of audiovisual works into new works for the purpose of fair use,¹³³ and where the person engaging in circumvention believes and has reasonable grounds for believing that circumvention is necessary to fulfill the purpose of the use in the following instances:

- (i) Educational Uses by College and University Professors and College Students;
- (ii) Educational Uses by K-12 Educators;
- (iii) Documentary Filmmaking;
- (iv) Primarily Noncommercial Videos;
- (v) Nonfictional or Educational Multimedia e-Books

Content Delivered via Internet Protocol

Proponents seek to circumvent access controls on IP-delivered video and Blu-Ray discs in addition to DVDs. While it is difficult to exhaustively identify the specific access controls online video distributors use to protect IP-delivered works, it is clear that they exist.¹³⁴ Online content is becoming more prevalent, with many works delivered exclusively through an online platform.¹³⁵ Proponents have convincingly demonstrated a need to access such works; therefore, NTIA supports the inclusion of content streamed via Internet Protocol.

the record in this case, which now includes television programs such as news that are contained on DVDs or delivered via Internet Protocol. NTIA notes that in some cases, television programs, for example, have been defined as audiovisual works, but have not been defined as “motion pictures.” See *WGN Continental Broadcasting Co. v. United Video, Inc.* 693 F.2d 622 (7th Cir. 1982). We believe this exemption should include these types of works and the record supports this notion. This expansion should not include some other works that may be defined by copyright law as “audiovisual works,” such as video games. The record does not support the expansion of this exemption to include these other works. See 17 U.S.C. § 101; see e.g., *Midway Mfg Co. v. Artic Intern’l, Inc.*, 704 F.2d 1009 (7th Cir. 1983)(defines video games as audiovisual works under copyright law). NTIA therefore supports the statutory class as stated in 17 U.S.C. §101 used here with a slight modification: “Motion pictures and other similar audiovisual works ...” to keep the exemption narrow.

¹³³ NTIA does not include the phrase “for the purpose of criticism or comment” in the proposed exemption because that phrase is too narrow. Instead, the phrase “for the purpose of fair use” is more appropriate as it includes those uses defined by the 17 U.S.C. §107, such as criticism, comment, news reporting, teaching, scholarship, and research. The record contains examples of these uses.

¹³⁴ *Decherney Reply* at 14. Proponents have explained that online distributors constantly change access controls with ease.

¹³⁵ *Id.* at 13.

NTIA is not prepared, however, to support extending the exemption to include audiovisual works on Blu-Ray discs at this time. DVD is the dominant format and, in concert with the inclusion of IP-delivered video, provides a sufficient alternative to circumventing access controls used in Blu-Ray media.¹³⁶ A vast majority of content is released in both DVD and Blu-Ray formats, with very few works released exclusively on Blu-Ray. Should proponents need access to high-definition content, NTIA's proposed exemption is intended to include high-definition media delivered online.¹³⁷

All College and University Professors and College Students; K-12 Educators

The current exemption permits all college and university professors to circumvent for educational uses, but limits student use to those in film and media studies classes.¹³⁸ NTIA supports expanding the exemption to include all college and university students, in addition to all K-12 educators.¹³⁹ Proponents have demonstrated a need for all higher education students to incorporate audiovisual media into classroom assignments and its benefits to the learning experience.¹⁴⁰ Given the multimedia nature of today's cultural expression, classroom use of video clips is necessary to aid instruction across a wide range of subjects. Proponents have also demonstrated that K-12 classrooms similarly benefit from the inclusion of audiovisual works in lessons and other pedagogical uses.¹⁴¹ As new technology becomes more prominent in society, classrooms should be encouraged to similarly evolve. Regardless of students' particular field of study, incorporating multimedia teaching methods better prepares them for life in a digital age. NTIA is optimistic that schools will be proactive in preventing abuse of the exemption by educating students and professors on the relevant law, and by developing "best practices" or other guidelines to help clarify any confusion on the part of such users.

Documentary Filmmakers; Primarily Noncommercial Videos

NTIA supports continuing the exemption for documentary filmmakers and noncommercial videos, as well as expanding it to include multimedia e-books. Documentary films are a paradigmatic fair use of copyrighted works and provide beneficial commentary on important issues. Noncommercial videos, such as "vids,"¹⁴² regularly contribute to public discourse by granting the general public the ability to use copyrighted works for non-infringing purposes.¹⁴³

¹³⁶ See Comments of the Advanced Access Content System Licensing Administrator, LLC (*AACSLA Comments*) at 20-24, Docket No. RM 2011-7, http://www.copyright.gov/1201/2012/comments/Bruce_H_Turnbull.pdf.

¹³⁷ See *IDA Comments* at 2 (claiming documentarians sometimes need to incorporate high-definition content).

¹³⁸ *2010 Librarian Order* at 43827.

¹³⁹ NTIA did not support the extension to K-12 educators in 2010 because proponents did not present enough evidence demonstrating harm. See *Strickling Letter 2009* at 4. In this proceeding, the proponents have cited multiple studies and included educator testimony that incorporating video leads to higher levels of student engagement. They have also demonstrated the increasing use of video in the classroom setting. See also *URI Comments* at 5.

¹⁴⁰ *Decherney Comments* at 21-24.

¹⁴¹ *URI Comments* at 5, 9.

¹⁴² *EFF Comments* at 40 (The EFF explains that "vids" are video remixes created "by combining clips from one or more sources with music, often in order to comment on the works in question.").

¹⁴³ *EFF Comments* at 36-37.

NTIA notes that some proponents of the noncommercial video exemption request that the language be “*primarily noncommercial works*.”¹⁴⁴ The noncommercial language is intended to limit uses to those supported by fair use, but it is also true that some commercial uses are also fair use.¹⁴⁵ NTIA believes expanding the language to “primarily noncommercial” would eliminate some confusion about whether a legitimate fair use that may generate some revenue (such as a “vid” posted to a video sharing site) qualifies for the exemption.¹⁴⁶

Nonfictional and Educational Multimedia e-Books

Proponents advanced a proposed exemption for multimedia e-books that holds great potential for educational and noninfringing uses such as a comment and criticism.¹⁴⁷ Proponents argue that multimedia e-books are “an important and rapidly expanding form of authorship and communication in today’s society . . . [and] are capable of intermingling literary and audiovisual materials . . . [where] [f]or the first time, authors can make important visual and audiovisual arguments that were not possible solely with the use of static text and still images.”¹⁴⁸ Proponents note that e-books are now capable of processing and storing the multimedia content; however, use of short audiovisual clips is hindered by the prohibition against circumvention.¹⁴⁹ Proponents furnish ample examples of harm when authors attempt to procure licenses to use clips in e-books, including prohibitive costs and terms.¹⁵⁰ The record contains examples and demonstrations by university professors who would use this exemption to create e-books, largely for educational purposes.¹⁵¹ For example, one author proposes to present an argument in her

¹⁴⁴ *Id.* at 57.

¹⁴⁵ See e.g., *Campbell v. Acuff-Rose Music, Inc.* 510 U.S. 569 (1994).

¹⁴⁶ EFF provided some additional examples that included a website hosted by a film critic that also generate some revenue from ads to help cover costs of software, equipment and hosting or video editors. *EFF Comments* at 37-38. However, opponents argue that the EFF advocated a definition of primarily noncommercial that is very broad and would open the exemption for nearly “all videos that are not themselves advertisements.” *Joint Creators and Copyright Owners Comments*, at 39. NTIA does not believe the latter interpretation would be appropriate. The exemption should be limited to those instances where the work itself is not being made available for sale, rent, or other distribution, and the primary purpose is not to generate income for the creator of the work. Therefore, incidental income generated from ads can be appropriate under this formulation.

¹⁴⁷ This is an example of the utility of conducting this proceeding every three years, as this use of e-books did not exist when the previous proceeding occurred. Multimedia e-books incorporate video and audio content. The content is embedded into the actual e-book file so readers can view or listen to clips as they read the text. See Comments of Mark Berger *et al.* (*Berger Comments*), Docket No. RM 2011-7, http://www.copyright.gov/1201/2011/initial/IDA_Mark_Berger.pdf (describing purposes such as criticism, comment, news reporting, teaching, scholarship, or research).

¹⁴⁸ See e.g., *Berger Comments*, at 3.

¹⁴⁹ *Id.* at 5; see e.g., *Comments of Patricia Augderheide*, University Professor and Director of the Center for Social Media, School of Communication, American University (Feb. 2, 2012), http://www.copyright.gov/1201/2012/comments/Patricia_Aufderheide.pdf (she is using this tool to develop books and teach history and ethics of documentary film, using clips from a PBS *Nova* program entitled “Is Wal-Mart Good for America?” and Brave New Films’ *Wal-Mart: The High Cost of Low Price.*).

¹⁵⁰ *Berger Comments* at 7.

¹⁵¹ See e.g., *Comments of Tony Conrad*, SUNY Distinguished Professor, Department of Media Study, University of Buffalo (Feb. 4, 2012), http://www.copyright.gov/1201/2012/comments/Tony_Conrad.pdf; Comments of University Film & Video Association, Rob Sabal, President (Feb. 9, 2012), http://www.copyright.gov/1201/2012/comments/Robert_Sabal.pdf (increasingly important for scholarly and educational purposes); *Comments of Chiara Ferrari*, Assistant Professor, California State University, Chico,

book comparing “threshold moments” in certain movies, using short clips to demonstrate the point. She notes that written text would be inadequate to describe the scenes, while a visual demonstration is powerful and clear.¹⁵² The record does not support other uses beyond the creation of nonfictional or educational e-books and therefore the exemption should be narrowed using the language “nonfictional or educational.”

Fictional Films

Another proposed expansion is the inclusion of “fictional films,” which commonly incorporate audiovisual clips to parody or comment on copyrighted works as a form of fair use.¹⁵³ NTIA does not believe the record supports this exemption.¹⁵⁴ In essence this exemption expands the exemption granted to documentary filmmakers to include all other filmmakers.¹⁵⁵ Evidence in the record does not provide adequate description or definition of this class of users to suggest otherwise. Furthermore, it is unclear whether this group of filmmakers struggles to obtain licenses for the works they intend to use beyond mere inconvenience, unlike documentary filmmakers.¹⁵⁶ Therefore, NTIA agrees that the proponents have not met the burden for this proposed exemption as presented.¹⁵⁷

H. Class 9 – Audiovisual Works for Improved Accessibility

With the 21st Century Communications Video Accessibility Act (CVAA), Congress recognized that the information divide is leaving behind persons with disabilities.¹⁵⁸ Proponents

http://www.copyright.gov/1201/2012/comments/Chiara_Ferrari.pdf (“I am currently working on an e-book in communication criticism to create an open source text that allows for multiple authors and participants and I anticipate being able to use this exemption for the first and following editions of this book.”)

¹⁵² *Berger Comments* at 8 (Bobette Buster is authoring the book *The Use of Cinematic Enchantment: Deconstructing Master Filmmakers* where she would like to use film clips from films in the 1970s and 1980s, but can do so without circumventing TPMs on the DVD.) NTIA witnessed a demonstration in the June 4, 2012 hearing that supports this assertion. She demonstrated certain scenes from *Toy Story II* and *III*, *Schlinder’s List*, and *Godfather* to demonstrate the emotion of cinema, among other points, all of which she would like to make in her e-book but cannot without the exemption. Bobette Buster, Film Professor, screenwriter, and producer, Testimony, Washington, D.C., June 4, 2012, Transcript at 169-178.

¹⁵³ *IDA Comments* at 6-7; *IDA Reply* at 3-4.

¹⁵⁴ NTIA can imagine situations where an independent filmmaker is producing a fictional film that includes parody or other social commentary, which may include short clips from audiovisual works protected by a TPM, that may qualify as fair use. However, the current record does not give us that example and therefore the case has not been made for fictional films.

¹⁵⁵ NTIA notes that in the record, advocates for the documentary and fictional filmmaking generally only speak to the former and not the latter. In other documents, the advocates simply resort to the shortened term “filmmakers” to describe the class. NTIA is not convinced that the record is developed with evidence of the need for this category. See e.g., *IDA Reply* at 4; Comments of Film Independent, Chicago Filmmakers, Kindling Group, Kirby Dick, Jeffrey, Kusama-Hinte, J S Mayank, David Novack, and Laurence Thrush (*Comments of Film Independent, et al.*) http://www.copyright.gov/1201/2012/comments/laurence_thrush.pdf; *Comments of Elizabeth Coffman*, http://www.copyright.gov/1201/2012/comments/Elizabeth_Coffman.pdf (notes her using short clips for documentary films from news and movies, but does not mention fictional filmmaking.)

¹⁵⁶ See e.g., *Joint Creators and Copyright Owners Reply* at 42.

¹⁵⁷ See e.g., *AACSLA Comments* at 25.

¹⁵⁸ *Report of the Senate Committee on Commerce, Science, and Transportation*, Twenty-First Century Communications and Video Accessibility Act of 2010, S. Rep. No. 111-386, at 1-2 (2010) (“If certain current and

introduce four new proposed exemptions that promise improved accessibility to audiovisual works for the visually and hearing impaired. The first two would enable circumvention of access controls on IP-delivered audiovisual works for creating, improving, or rendering: (1) visual representations of audible portions; and (2) audible descriptions of visual portions.¹⁵⁹ The second pair of exemptions would similarly enable creating, improving, or rendering visual representations and audible descriptions from works on fixed-disc media.¹⁶⁰

In support of these four proposals, proponents assert three particular categories of uses that would benefit from an exemption: research, improvement of accessibility features by third parties (“crowdsourcing”), and individual use.¹⁶¹ For example, researchers at Gallaudet University aspire to create a software tool that enables individual users to add, improve, and customize closed captions and video descriptions.¹⁶² They envision developing a specialized media player that users can run when playing a DVD on their computer or watching an online video. The process would invoke the help of volunteer crowdsourcers, who would be able to create captions and descriptions, or correct and improve captions and descriptions already accompanying an audiovisual work they have lawfully obtained.¹⁶³ They would then upload the electronic files they have created to an online database. Individual users with visual or hearing impairments would then be able to access the database through the software program and overlay the corresponding accessibility features while viewing an audiovisual work they have lawfully acquired. To be clear, the program itself would not include the functionality that enables individual users or crowdsourcers to circumvent access controls.¹⁶⁴ Rather, the media player will only play already decrypted media files.

emerging technologies are not accessible to the disabled community, this economic disparity may increase. Enhanced accessibility could help diminish this economic divide.”).

¹⁵⁹ Comments of the Telecommunications for the Deaf and Hard of Hearing, Inc. *et al.* (*TDI Comments*), Docket No. RM 2011-7, http://www.copyright.gov/1201/2011/initial/IPR_TDI_gallaudetU.pdf (detailing all four proposals). TDI also argues for a more broad exemption to cover accessibility for many technologies. While NTIA may be sympathetic to this position, TDI did not make the case for a more broadly applied exemption to the DMCA for every technology that may impede accessibility. Reply Comments of the Telecommunications for the Deaf and Hard of Hearing, Inc. *et al.* (*TDI Reply*), Docket No. RM 2011-7, http://www.copyright.gov/1201/2012/comments/reply/tdi_gallaudet.pdf.

¹⁶⁰ *TDI Comments* at 1-2.

¹⁶¹ *Id.* at 7, 14, 16.

¹⁶² The proponents intend this exemption to include this research and other research by other entities and individuals to benefit accessibility. Frequently the text argues generally for researchers and technologists. *See e.g., Id.* at 5 (“These exemptions are particularly important to clear the way for accessibility technologists to fill gaps in recent legislation and regulatory efforts to require the captioning and video description of digital video programming.”)

¹⁶³ Generally, “crowdsourcing” is a process that involves outsourcing tasks to a distributed group of people instead of allocating such tasks to a single individual. In the context of this proposed exemption, “crowdsourcers” refers to those individuals that would contribute their efforts to make audiovisual works accessible. *See Id.* at 17 (“Yet accessibility technologists and researchers are poised to fill in missing captions and video descriptions with technologies that harness the power of the Internet to coordinate legions of volunteers to transcribe captions and video descriptions for videos distributed over IP and on fixed media.”)

¹⁶⁴ *See* Transcript, Hearing on Exemption to Prohibition on Circumvention of Copyright Protections Systems for Access Control Technologies, Section 1201 – Digital Millennium Copyright Act, 124-25 (June 5, 2012), http://www.copyright.gov/1201/hearings/2012/transcripts/section_1201_06-05-2012.pdf (*June 5 Transcript*).

The software tool proponents seek to develop illustrates the incredible potential of Internet technology and the advantage of a crowdsourcing network in facilitating improved accessibility. No company could afford or spare the time to closed caption every video hosted by the leading video sharing sites, or to add video descriptions to every video news clip across the online news media.¹⁶⁵ NTIA believes this exemption will open the doors for innovation and empower the millions of Americans with visual and hearing disabilities to participate to the fullest possible extent in our society’s multimedia culture. It will encourage developers to provide the accessibility tools needed for the visually and hearing impaired communities.¹⁶⁶

Proponents have demonstrated that the prohibition on circumvention has substantially adversely affected their ability to improve accessibility. There are many DRM-protected audiovisual works inaccessible to persons with hearing or visual disabilities. Current law does not require content distributors to caption or provide visual descriptions for fixed disc-based media,¹⁶⁷ and the CVAA only requires full-length IP-delivered videos previously broadcast on television be captioned.¹⁶⁸ Considering the wide range of disabilities requiring particular accessibility functions, regulatory remedies that impose additional burdens on content distributors might not be the most effective way to address accessibility needs. Rather, encouraging innovators like the proponents to find solutions – especially solutions that build on the crowdsourcing power of the Internet – could lead to great improvements in accessibility.

Moreover, for works with existing captions or video descriptions, the quality is sometimes insufficient, with spelling errors, timing issues, or mistakes making it difficult to understand the video program.¹⁶⁹ Captions are often distributed in a “one-size-fits-all” manner without the ability to customize specific characteristics such as font size or color so that persons with particular visual needs can read them.¹⁷⁰ To date, content distributors have not been able to fully meet the needs of the visually and hearing impaired communities. It has proven difficult for distributors to create the multitude of accessibility functions that could improve accessibility for the entire range of persons with disabilities.¹⁷¹ However, access controls protect information necessary to create and incorporate closed captions (CC) and video descriptions (VD). For example, these TPMs restrict access to playhead information required to align the timing of the CC and VD with the corresponding video frames.¹⁷² Also, CC and VD data may be embedded

¹⁶⁵ Today, an average of 72 hours of video is uploaded to YouTube every minute of every day. *See* http://www.youtube.com/t/press_statistics.

¹⁶⁶ *TDI Comments* at 5.

¹⁶⁷ Comments of the National Association of the Deaf *et al.* (*NAD Comments*) at 2, Docket No. RM 2011-7, available at http://www.copyright.gov/1201/2012/comments/Andrew_Phillips.pdf.

¹⁶⁸ *Id.* (citing the 21st Century Communications Video Accessibility Act of 2010).

¹⁶⁹ *NAD Comments* at 3-4.

¹⁷⁰ *TDI Comments* at 7-9; *June 5 Transcript* at 56-57.

¹⁷¹ *TDI Comments* at 27 (“For example, the National Cable and Telecommunications Association and the National Association of Broadcasters stated that requiring the captioning of certain programs online would be so burdensome and costly to industry that such a requirement would disincentivize voluntary captioning altogether.”)

¹⁷² *TDI Comments* at 17 (“For example, to synchronize a user-generated caption or video description file with a video being lawfully viewed over a subscription service such as Netflix, it may be necessary to access the location of the playhead of the video . . . to display the captions or play back the video description in time with the video.”).

in encrypted files that a person must extract in order to correct or improve distributor-created captions and descriptions.¹⁷³

Proponents assert three uses adversely affected by the prohibition on circumvention, which ultimately inhibits the ability of the visually impaired and hearing impaired to perceive copyrighted audiovisual works. First, they claim a research need to circumvent access controls on fixed-disc media and IP-delivered video to develop a software program that would enable improvements of CCs and VDs. Second, individuals, nonprofit organizations, and government entities require an exemption to produce and improve visual and audible descriptions that can be used in conjunction with the developed software or other tools.¹⁷⁴ Third, persons with visual or hearing impairments must similarly initiate circumvention to incorporate the new or improved CC and VD or to utilize available software.¹⁷⁵ Proponents seek to empower the tool developers, the crowdsourcers, and most importantly, the end users.

The proposed uses are likely noninfringing. Proponents cite authority that improving accessibility embodies the spirit of fair use.¹⁷⁶ While that particular citation is limited to improving book accessibility for the blind, proponents have shown a similar fair use analysis could apply to the audiovisual works at issue. The proposed uses are noncommercial uses to improve individual accessibility.¹⁷⁷ While the researchers and crowdsourcers are not performing the service for their own benefit, their work ultimately benefits the personal use of individuals with hearing or visual disabilities.¹⁷⁸ Some of the copyrighted works at issue may be highly creative (motion pictures), while others are purely factual (news clips). In any event, adding or improving CC and VD makes use of the audiovisual work only to the “minimum extent necessary.”¹⁷⁹ Individuals would also use this exemption to customize the captions for individual needs, in some cases using software that is currently available.¹⁸⁰ There is little

¹⁷³ *TDI Comments* at 18-22.

¹⁷⁴ *See e.g., NAD Comments* at 5 (Notes the efforts of Universal Subtitles that attempt to provide assistance to access online content.).

¹⁷⁵ *See e.g., NAD Comments* at 4.

¹⁷⁶ *See TDI Comments* at 23-26; *see also* H.R. REP. NO. 094-1476, at 73 (1976) (noting the application of the fair use doctrine to the noncommercial creation of Braille and audio recordings of books for use by those with vision disabilities); *Sony Corp. v. Universal City Studios, Inc.*, 464 U.S. 417, 455 n.40 (1984) (“Making a copy of a copyrighted work for the convenience of a blind person is expressly identified by the House Committee Report as an example of fair use, with no suggestion that anything more than a purpose to entertain or to inform need motivate the copying.”); CONF. REP. NO. 094-1773, at 70 (1976) (noting the applicability of fair use to generating captions for television programs in nonprofit schools for the deaf and hard of hearing).

¹⁷⁷ NTIA supports language that further limits the exemption to noncommercial uses for the sole purpose of improving accessibility. This would ensure uses are kept within the bounds of fair use.

¹⁷⁸ *See e.g., NAD Comments* at 4 (“It is very important that third parties are able to edit or enable editing of the quality of the captions to make video programs more accessible, such as lining up the caption text with the speech, adding to the captions where there are gaps, and adjusting the appearance of the captions to make them more accessible.”).

¹⁷⁹ *TDI Comments* at 25.

¹⁸⁰ *See e.g., NAD Comments* at 4 (“a growing number of video programming software allows consumers to customize the captions on the screen, such as changing the color of the captions, the caption font and size, and even reposition the captions to a different part of the screen. Being able to customize the appearance of captions is

evidence suggesting these uses could have a negative effect on the market for audiovisual works. In fact, NTIA believes that this exemption may encourage an increase in purchases of audiovisual works, as more will be able to enjoy the content when accessibility has improved. Also, all movies or videos used with this technology must have been lawfully acquired, which could increase sales of audiovisual works.¹⁸¹

NTIA does not support the inclusion of Blu-Ray discs in the proposed exemptions at this time. As previously mentioned, DVD remains the dominant format, and online video distribution is outgrowing Blu-Ray adoption. Moreover, NTIA is uncertain what effect, if any, these proposed exemptions could have on the developing Blu-Ray market.¹⁸² In any case, the user will be able to purchase the audiovisual works, largely without exception, on DVD for the next three years.

Opponents question whether an exemption is necessary. For example, one argued that the content industry is making progress towards providing captioning or video descriptions on most audiovisual works, but such efforts do not include all audiovisual works released.¹⁸³ Opponents cite recent regulatory measures that impose accessibility requirements on content distributors and claim the legal mandates have created market pressure to voluntarily improve accessibility.¹⁸⁴ Proponents have pointed out multiple shortcomings, such as insufficient mandates, and noted the continued pushback from the industry, including requests to extend deadlines, petitions for exemptions, and reluctance to adopt more than what is statutorily prescribed.¹⁸⁵ Opponents also claim a willingness to work with groups serving the hearing impaired or visually impaired to make content more accessible or, alternatively, negotiate a license to decrypt DVD and Blu-Ray content.¹⁸⁶ However, to date discussions have not progressed towards granting a license to the requesters.¹⁸⁷ NTIA commends all efforts to voluntarily provide captioning and video descriptions and to work with the disabilities community to facilitate improved accessibility.

NTIA acknowledges opponents' arguments, but is concerned that the asserted regulatory obligations and potential license agreements will not fulfill proponents' needs in the coming three years.¹⁸⁸ This is especially true for the minority of individuals with specialized

similar to a hearing person being able to adjust volume, bass, and treble in a program. This is especially important for deaf and hard of hearing people with low vision who need larger captions or better contrast between the text of the captions and the background picture.”)

¹⁸¹ See e.g., *TDI Comments* at 26.

¹⁸² NTIA also notes that BD Live discussed in the record seems to provide some level of access to be able to modify the captioning available on the Blue-Ray Disc. This also seems to be an alternative that is helpful. Whether it will serve all of the needs discussed here, is uncertain. *AACSLA Comments* at 34.

¹⁸³ *AACSLA Comments* at 28-30.

¹⁸⁴ *Joint Creators and Copyright Owners Comments* at 45.

¹⁸⁵ *TDI Reply* at 5-10.

¹⁸⁶ *DVDCCA Comments* at 22.

¹⁸⁷ Letter to Maria A. Pallante, Register of Copyrights, et al., from Blake E. Reid, Counsel to Telecommunications for the Deaf and Hard of Hearing, Inc., et al. (Aug. 16, 2012)(*TDI August Letter*).

¹⁸⁸ For example, some deadlines for certain types of captioning have been pushed back further to January 1, 2014. In the Matter of Closed Captioning of Internet Protocol-Delivered Video Programming: Implementation of the Twenty-First Century Communications and Video Accessibility Act of 2010, Petitions for Temporary Partial Exemption or Limited Waiver, *Memorandum Opinion and Order*, MB Docket No. 11-154 (Aug. 17, 2012).

accessibility needs, where standard captions and video descriptions do not provide adequate access to the content. As mentioned above, NTIA recognizes the difficulty in crafting regulations or negotiating agreements that can address every possible need for those individuals, and generally prefers non-regulatory solutions where they prove to be effective. NTIA does not agree, however, that this exemption will discourage such efforts.¹⁸⁹

NTIA generally supports the proposals, but believes it is better to frame the exemption in terms of the three categories of use supported by the record. The following three narrower exemptions demonstrate a greater emphasis on the noncommercial nature of the uses and specify that circumvention can only be accomplished for the sole purpose of improving accessibility. This eliminates concerns that persons or entities will exploit the exemption for commercial gain or to access a derivative market that does not involve improved accessibility. Proponents note that creating the software will require help from the crowdsourcers and individual users. These individuals would participate as “beta testers” during the research and development of the various tools.¹⁹⁰ In addition, after the software is released, the assistance of third parties is necessary in creating the captions or video descriptions or providing other assistance to facilitate accessibility.¹⁹¹ Therefore, NTIA does not recommend limiting this class to a single exemption solely for research purposes.

NTIA supports exemptions constructed as follows:

1. Motion pictures and audiovisual works that are lawfully made and acquired from (1) DVDs protected by the Content Scrambling System; or (2) works delivered via Internet Protocol protected by technological protection measures that control access to such works, when circumvention is accomplished by an individual, or an authorized entity as defined in 17 U.S.C. § 121 (d)(1), for the sole purpose of creating, developing, or researching primarily non-commercial tools that facilitate the creation, improvement, or rendering of visual and audible representations or descriptions of audible and visual portions of motions pictures and audiovisual works to improve the ability of individuals with hearing or visual impairments that lawfully access such works to perceive such works. (the tool developers)
2. Motion pictures and audiovisual works that are lawfully made and acquired from (1) DVDs protected by the Content Scrambling System; or (2) works delivered via Internet-Protocol protected by technological protection measures that control access to such works, when circumvention is accomplished by an individual, or other third party, to create and/or distribute non-commercial visual or audible representations or descriptions of visual or audible

¹⁸⁹ *AACSLA Comments* at 28-30.

¹⁹⁰ For example, TDI may include Gallaudet University students in research to improve the accessibility of these tools. This would include user control over captions to test using telecollaboration software. This test includes a video that would require captioning but could not be accomplished without an exemption. *TDI Comments* at 34.

¹⁹¹ As noted above, all of these uses at some point will require breaking the TPM on a DVD or on online content.

portions of such works for the sole purpose of improving the ability of individuals with hearing or visual impairments who have lawful access to such works to perceive such works. (the crowdsourcers)

3. Motion pictures and audiovisual works that are lawfully made and acquired from (1) DVDs protected by the Content Scrambling System; or (2) works delivered via Internet-Protocol protected by technological protection measures that control access to such works, when circumvention is initiated by an individual with a hearing or visual impairment who has lawfully obtained such works, and the necessary hardware or software, to improve his or her ability to perceive such works by adding, improving, or rendering visual and/or audible representations or descriptions of the visual and audible portions of such works. (the end users)

I. Class 10 – Space Shifting

The practice known as “space shifting,” in which a person produces a copy of a work for the express purpose of non-commercially and personally perceiving it on a device other than one for which it was originally intended, has been the subject of considerable controversy both within this proceeding and in the greater public discourse.¹⁹² The proponents advocate for the ability to play the content from DVDs they own on other media devices such as tablets and laptops, as many of these new devices are being produced without optical DVD drives and rely strictly on online or locally-stored content.¹⁹³

Because the law generally grants copyright owners the exclusive right “to reproduce the copyrighted work,” the legality of space shifting rests in many contexts on the end users’ ability to assert that the practice constitutes fair use under 17 U.S.C. § 107.¹⁹⁴ Unfortunately, there is a dearth of definitive case law dealing with space shifting; accordingly, neither proponents nor opponents show that any cases on this particular subject are conclusive.¹⁹⁵ As consumers increasingly expect personal content collections to be universally accessible, policymakers may want to consider a legislative resolution to this ongoing legal uncertainty. Advances in the market may also address this problem.

¹⁹² See e.g., Directors Guild of America, Inc., Reply Comments (Mar. 1, 2012)(*DGI Reply Comments*), http://www.copyright.gov/1201/2012/comments/reply/directors_guild_of_america.pdf. NTIA does not support the more broad exemptions to the extent they go beyond space shifting. Therefore, the exemption discussed here does not include backup copies or other personal uses except that specifically defined as moving from one format to another. See e.g., Cassiopaea Tambolini, Proposed Exemption 10B, http://www.copyright.gov/1201/2011/initial/cassiopaea_%20tambolini.pdf. Five similar proposals made by individuals were grouped together as 10B. NTIA does not support this more broadly worded proposal and recommends the Register reject those proposed exemptions.

¹⁹³ Comments of Public Knowledge, Docket No. RM 2011-7 (Dec. 1, 2011) (*Public Knowledge Comments*) at 2, http://www.copyright.gov/1201/2011/initial/public_knowledge.pdf.

¹⁹⁴ See 17 U.S.C. § 106(1).

¹⁹⁵ Reply Comments of Public Knowledge (*Public Knowledge Reply*), Docket No. RM 2011-7, http://www.copyright.gov/1201/2012/comments/reply/public_knowledge.pdf. (The judicial status is discussed on page 11); *DVDCCA Comments* at 30.

That said, the absence of legal proceedings is certainly not an indicator that space shifting, as narrowly defined here, is not fair use.¹⁹⁶ The Register noted in its 2010 recommendation to the Librarian that, despite placing the burden of proof of non-infringement on proponents, “that does not mean that unless there is a controlling precedent directly on point, the Register and the Librarian must conclude that a particular use is an infringing use.” Absent guidance from the courts, the Register and Librarian may “conclude that a particular use... is a fair use” for the purpose of assessing the alleged non-infringing use contemplated in a proposed exemption.¹⁹⁷ In particular, NTIA notes that the ability to space shift audiovisual works on DVDs that are not accompanied by an additional copy in any other format, online, or through alternative solutions such as Ultraviolet and Managed Copy weighs towards a fair use.¹⁹⁸ NTIA believes that where the alternatives are unavailable, the potential adverse affect on the market is minimal.¹⁹⁹

To the extent that the contemplated, solely noncommercial practice of space shifting is a fair use, NTIA supports a more narrowly-constructed version of the exemption proposed by Public Knowledge:

Motion pictures on lawfully acquired DVDs that are protected by the Content Scrambling System, when the DVD neither contains nor is accompanied by an additional copy of the work in an alternative digital format, and when circumvention is undertaken solely in order to accomplish the noncommercial space shifting of the contained motion picture.²⁰⁰

The modified version adds the clause “when the DVD neither contains nor is accompanied by an additional copy of the work in an alternative digital format” to further narrow the exemption to those instances where the demonstrated harm is clear. Proponents have focused on the fact that a prohibition on circumvention for space shifting purposes “is especially problematic as the consumer electronics market moves away from including DVD optical drives in new devices.”²⁰¹ In turn, opponents cite as alternatives to circumvention the various digital formats in which motion pictures have been made available, and particularly “the widespread practice of DVDs and BDs [Blu-Ray discs] coming with ‘digital copy’ rights, the new market

¹⁹⁶ Opponents all argue that the cases cited by Public Knowledge do not settle the matter, and that the Register has rejected the argument that those cases hold that space shifting of DVDs is fair use. NTIA agrees. *See e.g., Joint Creators and Copyright Owners Comments* at 48-49.

¹⁹⁷ *2010 Recommendation of the Register of Copyrights* at 12.

¹⁹⁸ NTIA is concerned that owners of most existing DVDs will not gain the ability to view the work in another format without incurring additional costs. For example, although the service UltraViolet is now available, the FAQs state: “Can I add previously purchased movies and TV shows to my UltraViolet account? Not at this time; however, UltraViolet was designed to support this feature, so if movie/TV studios and/or retailers choose to make such ‘upgrade’ offers available, you’ll be able to easily add existing titles to your UltraViolet Account.” UltraViolet Website, FAQ, No. 16, <http://www.uvvu.com/faqs.php#question-16> (last visited on September 5, 2012) (*UltraViolet Website*).

¹⁹⁹ NTIA agrees with Public Knowledge on this point of its fair use analysis. *Public Knowledge Comments* at 5.

²⁰⁰ Public Knowledge proposed the following: “Motion pictures on lawfully made and lawfully acquired DVDs that are protected by the Content Scrambling System when circumvention is accomplished solely in order to accomplish the noncommercial space shifting of the contained motion picture.” *Id.* at 1.

²⁰¹ *Id.* at 2.

practice of content providers releasing works on DVD now with UltraViolet rights, and the forthcoming AACS managed copy system.”²⁰² NTIA supports the motion picture industry’s efforts to make content available on the wide range of new devices, and encourages content creators to continue working to make their work universally accessible, irrespective of the end user’s favored platform.²⁰³

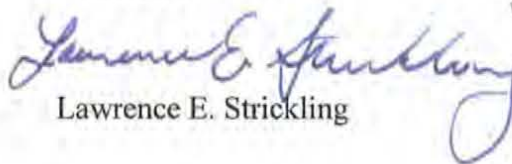
To the extent that a DVD is accompanied by a license to view the work in an alternative digital format, NTIA agrees that the record does not show that circumvention is necessary. However, many consumers have accumulated large collections of DVDs that lack alternatives introduced since the format was first introduced, and absent the ability to space shift, they may lose access to those motion pictures as the market continues to shift towards mobile and Internet-dependent devices and away from optical DVD players.²⁰⁴

* * *

We appreciate the opportunity to express our views to you on the important questions raised in this proceeding. As we have noted, the exemptions granted by the Librarian in the past have in many cases provided the foundation for innovation and economic growth in our country, and we look forward to continuing to work with you to pursue those goals.

Should you have any questions regarding this discussion, please feel free to call me at 202-482-1840. Thank you again for your consideration of NTIA’s views on this important matter.

Sincerely,



Lawrence E. Strickling

²⁰² *DVDCCA Comments* at 25-26.

²⁰³ NTIA notes, for example, that the UltraViolet service includes in some instances the ability to make an additional copy that is not hosted online. See *UltraViolet Website*, at FAQ No. 21.

²⁰⁴ Wal-Mart introduced a new service in March 2012 that permits customers to bring in audiovisual works and for \$2.00 per work copy the disc to digital format using a service called VuDu. In addition to this service requiring an additional purchase, NTIA notes that not all studios are participating in the service. Paramount, Sony, Fox, Universal, and Warner Bros. are the only studios participating in the program. Also for \$5.00 consumers can upconvert their DVD to Blu-Ray if it is available. See Leslie Meredith, TechNews Daily, “Wal-Mart Unveils DVD to Digital Movie Service” (Mar. 14, 2012), <http://www.mnn.com/green-tech/gadgets-electronics/stories/wal-mart-unveils-dvd-to-digital-streaming-movie-service>.