



UNITED STATES COPYRIGHT OFFICE

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

Item A: Commenter Information

Petitioners:

Authors Alliance is a nonprofit organization representing the interests of authors who want to take advantage of opportunities of the digital age to share their creations with readers, promote the ongoing progress of knowledge, and advance the public good. We provide information and tools designed to help authors better understand and manage key legal, technological, and institutional aspects of making their works widely available. We are also a voice for authors in discussions about public and institutional policies that might promote or inhibit the broad dissemination they seek. For more information, visit <http://www.authorsalliance.org>.

The American Association of University Professors (AAUP) aims to advance academic freedom and shared governance and to define fundamental professional values and standards for higher education. AAUP has helped to shape American higher education by developing the standards and procedures that maintain quality in education and academic freedom in this country's colleges and universities.

Organization for Transformative Works (OTW) is a nonprofit organization established in 2007 to protect and defend fanworks from commercial exploitation and legal challenge. "Fanworks" are new creative works that are based on existing media. We believe that fanworks are transformative and that transformative works are legitimate. We advocate on behalf of fans and fanworks and provide information to fans who need assistance when faced with related legal issues or media attention. For more information, visit <http://www.transformativeworks.org>.

The Interactive Fiction Technology Foundation (IFTF) helps ensure the ongoing maintenance, improvement, and preservation of the tools and services crucial to the creation and distribution of interactive fiction, as well as the development of new projects to foster the continued growth of this art form. Interactive fiction was one of the first genres to emerge in computer gaming. It remains a driving force and a leading edge for the broad, ever-developing spectrum of digital games. Today, interactive fiction presents a medium uniquely suited to experimenters and artists. IF can be written without a budget, without a publisher, without a team of artists or programmers. Since the 1990s it has been supported entirely by hobbyists, open-source projects, and informal associations of enthusiasts. It is the purpose of IFTF to offer organized support to these many passion-driven projects, helping

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The authority for requesting this information is 17 U.S.C. §§ 1201(a)(1) and 705. Furnishing the requested information is voluntary. The principal use of the requested information is publication on the Copyright Office Web site and use by Copyright Office staff for purposes of the rulemaking proceeding conducted under 17 U.S.C. § 1201(a)(1). NOTE: No other advisory statement will be given in connection with this submission. Please keep this statement and refer to it if we communicate with you regarding this submission.

to ensure the survival and growth of interactive fiction while maintaining the unique advantages of this medium.

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Item B: Proposed Class 1: Audiovisual Works—Criticism and Comment

Proposed Class 1 includes:

Motion pictures (including television shows and videos), as defined in 17 U.S.C. § 101, where circumvention is undertaken solely to make use of short portions of the motion pictures for the purpose of criticism or comment in multimedia e-books where the motion picture is lawfully made and acquired on a DVD protected by the Content Scramble System, on a Blu-ray disc protected by the Advanced Access Control System, or via a digital transmission protected by a technological measure.¹

This proposed class is a modification of the exemption granted by the Librarian in the sixth triennial review and the exemption provisionally recommended for renewal in the 2017 Notice of Proposed Rulemaking (NPRM); it proposes to remove the limitations restricting the exemption to nonfiction e-books and to e-books that offer film analysis, and removes the screen-capture requirement.²

Item C: Overview

We return to the DMCA exemption process seeking to modify the current exemption on the behalf of authors who wish to exercise their fair use rights by embedding audio and visual material into electronic books (“e-books”) for purposes of criticism or commentary. We seek to remove the limitations restricting the current exemption to “nonfiction” e-books that “offer[] film analysis.” We also seek to remove the exemption’s requirement that creators develop a belief regarding the adequacy of screen-capture technology.

Electronic books continue to represent a well-utilized form of authorship that becomes more dynamic when multimedia elements are added. With modern technology, authors are now able to incorporate audiovisual content directly into their e-books for lawful fair use purposes. Multimedia e-books allow a unique experience not possible through simple static text and visuals. By allowing authors to embed non-static forms of content into e-books, multimedia e-book technology empowers authors to conduct scholarship, express new ideas, facilitate rich discussion, educate others, engage in creative expression, and share research and findings in a way that mere prose cannot.

E-books have evolved from a futuristic novelty to a staple of American literature. The e-book market has been expanding since its inception. According to one study, Americans in

¹ Exemption to Permit Circumvention of Access Controls on Copyrighted Works, 82 Fed. Reg. 49,550, 49,559 (proposed Oct. 26, 2017) (to be codified at 37 C.F.R. § 201) (“2017 NPRM”).

² *Id.* at 49,557.

2017 spent \$3.1 billion on e-books;³ and retailers like Amazon, Barnes and Noble, and Apple continue to report a steady increase in e-book consumption by users.⁴ This explosion in e-book sales is likely explained in part by granting less well-known authors the ability to compete with larger, traditional publishing houses. Before e-books, creators often needed the approval of giant publishing houses to distribute their work; now authors can disseminate works in other ways. For example, e-book publishers now have the choice of being published by major publishers, indie self-publishers, or by self-publishing.

Many e-books now feature movable digital images, links to websites, and graphs that can be updated in real time. Authors can now create works that make robust criticism or commentary in innovative ways, without having to navigate traditional publishing systems.

The growth of the e-book market can also be explained by the growing number of communities that have developed new technologies to create and publish their works. There are now more opportunities than ever to use technology to make, and consume, creative works. For example, the burgeoning fanfiction community is changing the industry by publishing interactive fictions that are akin to a digital “choose your own adventure” book. Many in this community use the innovative and easy-to-use visual novel engine Ren’Py to create e-books.⁵ Unlike conventional e-books or regular books, Ren’Py allows users to fully immerse themselves in and interact with multimedia e-books. Rather than contain a linear progression of a story like most e-books do, books created with Ren’Py often allow the reader to make choices that effect character development as well as story progression. Ren’Py has also been used for educational purposes at higher institutions of education such as Carnegie Mellon.⁶ Other visual novel engines include NScripiter and KiriKiri.⁷

The Register recognized the growing evolution of technology and its incorporation in e-books in the sixth triennial rulemaking when recommending renewal of the exemption that allows circumvention for nonfiction multimedia e-books offering film analysis.⁸ In the 2017 Notice of Proposed Rulemaking, the Register provisionally recommended that the current exemption allowing film analysis in multimedia e-books be renewed.⁹

³ *February 2017 Big, Bad, Wide & International Report: Covering Amazon, Apple, B&N, and Kobo E-book Sales in the US, UK, Canada, Australia, and New Zealand, Author Earnings*, <http://authorearnings.com/report/february-2017/> (last visited Dec. 16, 2017).

⁴ *Id.*

⁵ *What is Ren’Py?*, Ren’Py, <https://www.renpy.org/> (last visited Dec. 16, 2017).

⁶ *Experimental Game Design, Postgaming, Fall 2016*, Carnegie Mellon U. Sch. Art, <http://mycours.es/gamedesign2016/> (last visited Dec. 16, 2017).

⁷ *List of Visual Novel Engines*, Wikipedia, https://en.wikipedia.org/w/index.php?title=List_of_visual_novel_engines&oldid=813571445 (last visited Dec. 1, 2017).

⁸ U.S. Copyright Office, Section 1201 Rulemaking: Sixth Triennial Proceeding to Determine Exemptions to the Prohibition on Circumvention, Recommendation of the Register of Copyrights at 99 (2015) (“2015 Recommendation”).

⁹ *See* 2017 NPRM, 82 Fed. Reg. at 49,557.

The current exemption, however, is limited to nonfictional works and film analysis. We are seeking to modify the current exemption to remove these limitations because over the last three years, many authors, across multiple creative communities, have begun to explore how new technologies can expand their capacity for expression—and many of them do not fit into the current exemption’s limitations.

As the Register recognized in the previous rulemaking, authors need to circumvent the Technological Protection Measures (“TPMs”) on DVD, Blu-ray, and online video services in order to make fair use in multimedia e-books.¹⁰ Access control protections that have been implemented using TPMs continue to block authors’ legitimate fair use of content contained in DVDs with Content Scramble System (“CSS”), Blu-ray discs containing Advanced Access Content System (“AACS”), and other digital media that contain access controls such as encryption. The Register determined in the last rulemaking that “various technological measures interfere with [authors’] ability to make [their] desired uses of motion pictures and that a significant number of those uses are likely fair and non-infringing.”¹¹ Despite authors’ exercise of fair use, they may still be subjected to criminal and civil liability under section 1201 of the DMCA due to circumventing TPMs. In short, the DMCA continues to block non-infringing uses that have long been recognized by the courts and Congress.

Over the course of preparing this comment we reached out to authors, vidders, bloggers, and creators of all kinds who are interested in creating multimedia e-books. The responses we received demonstrated that there is an overwhelming interest in innovation and exploration of the potential of new technologies. From academia to fanfiction, creators have expressed a need for this exemption so that they can criticize and comment on the evolving issues of our time. We have also found that many creators have not even begun to explore in earnest the idea of creating a multimedia e-book, even though they understand the technology and make fair use in other media, because of concern about liability under section 1201.

The Register’s recognition that the use of audiovisual material in nonfictional e-books offering film analysis is non-infringing and should not change simply because an e-book is fictional and/or not directed at film analysis. The Register concluded in 2015 that authors need to circumvent TPMs on audiovisual media in order to make fair use in nonfiction multimedia e-books.¹² The Register concluded that such uses in the exemption would likely be fair use in most cases due to the transformative nature of the works and the fact that

¹⁰ See Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, 80 Fed. Reg. 65,954, 65,949 (Oct. 28, 2015) (codified at 37 C.F.R. § 201.40) (“2015 Final Rule”).

¹¹ 2015 Recommendation at 99.

¹² *Id.*

most of the clips were short,¹³ noting that the uses in question are “long recognized as paradigmatic productive use with respect to textual works, which is at the core of fair use’s function as a free-speech safeguard.”¹⁴

Authors have held the right to make fair use of protected material for over 150 years, and the fair use doctrine remains essential for authors interested in criticizing, commenting on, or educating others. As rightsholders themselves, authors respect and understand the importance of copyright protection, and thus have a long track record of using the fair use doctrine responsibly. There has been neither allegation nor evidence that any e-book-related exemption—or, for that matter, any exemption dealing with motion pictures—has contributed to copyright infringement, and there is no reason to think that the proposed modification would be any different.

By prohibiting the ability to make fair use of motion picture material protected by TPMs, section 1201 hinders the creative expression of authors as well as their ability to conduct criticism and commentary, and creates a chilling effect that would prevent the creation of new, innovative e-books.¹⁵ Many authors choose not to create their works because of the burdensome process of seeking out the copyright holders to ask for permission before expressing themselves through their art.

In addition to our proposal to remove the “nonfiction” and “offering film analysis” limitations from the current exemption, we urge the Register to recommend that references to screen-capture also be removed. Screen-capture has never been a viable alternative to circumvention for multimedia e-book authors, who require high quality footage in order to conduct criticism and commentary, and it remains infeasible and highly burdensome.¹⁶ Furthermore, it is unreasonable to expect multimedia e-book authors, most of whom are unaware of section 1201, to develop opinions about screen-capture technology before engaging in fair use.

The Register has previously acknowledged that non-circumventing means of acquiring video do not enable creative fair uses of material to the same degree as circumvention.¹⁷ Alternatives to circumvention continue to remain inadequate: they are expensive, impracticable, inferior, and unduly burdensome to utilize. For example, licensing is not a

¹³ See Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, 77 Fed. Reg. 65,260, 65,268 (Oct. 26, 2012) (“2012 Final Rule”).

¹⁴ U.S. Copyright Office, Section 1201 Rulemaking: Fourth Triennial Proceeding to Determine Exemptions to the Prohibition on Circumvention; Recommendation of the Register of Copyrights, 50 (2010) (“2010 Recommendation”), <https://www.copyright.gov/1201/2010/initialed-registers-recommendation-june-11-2010.pdf>.

¹⁵ See discussion *infra*, Part E (Asserted Adverse Effects on Non-infringing Uses).

¹⁶ 37 C.F.R. § 201.40(b)(1)(iii)(B).

¹⁷ 2015 Recommendation at 85.

viable alternative due to exorbitant fees, difficulties in locating the rightsholders and the delays caused by protracted negotiations. Screen-capture technology is also not a viable alternative because of deteriorated quality, frame rate issues, dropped frames, and difficulty of syncing audio and visual files. The same can be said about recordings from smartphones or cameras. The Register has acknowledged that e-book authors are likely to suffer adverse effects if they are not able to utilize high quality content, especially in the case of conveying a specific point or examining detail in a media clip.¹⁸ Lower quality media may also be distracting due to its degraded quality, thereby making it more difficult for a point to be made in the creative work. It may also be viewed as showing a lack of professionalism, diligence, and credibility.

For these reasons, we respectfully request that the Register recommend the proposed modification of the exemption for multimedia e-book authors based on the analysis set forth in this Comment.

Item D. Technological Protection Measure(s) and Method(s) of Circumvention

The TPMs at issue in the proposed modification are the same as those at issue in the current exemption, which the Register has provisionally recommended for renewal.¹⁹ Authors need to access motion picture material on (1) DVDs, (2) Blu-ray discs, and (3) digitally transmitted video to make criticism and commentary in their multimedia e-books.

Content Scramble System (CSS) on DVDs. Like the current exemption, the modified exemption will permit circumvention, in certain circumstances, of CSS on DVDs.²⁰ CSS utilizes a mix of access and use controls to protect the content of DVDs from being copied by, distributed by, and viewed from unauthorized devices. The Register has previously concluded that CSS qualifies as a TPM subject to the DMCA's anti-circumvention provisions because it "effectively controls access" to content by requiring the "application of information"—namely, encryption keys—to gain access to the work.²¹ Software that allows users to access content on DVDs has been available for well over a decade.

Advanced Access Content System (AACS) on Blu-Ray Discs. Like the current exemption, the modified exemption will permit circumvention, in certain circumstances, of AACS on Blu-ray discs. Like CSS, AACS is also a mixed access and use control, and has also been previously recognized by the Register²² as a TPM subject to the DMCA because it "effectively controls access" to content by requiring the "application of information"—

¹⁸ *Id.* at 86.

¹⁹ *See* 2017 NPRM, 82 Fed. Reg. at 49,557.

²⁰ *See* 37 C.F.R. § 201.40 (b)(1)(iii).

²¹ 2015 Recommendation at 126; 17 U.S.C § 1201(a)(3).

²² 2015 Recommendation at 216.

namely, encryption keys—to gain access to the work.²³ To the best of our knowledge, there exists software which allows users to access digital files on AAC3-protected Blu-ray.

Encryption Measures on Digitally Transmitted Video. Like the current exemption, the modified exemption will permit circumvention, in certain circumstances, of TPMs on digitally transmitted video. Much like CSS and AAC3, the protection measures found on digitally transmitted video seek to control access through encryption and other mechanisms, and thus qualify as a TPM within the meaning of section 1201(a)(3) by requiring the “application of information”—namely, encryption keys—in order to gain access to the work.²⁴ The Register reached the same conclusion in her 2015 recommendation, determining that a “significant number of platforms that offer digitally transmitted motion pictures, both for digital downloads and for streaming, constitute technological measures controlling access to those works under section 1201(a)(1).”²⁵ The same is true today.

In general, protection measures on digitally transmitted video operate by utilizing a combination of:

- i. Client verification, which ensures that an authorized client is receiving the content;
- ii. Encryption, which ensures that the content is delivered securely only to authorized client; and
- iii. Access controls, which ensure that the client cannot export the content for redistribution.²⁶

For example, Netflix content streamed to a laptop through a web browser plug-in is protected by both encryption and other protocols.²⁷ A client requests media usage rights from a rights server online and downloads a DRM license or key so that he or she can play the content.²⁸ In addition, cable set-top boxes, digital video recorder (“DVR”) machines, Hulu, and Netflix are often protected by hardware encryption through High Definition Multimedia Interface (“HDMI”) cable outputs as well as encryption and other protocols active within DVR and cable boxes.²⁹

The systems that use TPMs such as these are diverse and in a state of constant flux. It is clear, however, that virtually all the digital systems in use today seek to control access through a combination of encryption and other mechanisms that easily qualify as TPMs within the meaning of section 1201(a)(3). It is our understanding that hardware and software solutions exist which allow access to some of these forms of digital transmission.

²³ 17 U.S.C § 1201(a)(3) (2016).

²⁴ See 2015 Recommendation at 8.

²⁵ *Id.* at 69.

²⁶ See Memorandum from Alex Podobas, Appendix A.

²⁷ *Id.*

²⁸ *Id.*

²⁹ *Id.*

Item E. Asserted Adverse Effects on Non-infringing Uses

Authors who wish to use motion picture material in fictional multimedia e-books and e-books not offering film analysis are adversely affected by the prohibition on circumvention in their ability to make non-infringing uses of motion picture material. The inquiry to show the adverse effects on the non-infringing use of audiovisual material is broken down into the following elements:

1. The proposed class includes some works protected by copyright;
2. The uses of audiovisual material in fictional multimedia e-books and e-books not offering film analysis are non-infringing;
3. The statutory prohibition on circumventing access controls is the cause of the adverse effects; and
4. Section 1201(a)(1)(C)'s five statutory factors show that users are adversely affected in their ability to make non-infringing uses of audiovisual material.

1. The proposed class includes at least some works protected by copyright.

Authors of e-books seek to use motion pictures that are lawfully made and acquired from DVDs, Blu-ray discs, or digitally transmitted video in order to incorporate portions of these video clips into new works for the purpose of fair use. The overwhelming majority of motion pictures are protected by copyright and are therefore subject to the circumvention ban.³⁰

2. The uses of audiovisual material in multimedia e-books that do not qualify as “nonfiction” or do not offer film analysis are often non-infringing.

In the past, technology restricted authors to use static text and images to express their ideas and opinions in traditional printed books. Now that e-book technology allows books to escape the printed page, authors can incorporate video and audio within multimedia e-books to immerse readers in their scholarship and creative visions. The use of audiovisual material within e-books allows authors to be more creative, accessible, and engaging with their audience. Additionally, authors have long relied on the doctrine of fair use to comment on, criticize, and educate others about important historical, cultural, and political issues. Since authors are familiar with the fair use tradition they will continue to rely on fair use when incorporating audiovisual material in their e-books.

Fair use is a quintessential non-infringing use expressly recognized by Congress, the courts, the Register, and the Librarian of Congress.³¹ The doctrine aims to protect

³⁰ 17 U.S.C. § 102(a)(6); § 1201(a)(1)(A).

³¹ See 15 U.S.C. § 107 (defining fair use); *Rosemont Enterprises, Inc. v. Random House, Inc.*, 366 F.2d 303 (2d Cir. 1966) (holding that defendant's unauthorized use of articles in a biography was fair use); 2015 Recommendation at 15 (noting that fair use is one of several

democratic ideals of free speech and academic freedom; prevent censorship; and encourage creative expression.³² Courts have held the traditional role in deciding fair use and should continue to do so. When the Register denies or narrows an exemption on the basis of the content of the output it would allow for, the court is also denied the ability to decide whether that qualifies as fair use.³³

The excerpted use of copyrighted multimedia clips in e-books is often a fair use.³⁴ Indeed, by provisionally recommending renewal of the existing exemption, the Register has concluded and reaffirmed in this proceeding that authors need to circumvent the TPMs on audiovisual material in order to make fair use in nonfiction multimedia e-books for the purpose of film analysis.³⁵ The Register determined that the uses that would fall under this exemption would likely be a fair use in most instances due to the transformative nature of the works, the fact that most of the clips were short, and because the purpose is for criticism, comment, or scholarship.³⁶

Even though the Register did not conclude that each and every use was a transformative fair use, the Register believed it likely that a substantial number likely would be transformative.³⁷ This exemption has allowed authors interested in film analysis to create original and transformative works exactly in the way fair use was imagined.

Modifying the exemption to include fictional e-books and works not offering film analysis will not alter the outcome of the fair use analysis. As with the use of video clips to offer criticism or commentary in nonfictional e-books for film analysis, the use of video clips in fictional multimedia e-books and those not engaged in film analysis will also, in many

factors in determining whether a use is non-infringing); 2012 Final Rule 77 Fed. Reg. at 65,260 (noting that fair use is relevant in determining exempted classes).

³² See generally *Penelope v. Brown*, 792 F. Supp. 132, 136 (D. Mass. 1992) (stating that purpose of fair use is “to prevent strict enforcement of the copyright law when its enforcement would inhibit the very Progress of Science and useful Arts, that copyright is intended to promote.”) (quoting *Sony Corp. of Am. v. Universal City Studios, Inc.*, 464 U.S. 417, 477 (1984) (Blackmun, J., dissenting)) (quotation marks omitted); Goldstein on Copyright § 12.2.1 (Aspen Publishers 3d ed. 2005) (describing fair use as “situations in which social, political, and cultural benefits of use will outweigh any consequent losses to copyright proprietor”).

³³ Comment of the Electronic Frontier Foundation, Docket No. RM 2008-08, 3 (filed Dec. 2, 2008), <https://www.copyright.gov/1201/2008/comments/lohmann-fred.pdf> (“2008 EFF Comments”).

³⁴ See generally *Sofa Entertainment, Inc. v. Dodger Productions, Inc.*, 782 F. Supp. 2d 898 (C.D. Cal. 2010).

³⁵ 2017 NPRM, 82 Fed. Reg. at 49,557; 2015 Final Rule, 80 Fed. Reg. at 65,949; 2012 Final Rule, 77 Fed. Reg. at 65,260.

³⁶ See 2012 Final Rule, 77 Fed. Reg. at 65,268.

³⁷ *Id.*

cases, be fair use for precisely the same reasons. The use of clips from protected material such as DVDs, Blu-ray discs, and digitally transmitted video in fictional works will be as transformative as their nonfiction counterparts. Authors will continue to rely on the fair use factors of purpose and character, nature of the copyrighted work, the substantiality of the portion used, and the effect of the use on the potential market in order to continue to contribute to society in a new medium.

Fanfiction is an example of types of fictional e-books that would benefit from the proposed exemption and widely make fair use. Fanfiction is an important part of modern culture and a transformative form of expression that fits into the fair use doctrine. Fanfiction, or fanworks, are new creative works based on existing media. The creation of these transformative works brings people around the world together with an entry point into their own creative endeavors. It provides a safe place for isolated creators to discover their own voice and gives them a supportive community to find their talent. It is also of particular value for groups underrepresented in American mass culture, such as women, people of color, and LGBT people, among others, who remix current culture to include, critique, and comment upon what it leaves out.³⁸

Fanfiction is a form of literary remix that breathes creative new meaning into old works, a category of activity already recognized as a non-infringing fair use under copyright law. In *Campbell v. Acuff-Rose Music*, the Supreme Court explicitly recognized the importance of adding new meaning or message in the fair use inquiry. “[T]he goal of copyright, to promote science and the arts, is generally furthered by the creation of transformative works.”³⁹ The Second Circuit in *Castle Rock Entm’t, Inc. v. Carol Pub. Group, Inc.* also noted that a transformative work “is the very type of activity that the fair use doctrine intends to protect for the enrichment of society.”⁴⁰ The vast majority of fanworks are noncommercial in nature. Not only have courts given their blessing to commercial remixes, but current jurisprudence favors fair use with works that are noncommercial.

Additionally, multimedia e-books can include a range of media formats known and used by many creative communities. One widely popular and common multimedia format is GIF files. GIF stands for graphics interchange format and has been used on the internet for quite some time.⁴¹ GIFs are often used online as “memes” that take on meaning of their own separate from their original meaning, but they are also becoming a medium of expression

³⁸ Comment of Organization for Transformative Works to the U.S. National Telecommunications and Information Administration and the U.S. Patent and Trademark Office, at 3 (Oct. 2013), <http://www.transformativeworks.org/wp-content/uploads/old/Comments%20of%20OTW%20to%20PTO-NTIA.pdf>.

³⁹ *Campbell v. Acuff-Rose Music, Inc.*, 510 U.S. 569, 579 (1994).

⁴⁰ *Castle Rock Entm’t, Inc. v. Carol Pub. Group, Inc.*, 150 F.3d 132, 141 (2d Cir. 1998) (quoting Pierre N. Leval, *Toward a Fair Use Standard*, 103 Harv. L. Rev. 1105, 1111 (1990)).

⁴¹ Reply Comments of Electronic Frontier Foundation and Organization for Transformative Works, Docket No. 2014-07, 6 (filed May 1, 2015).

respected in the art establishment.⁴² In many cases, authors need high-quality clips to make GIFs as a form of criticism and commentary.

Authors of multimedia e-books could also employ high-quality GIFs for criticism and commentary focusing on political speech. Members of Congress have already begun using GIFs to convey their political message by including them in press releases and “listicles.”⁴³ This allows members of Congress to connect with their constituents in a way that ordinary text does not allow. But this type of political expression would not be available to authors looking to create multimedia e-books unless the present exemption’s limitations are removed.

Purpose and Character of the Use. Fictional e-books will often satisfy the first factor, “purpose and character of the use,” by being both transformative and noncommercial.⁴⁴ In assessing the first factor, courts consider both the transformative nature of the work and commerciality as interrelated factors.⁴⁵ A transformative new work is one that does not merely supersede the object of the original creation but instead “adds something new, with a further purpose or different character, altering the first with new expression, meaning, or message.”⁴⁶

While the first factor also assesses the commercial nature of the use, commerciality is not the only relevant consideration.⁴⁷ Authors have routinely satisfied the purpose and character of fair use through criticizing, commenting on, and educating others about important social, political, historical, and economic issues in our society.⁴⁸

⁴² *Id.* at 7.

⁴³ Roque Planas, *Republicans Try to Sell Border Security with ‘Little Mermaid,’ Jennifer Lawrence GIFs*, Huffington Post (Mar. 18, 2015 at 5:12 PM), https://www.huffingtonpost.com/2015/03/18/house-judiciary-committee_n_6897190.html.

⁴⁴ 17 U.S.C. § 107 (“the purpose and character of the use, including whether such use is of a commercial nature or is for nonprofit educational purposes”).

⁴⁵ *See Campbell*, 510 U.S. at 579 (holding that the more transformative the work, the less significance commercialism will play into the purpose and character enquiry).

⁴⁶ *Id.* at 579.

⁴⁷ *Id.* at 584 (“Section 107(1) uses the term ‘including’ to begin the dependent clause referring to commercial use, and the main clause speaks of a broader investigation into ‘purpose and character.’”).

⁴⁸ *Id.* at 569 (finding a rap group’s parody version of Roy Orbison’s hit song to be fair use); *Monster Commc’ns, Inc. v. Turner Broad. Sys. Inc.*, 935 F. Supp. 490 (S.D.N.Y. 1996) (finding fair use where boxing documentary used movie clips); *Hofheinz v. AMC Productions*, 147 F. Supp. 2d 127 (E.D.N.Y. 2001) (finding fair use where documentary filmmaker used clips and photographs of copyrighted films); *Hofheinz v. A&E Television Networks*, 146 F. Supp. 2d 442 (S.D.N.Y. 2001) (finding fair use of movie clip in TV biography of an actor); *Wade Williams Distrib., Inc. v. ABC*, No. 00 Civ. 5002 (LMM), 2005 U.S. Dist. LEXIS 5730 (S.D.N.Y. Apr. 5, 2005) (finding fair use in clips of Ed Woods film in

The Register concluded in previous triennial reviews that nonfictional multimedia e-books were likely to be transformative even when commercial.⁴⁹ The Register noted that even though many multimedia e-books tend to have a commercial aspect, the short excerpts used for criticism and comment transformed the work to have new meaning enough to satisfy fair use.⁵⁰

An exemption without the “nonfiction” and “offering film analysis” limitations will also fulfill this first factor. The first factor of purpose and character is an evaluation of the transformative aspects and commerciality of the work in order to determine a finding of fair use.

First, multimedia e-books not offering film analysis will also be used for the purpose of comment or criticism and most will alter audiovisual material in such a way to give it new meaning. Film analysis is defined as the process of evaluating a film’s semiotics, narrative structure, cultural context, and mise-en-scene, among other things.⁵¹

However, there are many academic authors outside of film studies that would benefit from being able to include video within their e-books. For example, literature professors could include clips to study or critique adaptations of characters, plots, and narratives from a variety of novels and plays. Additionally, historians could add video clips to their texts to provide historical context or to demonstrate a historical phenomenon, technique, or artifact. Authors working outside of film who wish to offer character analysis, historical context, or examples of subject matter will easily fulfill the first factor. Short clips from audiovisual works are the equivalent of quotes from literary works and often help to further the purpose of the new work. Even though many e-books retain a commercial purpose, the video quotes will be transformed with enough new meaning and expression to satisfy the first factor.

Along similar lines, multimedia e-books that do not qualify as “nonfiction” also conduct criticism and commentary, and transform the work being used by adding meaning or

a TV commentary); *Lennon v. Premise Media Corp.*, 556 F. Supp. 2d 310 (S.D.N.Y. 2008) (finding fair use of Lennon’s song in a documentary film); *Hosseinzadeh v. Klein* 16-CV-3081 (KBF) (S.D.N.Y. 2017) (finding fair use for Klein’s Youtube video that criticized and commented on clips of Hosseinzadeh’s Youtube video); *Equals Three, LLC v. Jukin Media, Inc.* 139 F. Supp. 3d 1094 (2015) (finding fair use for the use of video clips because of their transformative nature).

⁴⁹ See 2012 Final Rule, 77 Fed. Reg. at 65,268. (“Despite the commercial aspect of uses by documentary filmmakers and multimedia e-book authors, the Register noted that when a short excerpt of a motion picture is used for purposes of criticism and comment, even in a commercial context, it may well be a productive use that serves the essential function of fair use as a free speech safeguard.”).

⁵⁰ See *id.*

⁵¹ The Writing Center, *Film Analysis*, University of North Carolina at Chapel Hill, <https://writingcenter.unc.edu/film-analysis/> (last visited Nov. 30, 2017).

expression, even if they describe imaginary events or characters.⁵² The first factor rests on the character and commerciality of the use and the main question for fictional multimedia e-books is the way the audiovisual material is being used by the e-book author. That is, when fictional multimedia e-book authors use audiovisual material in such a way that they create new meaning, they are not using the original expression from the material for their own material gain.

Video clips in fictional e-books often present characters or a setting from an original work but fictional authors who wish to comment on or transform an original work will often splice clips together in such a way that a new story is being told. In this way, authors can create new expression by combining video clips of two characters that typically never interact. Additionally, authors can use a video clip to introduce a setting such as another world, country, or city from an original work. By using the clips to merely present a setting authors can then introduce new characters or plots to an old world, creating new meaning and adding new expression. Frequently, juxtapositions such as these offer stinging critiques and biting commentary—just as techniques like pastiche and collage have done for centuries.

Additionally, the modification to the screen-capture requirement does not alter the fair use analysis of purpose and character. Authors wishing to alter video clips to show characters interacting or compare scenes and characters will no longer need to go through the additional cumbersome process of using screen-capture technology only to produce a low-quality video.

Nature of the Copyrighted Work. Fair use also requires the examination of the “the nature of the copyrighted work.”⁵³ Although courts are more likely to find that an informational or factual work is a fair use rather than the use of a nonfactual work of entertainment value, a broad rule should not be applied.⁵⁴ Instead, many literary works and audiovisual works have both informational and entertainment elements and thus the nature of the work should be determined on a case-by-case basis.⁵⁵

Additionally, in the 2012 and 2015 Rulemakings, the Register noted that the second factor is not especially relevant in the context of the multimedia e-book exemption analysis.⁵⁶ While the Register did find that motion pictures are creative in nature, the Register also noted that the Supreme Court has said the second factor is of limited assistance in the fair use analysis when a work is transformative.⁵⁷ In both rulemakings, the Register concluded

⁵² See *Fiction*, Oxford English Dictionary, <https://en.oxforddictionaries.com/definition/fiction> (2017).

⁵³ 17 U.S.C. § 107(2); see *Harper & Row, Publishers, Inc. v. Nation Enters.*, 471 U.S. 539, 564 (1985) (“The law generally recognizes a greater need to disseminate factual works than works of fantasy or fiction”).

⁵⁴ See William F. Patry, *The Fair Use Privilege in Copyright Law* 505 (2nd Ed. 1995).

⁵⁵ *Id.* at 505-07.

⁵⁶ 2015 Recommendation at 77; 2012 Recommendation at 128.

⁵⁷ 2012 Recommendation at 128 (citing *Campbell*, 510 U.S. at 586).

that since the works under scrutiny were transformative, the second factor was not as relevant in determining fair use. Since fictional multimedia e-books and e-books not offering film analysis will be similarly transformative, the second factor should likewise play a limited role in determining fair use.

Furthermore, the modification to the screen-capture requirement does not alter the fair use analysis for the nature of the copyrighted work. Using or not using screen-capture technology does not change the nature of the copyrighted work.

Substantiality of the Portion Used. The third factor in fair use focuses on the amount of the work used in proportion to the whole.⁵⁸ Courts often look at the number of pages or seconds of a video to determine whether the amount of work that was borrowed constitutes a fair use. Although courts are more likely to find fair use when the clip or quote is shorter in length in comparison to the whole, courts will also look at the value of the amount taken and whether or not the amount was essentially the heart of the work.⁵⁹ Thus, this factor can be both qualitative and quantitative.

Often authors will use short video clips or video quotes within their text to examine, parody, comment on, or expand upon a plot, idea, or character. These short clips are likely to introduce an idea, character, or setting and will unlikely be at heart of the copyrighted work. Like the song excerpts used in *Lennon v. Premise Media* or the photo used in *Blanch v. Koons*, fictional multimedia e-book authors are expanding or commenting on the original video clip for a specific purpose or providing useful visual context.⁶⁰ Authors are adding another purpose to the clips they include in their e-books and use audiovisual material for expansion, not to profit from the original expression.

In the 2015 Rulemaking, the Register found the use of short portions of motion pictures was a common theme among requested exemptions.⁶¹ Short portions are more likely to be fair use as they are unlikely to usurp the market for a work. Additionally, in the 2012 Rulemaking, the Register noted that even when the clips involved important elements of the original work, since the uses were transformative and so short, the uses were unlikely to usurp the market of the original. The 2012 Register also cited to *Campbell v. Acuff-Rose* and

⁵⁸ 17 U.S.C. § 107(3).

⁵⁹ See *Folsom v. Marsh*, 9 F. Cas. 342, 348 (C.C.D. Mass. 1841); *Harper & Row, Publishers, Inc. v. Nation Enters.*, 471 U.S. 539, 564-65 (1985).

⁶⁰ *Lennon v. Premise Media Corp.*, 556 F. Supp. 2d 310 (S.D.N.Y. 2008) (finding fair use when the defendants used and specifically critiqued fifteen seconds of a three-minute song); *Blanch v. Koons*, 467 F.3d 244 (2d Cir. 2006) (finding fair use where the artist's purpose was to convey facts of the original work and the artist did not copy portions that were creative decisions); See also *Bill Graham Archives v. Dorling Kindersley Ltd.*, 448 F.3d 605 (2d Cir. 2006), (finding fair use of the entirety of images of posters and tickets when used to provide visual context); *NXIVM Corp. v. Ross Institute*, 364 F.3d 471, (2d Cir. 2004) (finding fair use for website that critiqued and analyzed quotes from seminar material).

⁶¹ 2015 Recommendation at 70.

the Supreme Court’s suggestion that the use of a short clip that involves the heart of the work is acceptable when it is needed to “conjure up” the original work and that short clip avoids needing to use a longer clip.⁶² Authors of fictional multimedia e-books will continue in the tradition of using brief film segments because longer clips tend to distract the reader from the main text of the book. Even when the clips involve elements that are at the heart of the original work, since they are needed to bring to mind the original and can help avoid the use of longer clips, the use of such short clips remains in favor of fair use.

Furthermore, the proposed modification of screen-capture requirement does not alter the analysis or this factor. The use or non-use of screen-capture technology does not change whether an author uses five or twenty-five seconds of a video and whether or not that short segment goes to the heart of the work.

Effect of the Use on the Potential Market. The final factor to be determined in fair use is the effect on the market.⁶³ Courts often look to the effect on the market by the particular infringement as well as the effects on the potential market.⁶⁴ A harm on the market centers on if the use can be a substitute for the copyright holder’s work in the marketplace.⁶⁵ Additionally, courts take into consideration the harm to the market for derivative works that the copyright holder would likely create or authorize.⁶⁶

Fictional multimedia e-books and e-books not offering film analysis will not disrupt the market of the original borrowed work because the audiovisual clips included in the e-books will be short and will not supplant the original copyrighted work.⁶⁷ These video quotes will not be a substitute for the copyright holder’s original work, especially due to the fact that they will be used for purposes of criticism or comment, parody, or context of a broader issue. When authors use short video clips to critique, parody, or provide context, they are not taking away from the market for derivative works since it highly unusual for a copyright holder to develop works imitating, commenting upon or criticizing their previous works.⁶⁸

⁶² 2012 Recommendation at 129.

⁶³ 17 U.S.C. § 107(4).

⁶⁴ *See Campbell v. Acuff-Rose Music, Inc.*, 510 U.S. 569, 590 (1994); Bill Graham Archives, 448 F.3d at 613.

⁶⁵ William F. Patry, *The Fair Use Privilege in Copyright Law* 560 (2nd Ed. 1995); *see also Consumers Union v. New Regina Corp.*, 664 F. Supp. 753, 758 (S.D.N.Y. 1987) (“The fourth factor is aimed at the copier who attempts to usurp the demand for the original work. The copyright laws are intended to prevent copiers from taking the owner’s intellectual property”).

⁶⁶ *See Campbell*, 510 U.S. at 590 (1994).

⁶⁷ *See Wright v. Warner Books, Inc.* 953 F.2d 731, 739 (2d Cir. 1991) (“[M]arginal amounts of expressive content were taken from Wright’s works. . . . The biography in no way supplants Wright’s letters and journals.”).

⁶⁸ *See Campbell*, 510 U.S. at 592 (“The market for potential derivative uses included only those that creators of original works would in general develop or license others to develop.”).

In the 2015 Rulemaking, the Register noted that since the proposed uses were transformative and involved brief film clips that the users were unlikely to usurp the market for the original work.⁶⁹ The proposed uses today by fictional multimedia e-book authors and authors of e-books not offering film analysis are similarly transformative and brief.

Furthermore, the proposed modification to the screen-capture requirement does not alter the fair use analysis for the effect of the use on the potential market. In fact, by requiring authors to use screen-capture technology that creates a lower quality video, readers may be deterred from exploring and acquiring the original work.

The First Amendment. Finally, fair use serves as a First Amendment protection.⁷⁰ Fair use is not just a carve out within copyright law, but a right that allows copyright law to coexist with the First Amendment and for the exercise of the First Amendment right in and of itself.⁷¹ Given that fair use is a built-in First Amendment accommodation, it is not optional.

Typically, an author does not need to ask for permission in advance to engage in fair use because the contours will be sorted out in litigation if there is some doubt.⁷² Granting courts the power to decide fair use gives authors the opportunity to be creative, imaginative, and innovative. Since many of today's e-books use groundbreaking multimedia capabilities that fuse literary and audiovisual materials, courts have not yet had the chance to apply fair use to many of these new creations.

One such reason courts have not yet had the chance to apply fair use to multimedia e-books is that authors are denied the chance to rely on fair use because of the chilling effects of section 1201. Authors of fictional and non-film analysis multimedia e-books need to ask permission in advance not just from the copyright holders, but also from the Register. This transforms this proceeding into one of prior restraint since the First Amendment accommodation is denied.

If the Register is concerned that any examples of fictional or non-film-analysis multimedia e-books might not constitute fair use, it can add to the exemption a caveat that the exemption only applies to the extent the use is fair and non-infringing. Doing so would allow authors to make a determination as to whether the use of media within their work is fair, and let the courts decide any disputes that arise regarding that choice.

⁶⁹ 2015 Recommendation at 77.

⁷⁰ See *Eldred v. Ashcroft*, 537 U.S. 186, 219 (2003) (“[C]opyright law contains built-in First Amendment accommodations.”)

⁷¹ See *Lenz v. Universal*, 801 F.3d 1126 (2015).

⁷² Jason Mazzone, *Administering Fair Use*, 51 Wm. & Mary L. Rev. 395, 401 (2009); See *Harper & Row Publishers, Inc. v. Nation Enters.*, 471 U.S. 539, 549 (1985) (“Section 107 requires a case-by-case determination whether a particular use is fair, and the statute notes four nonexclusive factors to be considered.”).

3. The statutory prohibition on circumventing access controls is the cause of adverse effects.

By depriving multimedia e-book authors of access to content from DVDs, Blu-ray discs, and digitally transmitted video for criticism, commentary, and educational purposes, section 1201 creates an impediment to multimedia e-book authorship that prevents it from flourishing. The following examples from real authors demonstrate previously proposed alternatives to circumvention are either unworkable or simply unavailable to most authors. Specifically, for many self-publishing e-book authors, highly technical alternatives are too expensive and impractical. Copyright clearance is not a viable alternative because copyright holders may still overprice, fail to respond, or simply deny licenses to authors. Such denials constitute the type of censorship that the fair use doctrine exists to prevent.

These problems demonstrate that the DMCA causes “actual instances of verifiable problems occurring in the marketplace” of authors that are far “more than de minimis.”⁷³ As in 2012 and 2015, there is yet to “exist sufficient alternatives to obviate the need for an exemption.”⁷⁴ The following examples and statements given by several multimedia e-book industry experts and e-book creators—are illustrative of these substantial adverse effects.

a. Authors are not able to make fair use of protected material from DVDs, Blu-ray, and digitally transmitted video.

As discussed above, e-book authors have long enjoyed and exercised the right to make fair use—particularly in the form of criticism, commentary, and educational use. Given the nature of their art and work, multimedia e-book authors rely on the ability to criticize and comment on copyrighted material much more than traditional authors. To exercise this non-infringing use, e-book authors require access to (1) motion picture material from DVD protected by CSS, (2) Blu-ray discs protected by AACS, and (3) digitally transmitted video protected by various encryption measures. Unfortunately, because the alternatives to circumvention are expensive and cumbersome, the DMCA creates a substantial adverse effect on fair use in multimedia e-books that is felt heavily in the creative space.

Inability to Make Fair Use of Material on DVDs. As in 2012 and 2015, multimedia e-book authors rely on the ability to make fair use of DVDs and Blu-ray.⁷⁵ However, DVDs are still encrypted with CSS, which the Register recognizes “is a technological measure that

⁷³ 2012 Final Recommendation at 7-8 (internal quotation marks omitted).

⁷⁴ Letter from Lawrence E. Strickling, Administrator, National Telecommunications and Information Administration to Maria Pallante, Register of Copyrights, Library of Copyrights (Sept. 21, 2012), at 21, http://copyright.gov/1201/2012/2012_NTIA_Letter.pdf (“2012 NTIA Letter”).

⁷⁵ See 2012 NTIA Letter at 20; 2015 Recommendations at 76-77.

controls access to motion pictures on DVDs.”⁷⁶ The DMCA thus prevents authors from breaking or circumventing CSS encryption. This further prevents authors from ripping from DVDs to make fair use. The result is that the DMCA severely inhibits authors’ ability to criticize and comment on important protected material from DVDs.

Since the Librarian granted an exemption permitting authors to circumvent CSS in certain circumstances in 2012 and in 2015, authors creating in the e-book space have flourished by creating a plethora of creative new multimedia e-books.⁷⁷ Because DVDs are still a ubiquitous medium for motion picture material, and sometimes the only source, the DMCA’s prohibition on circumvention of CSS has and continues to pose a substantial adverse effect on fair use in e-book authorship during the 2018 – 2021 exemption period.

Inability to Make Fair Use of Material on Blu-ray. The DMCA continues to hinder e-book authors’ ability to make fair use of material stored on Blu-ray discs. As the Register has previously recognized, Blu-ray is protected by AACS, a form of access control.⁷⁸

As an example, a creator, Kirby Ferguson, is interested in creating multimedia e-books to share his ideas with educators, scholars, and students. He relies on fair use for his works and would need to access material from Blu-ray and online media. Mr. Ferguson writes:

I’m a filmmaker, writer, podcaster, and speaker. My work analyzes popular culture and its relation to the law. In my 2012 video series *Everything is a Remix*, I argue that creativity is— and always has been—based on copying, transforming, and combining. I have since added to the series with short films on patent litigation and fair use. Since 2015, I have been working on an episodic documentary about the hidden forces that shape our lives entitled *This is not a Conspiracy Theory*. I relied on fair use for both these series. I’ve spoken at YouTube, TED, SXSW, The Festival of Dangerous Ideas, Google, Netflix, The Creators Project, Columbia University, New York University.

Lately I’ve begun to explore other media formats in which to share my ideas, such as creating online video essays based on *This is not a Conspiracy Theory*. Because my work has a strongly educational component, a multimedia e-book could be an ideal way for me to share my work with educators, scholars, and

⁷⁶ 2012 Recommendation at 126 (“It is well established, and the record confirms, that CSS is a technological measure that controls access to motion pictures on DVDs.”); *see also* 2015 Recommendation at 29.

⁷⁷ *See* 2012 Final Rule, 77 Fed. Reg. at 65,266; 2015 Final Rule, 80 Fed. Reg. at 65,949.

⁷⁸ 2015 Recommendation at 29 (“Blu-ray discs are protected primarily by the Advanced Access Content System (‘AACS’.”); 2012 Recommendation at 126 (“It is well established, and the record confirms, that . . . AACS is a measure that controls access to motion pictures on Blu-ray discs.”).

students. However, I would not know whether accessing material from Blu-ray or online media for such a project would be legal, because it's not clear to me whether the current DMCA exemption applies to my work. A DMCA exemption that removes the term "offering film analysis" would allow me to explore the possibility of creating an e-book that makes fair use.

Additionally, there are many authors who are interested in creating fanfiction multimedia e-books that express both criticism and commentary. As explained above, fanfiction is a form of literary remix that is highly transformative and breathes new creative meaning in existing works. These authors would need to circumvent TPMs in order to access the high-quality images necessary for their e-books.

An author who goes by the pseudonym Holdt is interested in creating a multimedia e-book that would require them to circumvent DVD and Blu-ray protections. Holdt's e-book would transform the story of an existing canon by taking characters from the original canon and putting them in a different movie universe. It would change the original work to discover what characters might do in different circumstances, often answering the "what if" questions. For example, Holdt would take the characters from the Marvel Universe but with the idea that the characters are immortal and traveling in a different sci-fi universe. The clips used would be short, generally less than 30 seconds, and be used in lieu of a summary. This would allow the author to inform the reader of the story's setting, history, and context, without requiring readers to read hundreds of pages of background information. The author prefers to use DVD and Blu-ray because they already own copies of the relevant works in those formats and no alternatives to circumvention would produce the quality needed to publish their e-book. Using these clips in this way is a highly transformative use that does not harm the market for the original work. In fact, by allowing fans to engage and interact with the work in new and different ways, the work actually enhances interest in the original work and will likely increase sales.

Another author who chooses to stay anonymous creates fanfiction to teach others about fair use. Specifically, this author wants to create multimedia e-books using Ren'Py. This author's ability to make fair use will be severely limited without an exemption because low quality images will make certain parts of the work unintelligible.

I have been writing fanfiction for nearly twenty years. Most of the fanworks I have created explore and critique aspects of the original book, series, or film. For example, I created a fanwork that took place in the fictional world of a major literary work, in which I used plot elements from the work to argue that the moral framework of the work was problematic in numerous ways that had been obscured in the original work. I have also written "crossover" fiction combining two different fictional worlds that remix popular television shows to reimagine older, well-known stories in ways that analyze and critique the

messages and themes of the shows, while also illuminating the identity and history of a major American city. I have given readings and shown my work at major literary venues, conferences and conventions for nearly two decades.

I recently began experimenting with creating e-books using computer software to create choice-based narratives and more interactive e-book experiences—essentially, “choose your own adventure”-type e-books. This format is very important to my work because I explore and critique questions of morality in my work. Multimedia e-books with interactive elements give the reader choices, and when readers make choices they are implicated in the moral quandaries, dilemmas, and frameworks I explore.

My next project will probably not be possible because of the strictures of the DMCA. I want to use the Ren’Py software engine to explore an important but little-discussed aspect of a major television series, which is the pregnancy of one of the characters. I seek to criticize how the pregnancy and questions of fertility were portrayed in the show, and to demonstrate that the creators of the show did not take these questions seriously and in fact these questions were used primarily to drive the plot and explore male characters’ feelings and motivations.

In order to create this e-book, I need to access high quality footage from DVDs and Blu-ray. I need high quality footage for two reasons. First, I will be highlighting details within a larger setting such as a cradle or the baby in the cradle. Without high quality footage, the zoomed-in image is highly pixelated and barely understandable. Second, on occasion I will create moving backgrounds from various stills taken from the source footage, and then, using computerized animation, superimpose characters onto the image. I have tried to do this simply with stills and found that the image was highly pixelated and not usable. This is especially the case when highlighting smaller details from the show. In my experience, there is no way I can make this work without a DMCA exemption that would allow me to access footage on DVD and Blu-ray.

Inability to Access Digitally Transmitted Video. Section 1201 further hinders e-book authors’ ability to make fair use of digitally transmitted video. This includes content transmitted via traditional cable channels as well as online distribution of content, such as Netflix and Hulu. Since the last exemption, the use of internet streaming services has

exploded with more and more people consuming content through this medium.⁷⁹ Furthermore, internet streaming services such as Netflix and Hulu are now serving content only available through their own platforms. As original series continue to be made, no doubt creators will continue to make fair use commentary on them, which will require access to high quality versions of the original content.

An author who chooses to stay anonymous stated that they are interested in creating “a nonfiction book about the psychology used in certain TV shows illustrated with videos as examples.” Use of short clips for such purposes would be archetypal fair use, but because of the narrowness of the current exemption, this author cannot be sure whether the work will qualify for an exemption—it offers criticism and commentary, but not necessarily film analysis. This type of e-book could critique psychological techniques using pop culture to demonstrate or illustrate its points, but may not fall under the current exemption because the contemplated e-book would primarily be about psychological techniques, not analysis of film, and so it does not necessarily fit into the “offering film analysis” limitation. The author mentioned that it is discouraging and stifling to have ideas and know that they cannot use this medium to express these ideas.

Hedi Tandy is an author and attorney who stated that she uses fanfiction to not only create novel works of criticism and commentary, but also to teach people about fair use. She is interested in creating an e-book that is set in the world of the TV show *Supernatural*.

I am an attorney and the founder/writer of the blog *ef yeah copyright*, which focuses on legal issues involving fandom and fan creativity.⁸⁰ I have also been a vidder⁸¹ for over two decades, first using videotape and Amiga computer, and more recently on a personal computer. I have created around 50 vids, mostly touching on and inspired by science fiction and fantasy works. Much of my work has concerned the well-known, long-running television series *Supernatural*. This is a very self-referential series, and the creators, writers, and producers have interwoven fan creativity and episode plots a number of different ways, including through an in-universe book series

⁷⁹ Lee Rainie, *About 6 in 10 Young Adults in U.S. Primarily Use Online Streaming to Watch TV*, Pew Res. Cent. (Sept. 13, 2017), <http://www.pewresearch.org/fact-tank/2017/09/13/about-6-in-10-young-adults-in-u-s-primarily-use-online-streaming-to-watch-tv/>.

⁸⁰ *FYeahCopyright.com* aka “Is FanFic Legal”, <http://www.isfanficlegal.com/> (last visited Dec. 15, 2017).

⁸¹ *Vidding*, Wikipedia, <https://en.wikipedia.org/w/index.php?title=Vidding&oldid=781883538> (last visited Dec. 15, 2017).

called *Supernatural*.⁸² When something is described as “in-universe,” that means that to the fictional characters, it’s real; it’s part of their world, like *Hogwarts: A History* is a book in the *Harry Potter* universe. In *Supernatural*’s 200th episode, a new character named Marie wrote a musical based on the in-universe novels, and performed in it alongside her classmates at an all-girls high school. Since that episode aired, I have wanted to create an e-book that essentially is the in-universe TV series Marie gets to do that is also based on the in-show novels.

The e-book I want to create would contain all the multi-layered ephemera associated with a major television series: a trailer, the first few minutes of an episode, blog posts about the show, promotional literature, reviews, the Twitter-verse’s reaction, and so on. “In-universe marketing” is a trope used in fictional narratives that brings a layer of realism to the fantastic and fictional.⁸³ To create something that looks authentic, credible and watchable, I would need to obtain high resolution clips from Blu-ray or online sources. Also, because some of the content I would create for the e-book would be a mirror of content fans create about the series they love, I intend to include specific critiques and analysis of details in the in-universe show, such as set artifacts, a character’s fleeting facial expression, and so on. When pulling out small details, blowing them up, and exploring them in this work, it is absolutely essential to start with high-resolution source material.

In the fall of 2017, author Neil Gaiman is serving as the showrunner for *Good Omens*, a series based on the novel of the same name that he co-wrote with Terry Pratchett in the 1980s. He has been sharing photos of various sets through Instagram and Twitter, including a stack of books in a lead character’s bookstore⁸⁴ and a newspaper created for the program, noting that the items included in those photos will also be in the show,

⁸² *Totally Not Based On Friends and Family*, TV Tropes, <http://tvtropes.org/pmwiki/discussion.php?id=8zicyn1e95u4iojuz547m4vd> (last visited Dec. 18, 2017).

⁸³ *In-Universe Marketing*, TV Tropes, <http://tvtropes.org/pmwiki/pmwiki.php/Main/InUniverseMarketing> (last visited Dec. 18, 2017).

⁸⁴ Neil Gaiman Instagram, 5:39 AM EST on December 12, 2017 <https://www.instagram.com/p/BcmVv3jFRQ0/>.

and “are there for people who like to freeze frame.”⁸⁵ But they are also there for those who like to zoom in and see a very specific visual attribute in a program or film; in my nascent multimedia project, looking at *Supernatural* as an in-universe fan would look at it is a vital part of the visual compilation, and without high resolution images, the impact of the work I would create would inherently and automatically be limited and minimized. For it to have the impact on its viewers that I seek to create, it needs smooth clarity, and it needs to be visually pleasing in a way that cannot be manifested or accomplished with a series of consecutive screenshots.

The reason I want to do this project is to help people understand the arguments for fair use in fanfiction. For over 15 years, I have sought to teach people what fair use means and how it allows them to express themselves and explore popular culture; I’ve long tried to dispel myths that creating fanworks is a transgression that could result in the FBI breaking down a fan’s front door—which is a real concern that people have had and brought to me in questions and comments on my blog, on mailing lists, and on other online discussion forums. Factual and law-based explanations are useful, but they rarely capture imaginations in a way that a fiction-inspired narrative can.⁸⁶

For a vocal supporter of fanworks and transformative works like me to create something “in-world” that is set in a TV series universe, I will be able to create what I think will be a powerful educational tool to demonstrate how many fanworks are a fair use of copyright, and what the arguments are for fair use in fanfiction. I will also be making a form of metatextual criticism and commentary because I will be elucidating, exploring, and unpacking the construction of reality in a popular television series watched by millions, while also providing what I expect will be useful guidance to makers of fanworks.

These stories are only a few examples of lawful activity that section 1201’s prohibition on circumvention impedes. Given that DVDs, Blu-ray, and digitally transmitted video remains the widely used standardized formats for obtaining high quality content, multimedia e-book authors need access to these materials.

⁸⁵ Neil Gaiman Instagram, December 16, 2017
<https://www.instagram.com/p/BcwiBG7FfrR/>.

⁸⁶ Lucy Avraamidou & Martin Goedhart, *Tell Me a Story: The Use of Narrative as a Learning Tool for Natural Selection*, Educational Media International Vol. 54 , Iss. 1 (May 9, 2017), <http://www.tandfonline.com/doi/full/10.1080/09523987.2017.1324361>.

b. Alternatives to circumvention remain costly, impracticable, inferior, and unduly burdensome.

There are no alternatives to circumvention that are sufficient to accommodate the proposed non-infringing uses. Although opponents have previously proposed alternatives to circumvention such as licensing, smartphone and camera recordings, and screen-capture software,⁸⁷ these alternatives continue to be costly, impracticable, inferior, and unduly burdensome for authors.

i. Licensing remains an unworkable alternative because authors do not have financial resources or bargaining power.

The Register previously recognized that “licensing of motion picture clips is not a viable alternative for the uses proposed for criticism and comment.”⁸⁸ This was because “[t]he content available for clip licensing is far from complete and in any event such licensing is not practicable in many cases, whether due to difficulties in locating the rightsholders, overly lengthy negotiations that preclude planned uses, or denials where the would-be licensor disapproves of the noninfringing use.”⁸⁹ None of these reasons have changed and licensing continues to be an unrealistic option for authors.

Nearly all licenses from major studios contain provisions with language barring licensees from casting the studio or the film in a negative light. And even where a rightsholder is willing to award a license to an author, the rightsholder has unequal bargaining power and can charge the author an exorbitant fee, burdening the type of expression that authors seek to make. Some authors give their e-books out to the public for free; there would be no way for them to pay an exorbitant fee when they are making no money from their e-book themselves. Teachers or professors may also lack the funding necessary to pay the exorbitant fee. Requiring authors to obtain a license would create a pay-per-use system that would chill innovation and creation of multimedia e-books.

Additionally, to require “a creator who is making fair use of a work to obtain a license is in tension with the Supreme Court’s holding that rightsholders do not have an exclusive right to markets for criticism or comment of their copyrighted works.”⁹⁰ This requirement also goes against the public policy rationale behind the fair use doctrine. Requiring authors to get a license subverts the constitutional importance of the fair use doctrine as copyright law’s “safety valve.”⁹¹ Without fair use, authors could not use copyrighted materials in situations where rightsholders disapprove their message.

⁸⁷ Comments of the Advanced Access Content System Licensing Administrator LLC on Proposed Class 5, at 8-10 (2015) (“2015 AACCS Class 5 Comments”).

⁸⁸ 2015 Recommendations at 84.

⁸⁹ *Id.*

⁹⁰ *Id.* (citing *Campbell*, 510 U.S. 569).

⁹¹ The Purpose and Role of Fair Use, 4 Patry on Copyright § 10:1.50.

ii. Smartphone and camera video recordings are still not an adequate substitute for circumvention.

Neither the Register nor opponents took the position in the last rulemaking that smartphone recordings were a viable alternative to circumvention.⁹² No improvements to the quality of these recordings have changed since then to alter this conclusion. Alternatives like using a smartphone or camera to record video images to be displayed on a screen results in a video quality that is so degraded as to be unusable. As the Register found in the previous rulemaking, “the record does not establish that smartphone recordings can serve as sufficient alternatives to circumvention.”⁹³

iii. Screen-capture is not a viable alternative considering the considerable degradation of video resolution.

In the past, the Register has encouraged users to “employ non-circumventing screen-capture technology” in lieu of circumvention.⁹⁴ However, screen-capture technology has never been a viable alternative to the circumvention of TPMs for authors. Screen-capture technology can only be utilized to capture videos that are played through a computer’s DVD or Blu-ray disc reader or streamed via the internet.

Screen-capture technology continues to result in a noticeable lack of quality that renders the resulting images unusable to use for criticism and commentary. It is riddled with imperfections, such as dropped frames, frame rate issues, insufficient resolution, and artifacting.⁹⁵ Higher quality is important for fanfiction authors who cannot effectively make a critique or commentary of the original source without showing that work in all its original detail. It also is important for educators who use clips for educational purposes and to most criticism and commentary, where attention to detail is essential.

Screen-captured clips also often create problems with keeping the audio and video files in sync due to screen-capture’s separate processes of recording the audio and capturing the video images. When authors use lower quality version of video clips in their multimedia e-books it suggests a lack of diligence, professionalism, and credibility. The current DMCA exemption creates two classes of expression. One class includes those individuals who have the resources to afford to negotiate licenses to include higher quality video clips in their e-books. The other class includes individuals who will always have to include lower quality video clips recorded through screen-capture.

⁹² 2015 Recommendations at 84.

⁹³ *Id.* at 85.

⁹⁴ 2015 Recommendation at 103.

⁹⁵ *See* 2015 Recommendations at 50 n.305 (citing Reply Comment of International Documentary Association et al., Docket No. 2014-07, 7-8 (filed May 1, 2015)).

iv. All references to screen-capture in the exemption should be removed.

Given that screen-capture is never a viable alternative for multimedia e-book authors whose creativity dictates a high quality of presentation, the Register should remove all references to screen-capture in the exemption. The difference in quality between a clip obtained through screen-capture and one obtained from circumvention is discernable to the eye. High definition quality has become the norm for everyday consumers. When consumers see video clips that were obtained through screen-capture, they intuitively recognize that they are accessing second-class information. There is no situation where an author would ever want to include a second-class version of multimedia clips in their e-books. Authors are creators who take great pride in their work. Including a lower quality version of video clips in their multimedia e-books reflect a lack of diligence, professionalism, and credibility.

Additionally, the requirement of 37 C.F.R. § 201.40(b)(1)(iii)(B) that authors need to “reasonably believe that screen-capture software . . . are unable to produce the required level of high-quality content” is superfluous because screen-capture is objectively inadequate for producing high-quality content.⁹⁶ It is unreasonable to expect multimedia e-book authors, most of whom are unaware of section 1201, to develop opinions about screen-capture technology before engaging in fair use. For these reasons, the Register should remove all references to screen-capture in the exemption.

4. Section 1201(a)(1)(C)’s statutory factors support granting the proposed modifications.

Section 1201(a)(1)(C) requires the Librarian to consider five statutory factors. The proposed modifications to the exemption satisfy the statutory factors and thus should be granted.

a. The ubiquity of TPMs across all formats effectively means that copyrighted works are not available to authors who have the right to use them.

An analysis of the availability of the copyrighted work shows that without an exemption, the DMCA’s anti-circumvention provision will prohibit authors from accessing material that is lawful to use under the fair use doctrine but illegal to obtain under section 1201. This material is of the utmost importance to their works and will allow them to create new and unexpected e-books. The exemption would apply only to a narrowly tailored group of authors who responsibly make fair use.

The Register has indicated that the relevant inquiry into the first factor includes:

1. Whether the availability of the work in protected format enhances and/or inhibits public use of particular works;

⁹⁶ 37 C.F.R. § 201.40(b)(1)(iii)(B).

2. Whether the work protected is also available in other formats (and whether those formats are protected by access controls);
3. If alternative formats are available, whether such formats are sufficient to accommodate non-infringing uses; and
4. Whether the format is part of a “use-facilitating” business model that offers the public access to work in a variety of new ways, and whether the proposed exemption would prejudice this model.⁹⁷

i. The overall availability of copyrighted works will not be inhibited if circumvention is permitted for authors.

The first factor to consider is whether the availability of the work in the protected format enhances and/or inhibits the public use of the particular works. This asks whether the overall availability of copyrighted works will be enhanced or inhibited if circumvention is permitted for authors. The Register recognized in 2015 that the DMCA’s anti-circumvention prohibition prevents many e-book authors from making fair use of works in the protected formats identified in the proposed class.⁹⁸ The same is true today and will continue to be true throughout the 2018 – 2021 exemption period. Additionally, this will be true without the modifications we are seeking. Our proposed exemption would resolve this problem, all while not harming the public availability of motion pictures on Blu-ray, DVD, or digitally transmitted video.

The Register acknowledged in 2015 that an exception to circumvent CSS-protected DVDs would not decrease the availability of copyrighted works because “DVDs remain the dominant form of distribution despite the wide availability of circumvention tools.”⁹⁹ We know of no new evidence that would undermine this conclusion. The shift from DVDs to digitally transmitted video reflects consumers’ preference and is not the result of the circumvention of CSS-protected DVDs.

The situation is the same for Blu-ray and digitally transmitted video. The Register acknowledged in 2015 that an exception to the circumvention of Blu-ray would not have a “material impact on the availability of motion pictures on Blu-ray or of motion pictures generally”¹⁰⁰ and indeed it has not. The same can be said about the various systems protection of digitally transmitted video. This is especially true because the exemption is only for a narrowly defined class—authors who are making transformative uses of motion pictures for non-infringing purposes. For the foregoing reasons, the overall availability of copyrighted works will not be inhibited if circumvention is permitted for authors.

⁹⁷ 2010 Recommendation at 56.

⁹⁸ 2015 Recommendation at 99.

⁹⁹ *Id.* at 93 (internal quotation marks omitted).

¹⁰⁰ *Id.* at 94.

ii. There are no viable alternatives for accessing the specific and necessary motion picture material without circumvention.

The protected works are not available in any other format that is not protected by access controls. The only commercial formats that authors can use to obtain materials for fair use are on DVD, Blu-ray, and digitally transmitted video. VHS tapes are no longer a viable alternative, as the image quality is extremely poor and commercial distribution ceased in 2008.¹⁰¹

Additionally, some motion pictures are only available exclusively in one of these formats. For example, the past four years has seen a sharp increase in streaming services, such as Netflix, Hulu, and Amazon, producing their own content including culturally significant and critically recognized content such as the show *Transparent*, one of the first fictional portrayals of a transgender woman transitioning. Each format in which these works are available includes TPMs. Although some motion pictures are available in more than one format—for example, on both Blu-ray and digitally transmitted video—all three formats are protected by a form of TPMs,¹⁰² such as encryption, that authors reasonably fear will be covered by the DMCA. There is simply no viable alternative for accessing the specific and necessary motion picture material without circumvention.

iii. There are no alternative format controls that are sufficient to accommodate non-infringing uses.

There are no alternative format controls that are sufficient to accommodate non-infringing uses. Opponents have previously proposed alternatives to circumvention such as licensing, smartphone and camera recordings, and screen-capture software.¹⁰³ However, these alternatives continue to be costly, impracticable, inferior, and unduly burdensome for authors.

Licensing continues to be an unrealistic option for authors. As the Register previously recognized, “licensing of motion picture clips is not a viable alternative for the uses proposed for criticism and comment.”¹⁰⁴ This was because “[t]he content available for clip licensing is far from complete and in any event such licensing is not practicable in many cases, whether due to difficulties in locating the rightsholders, overly lengthy negotiations that preclude planned uses, or denials where the would-be licensor disapproves of the noninfringing use.”¹⁰⁵ Nothing has occurred since 2015 to overturn this conclusion.

Smartphone and camera recordings have never been a viable alternative for authors. As the Register previously recognized, “the record does not establish that smartphone

¹⁰¹ See 2010 Recommendation at 58.

¹⁰² See 2015 Recommendation at 83-84.

¹⁰³ 2015 AACS Class 5 Comments at 8-10.

¹⁰⁴ 2015 Recommendation at 84.

¹⁰⁵ *Id.*

recordings can serve as sufficient alternatives to circumvention.”¹⁰⁶ Nothing has changed since 2015 to alter this conclusion.

Lastly, screen-capture technology has never been a viable alternative to the circumvention of TPMs for authors. It results in a noticeable lack of quality that renders the resulting images unusable to use for criticism and commentary. Screen-capture technology is riddled with imperfections, such as dropped frames, frame rate issues, insufficient resolution, and artifacting.¹⁰⁷ Authors do not have the technical expertise to fix these problems. Additionally, the difference in quality between a clip obtained through screen-capture and one obtained from circumvention is discernable to the eye. Authors should not be limited creatively because they are unable to include video clips in their e-books that they are legally allowed to include.

iv. The proposed exemption will not prejudice any “use-facilitating” business models.

The proposed exemption will not prejudice the “use-facilitating” business models that are facilitated by TPMs. Any circumvention of TPMs will be limited to situations where the author wants to criticize or comment on short portions of motion pictures. This is a narrow, well defined, and incremental class limited by both use and users.

The current exemption for authors has been in place since 2012 and has had no effect on the public availability of motion pictures. The proposed exemption will not change that fact. The proposed exemption will actually allow authors to use copyrighted materials that they have the right to use under the fair use doctrine. This leads to greater public access to the works that are currently protected by TPMs. Thus, the proposed exemption will not prejudice any use-facilitating business model.

b. Modifying the exemption will improve the availability of works for nonprofit archival, preservation, and educational purposes.

In the 2012 Rulemaking, the Register found this factor to be neutral to favorable regarding the proposed exemptions which included multimedia e-books offering film analysis.¹⁰⁸ However, in the 2015 Rulemaking, the Register noted this statutory factor favored proposals relating to educational uses and multimedia e-books offering film criticism and was favorable to most of the proposed exemptions.¹⁰⁹

Multimedia e-books have the ability to provide great educational value to classroom settings. Many multimedia e-books are created specifically as a teaching tool and they can be used as a reference and resource, similar to their paper counterparts. While authors use

¹⁰⁶ *Id.* at 85.

¹⁰⁷ *See* 2015 Recommendations at 50 n.305 (citing Reply Comment of International Documentary Association et al., Docket No. 2014-07, 7-8 (filed May 1, 2015)).

¹⁰⁸ 2012 Recommendation at 136.

¹⁰⁹ 2015 Recommendation at 94.

multimedia e-books as a way to criticize and comment on a specific subject, readers can use multimedia e-books to develop these same skills. Multimedia e-books have the added benefit of providing textual and audiovisual archival material in one format.

Both nonfictional and fictional multimedia e-books are intrinsically educational, while one provides facts the other promotes creativity. Every level of education can benefit from fictional and nonfictional multimedia e-books featuring a range of fair uses that will only be possible if this exemption is granted. Additionally, many multimedia e-books not offering film analysis will continue to resemble documentaries in that these nonfictional e-books will use videos to analyze or criticize and comment on other academic pursuits beyond film such as literature, history, art, geology, or politics. Fictional multimedia e-books offer a lesser degree of educational value but still spur the imagination and promote creativity when used in the classroom. Therefore, as in the 2015 Rulemaking, this factor should be found neutral to favorable in regard to the proposed modification.

c. The prohibition on the circumvention of technological measures applied to copyrighted works has a negative impact on criticism, comment, news reporting, teaching, scholarship, and research.

Authors began the tradition of fair use to accomplish the purpose of criticism and comment.¹¹⁰ Books are the quintessential repository for sustained scholarship and are the primary teaching tool at all levels of education. In 2012 and 2015, the Register noted that this factor “is a critical consideration in relation to noncommercial videos, documentary filmmaking, multimedia e-book authorship, and education uses. Each of these proposed categories seek to enable criticism, comment, teaching and/or scholarship. This factor therefore weighs strongly in favor of appropriately tailored exemptions to foster such uses.”¹¹¹

Since 2015, this argument has only strengthened. Multimedia e-book authors will continue to propel the fair use tradition into the twenty-first century by making use of innovative technologies to provide scholarly research and arguments to readers in a manner that efficiently embeds content essential to understanding the scholarship. Such material is significantly more effective and dynamic than prose alone.

Additionally, teaching and scholarship are not limited to the nonfictional realm of authorship. Fictional authors also contribute to education and teaching through transformative uses that engage and challenge students with creativity. Fictional e-books with video clips expand students’ learning experience with transformative and creative experiences. Students learn best through a variety of mediums such as visual, verbal, or auditory. The ability to provide different types of media in one format will greatly benefit

¹¹⁰ *Folsom v. Marsh*, 9 F. Cas. 342 (C.C.D. Mass. 1841) (establishing the principle of “fair use”).

¹¹¹ 2012 Recommendation at 136; 2015 Recommendation at 94.

the educational experience of students in a variety of grade levels studying a variety of subjects.

Our proposed exemption can help to facilitate advances in scholarship, the ways people learn, and the way education is approached in the United States. The multimedia e-books that the proponents wish to create serve as compelling examples of such critical scholarship. If granted, this exemption will provide many other scholars the opportunity to translate their research into multimedia e-books.

Finally, the limitations of the existing exemption create a trap for unwary users who may not be aware of their complex contours, or even of section 1201. Users who may have already engaged in such activities for the purpose of creating fictional multimedia e-books or e-books not involving film analysis may make a good faith determination that their activities are fair use, may be unaware of the specific contours of the exemption and the potential liability associated with having circumvented for actions adjacent to but just outside the exemption—or, as is far more common, may be altogether unaware of section 1201. They may only become aware of such a rule when encountering either criminal or civil liability, despite their good faith efforts to engage in fair use. The impact on criticism, comment, news reporting, teaching, scholarship, and research can be devastating, given that the contours of the exemptions only become salient when users are defending fair uses against a legal challenge such as a takedown notice.¹¹²

d. The proposed modification will not negatively impact the market for or value of copyrighted works.

The doctrine of fair use protects the rightsholders' interest in protecting the market for their works, because the doctrine requires a “transformative use” of the original work that prevents a fair use from serving as a “market substitution.”¹¹³ The Supreme Court has recognized that there is “no protectable derivative market for criticism” because “the unlikelihood that creators of imaginative works will license critical reviews or lampoons of their own productions removes such uses from the very notion of a potential licensing market.”¹¹⁴ Harm cognizable under the Copyright Act consists of “market substitution” effects, not “criticism that merely suppresses demand.”¹¹⁵ Indeed, in 2015 the Register concluded that transformative short video clips are “consistent with principles of fair use and unlikely to supplant the market for motion pictures.”¹¹⁶ This has not changed since the doctrine of transformativeness was adopted and is not likely to change in the foreseeable future.

Furthermore, we are not aware of any allegations that previous exemptions pertaining to DVDs have resulted in infringing uses. This confirms the logic underlying the requested

¹¹² See 2015 Recommendation at 94.

¹¹³ See Comment of Mark Berger etc. al., Docket No. RM 2011-07, 19 (filed Dec. 1, 2011).

¹¹⁴ See *Id.*

¹¹⁵ See *Campbell v. Acuff-Rose Music, Inc.*, 510 U.S. 569, 592-94 (1994).

¹¹⁶ See 2015 Recommendation at 95.

exemption: when a class is tailored to a group of users who follow established best practices in fair use, the exemption will not prejudice the market for or value of copyrighted works. Even by broadening this exemption to include fictional authors, the category will remain specifically tailored as it will only include authors making fair use of video clips. It is especially unlikely that fair use in this context will prejudice the market for the original works, because authors engage in commentary, criticism, and analysis that serve goals other than those pursued by the original authors.

Inclusion of copyrighted material in new works increases the visibility and appetite for the original material by bringing it to consumers' attention and highlighting the technique and skill involved. Finally, an incremental approach further limits any risk of prejudice by ensuring this small group of users makes use of the most mature format that is sufficient to accommodate the particular non-infringing use.

e. Other factors weigh in favor of modifying the exemption.

The statutory prohibition under section 1201(a)(1)(A) on circumventing access controls is the cause of adverse effects for e-book authors. E-book authors are prevented from accessing material on DVDs, Blu-ray discs, and digitally transmitted video for criticism, commentary, transformative, and educational purposes. This prohibition is a significant barrier that prevents multimedia e-book authorship from flourishing. Previously proposed alternatives to circumvention are expensive, impracticable, and unduly burdensome on authors. For e-book authors who are looking to self-publish, highly technical alternatives are financially and logistically unfeasible. As for clearance as a potential alternative, rightsholders may still overprice, fail to respond, or simply deny licenses to authors. This is especially so where an author aims to criticize or comment on the rightsholder in a negative or unflattering manner.

Relatedly, we note that there is pending litigation about the constitutionality of section 1201 generally, and of this proceeding in particular. This litigation raises the possibility that the triennial review amounts to an unconstitutional speech licensing regime and a prior restraint in violation of the First Amendment.¹¹⁷ We note that the content-based distinctions in the existing exemption between fictional and nonfictional content, as well as between e-books offering film analysis and those that do not, create additional constitutional tension that may not survive strict scrutiny. In addition, distinctions such as “nonfiction” and “offering film analysis” are difficult to define and may be unconstitutionally vague. Given the fraught procedural context of this review, which requires speakers to seek permission in advance of engaging in First Amendment-protected fair use, we urge the Register to avoid these constitutional concerns by eliminating the content-based distinctions presently

¹¹⁷ See Memorandum of Points and Authorities in Support of Motion for Preliminary Injunction on Behalf of Plaintiff, *Green v. Dep. of Just.*, No. 16-cv-01492-EGS (D.D.C. Sep. 29, 2016).

included in the exemption, thereby ensuring that authors can make fair use in multimedia e-books regardless of the precise content of their output.

Documentary Evidence

See attached Appendix: Memorandum from Alex Podobas.

Appendix A
Memorandum of Alex Podobas

TECHNOLOGICAL PROTECTION MEASURES IN DIGITAL CONTENT DISTRIBUTION SYSTEMS

MEMORANDUM OF ALEX PODOBAS

DECEMBER 18, 2017

Biography

Alex M. Podobas is a Senior Cybersecurity Analyst/Penetration Tester at US ProTech, Inc. He specializes in analyzing web applications and networks for security vulnerabilities, developing applications to parse “Big Data” sets to analyze anomalous security events, and reviewing web applications, databases, and other cloud-related technologies for compliance with federal and state data privacy statutes. Mr. Podobas has a Juris Doctor from the University of California, Irvine School of Law and an undergraduate degree from the University of California-Los Angeles

This memorandum presents Mr. Podobas’s analysis alone and does not represent in any way the opinions of the US ProTech, Inc. or any other organization or person.

Introduction

The number of software tools and services specifically built to deliver media content online has risen as the Internet has increasingly become a distribution system for video streaming. Encryption measures are routinely integrated into online distribution platforms to protect digital video files during storage and transmission. This memorandum discusses several of the most prominent encryption measures in use today.

WebM

Definition

WebM constitutes a set of open-source, royalty free software technologies used to support playback of audio-visual media files primarily in web-based context. Per its open-source project website: “WebM defines the file container structure, video and audio formats. WebM files consist of video streams compressed with the VP8 or VP9 video codecs and audio streams compressed with the Vorbis or Opus audio codecs.”¹ WebM technology is deployed on

¹ See <https://www.webmproject.org/about/>.

thousands of websites worldwide. Its most prominent use case includes generic YouTube, which makes WebM the default transcoding scheme for video uploads.²

WebM utilizes encryption and decryption of media files through the AES (Advanced Encryption Standard), a FIPS (Federal Information Processing Standard)-compliant cryptographic algorithm defined at 66 FR 63369.³ AES operates as a “symmetric block cipher,” using a fixed-length bit and a single key used to encrypt (encipher) and decrypt (decipher) AES-protected data.⁴

DVR Systems

DVR stands for “Digital Video Recorder.” The purpose of such systems is to digitally save copies of video content onto storage devices such as USB sticks, external hard drives, or hard drives internal to the DVR itself. DVR systems are a general descriptor for the functionality they provide, and are not a brand identity or trademark associated with one particular vendor.

Encryption on DVR Systems using HDCP

DVR systems routinely include encryption.

(1) HDCP: Some DVR Systems utilize a technology named “High-bandwidth Digital Content Protection” (“HDCP”). This encryption technology protects the transmission between what device reads the content from a media source and what that device is connected to in order to display the media source. Thus, the purpose of HDCP is to regulate which displays are authorized to transmit the audio and/or video content of HDCP-protected files at the “last stage” of the transmission: the connection between a device and the display, and whether the display can ultimately render the audio and visual aspects of HDCP-protected content.⁵

(2) HDCP Components. HDCP-protected systems typically include four components: *source* (such as a set-up box like a DVR or a DVD or Blu-Ray player); *sink* (the display that receives content and renders it on a display for viewing); *repeaters* (such as audio

² See <https://youtube.googleblog.com/2011/04/mmm-mmm-good-youtube-videos-now-served.html>.

³ See <https://www.federalregister.gov/documents/2001/12/06/01-30232/announcing-approval-of-federal-information-processing-standard-fips-197-advanced-encryption-standard>.

⁴ The raw source code of WebM’s encryption mechanism may be found at https://github.com/webmproject/webm-tools/blob/master/webm_crypt/webm_crypt.cc and the yet un-finalized standards specification for AES support in WebM may be found at <https://www.webmproject.org/docs/webm-encryption/>.

⁵ See https://www.digital-cp.com/sites/default/files/resources/HDCP_deciphered_070808.pdf at 1.

amplifiers or video splitters); and *digital interfaces* (physical input/output ports that are connected by a cable). HDCP protects the digital interface communication channel, and includes:⁶

- Digital Visual Interface (DVI)
- DisplayPort, GVIF (Gigabit Video Interface)
- DLI (Digital Light Interface)
- UDI (Unified Display Interface)

HDCP utilizes encryption to verify that a device is authorized to perform certain content using authentication, authorization, and encryption. HDCP uses these principles in three distinct steps. In the explanation below, imagine a scenario in which an HDCP-protected Blu-Ray disc is inserted into a Blu-Ray player and asked to play a particular movie on a particular screen. The components of this example, for the sake of clarity, shall be:

- **Source:** a Blu-Ray DVD
- **Transmitter 1:** A device (Blu-Ray Player) that is asked to render the audio-visual content of a media source
- **Connector 1:** an HDMI cable connected on one end to Transmitter 1 and on the other end to Receiver 1.
- **Receiver 1:** A high-definition television set authorized to play HDTV content

HDCP Encryption Step 1 (Authentication):

Prior to sending any content from Source to Receiver 1, Transmitter 1 instantiates an authentication process with Receiver 1. The purpose of this authentication process is to confirm that Receiver 1 is authorized to receive data from Transmitter 1. Two sets of data are used to identify that a certain transmitter or receiver is actually that transmitter or receiver.

(1) Device Private Keys

- a. Transmitter 1 and Receiver 1 (like all HDCP transmitters and receivers) include “Device Private Keys.” These keys are unique to the transmitter or receiver that holds these keys, meaning that no other transmitter or receiver holds an identical set of Device Private Keys. Each Device Private key is a 56-bit key, and each

⁶ See https://www.digital-cp.com/sites/default/files/resources/HDCP_deciphered_070808.pdf at 3.

transmitter or receiver holds 40 Device Private Keys which are each 56-bit length-keys. These are never shared with other HDCP transmitters or receivers.

(2) Key Selection Vector

- a. In addition to the Device Private Key, Receiver 1 and Transmitter 1 (like any receiver and transmitter) each contain a Key Selection Vector unique to the device that holds a Key Selection Vector. Each Key Selection Vector is a 20-bit binary value and is used like a public key in public-private key exchange authentication mechanisms to verify the identity of a particular device.

Step 1, Part A:

The first part of HDCP authentication is initiated by Transmitter 1, which occurs when Transmitter 1 sends (1) its Key Selection Vector (again, a key akin to a public key) to Receiver 1 and (2) a second unique value that Transmitter 1 generates. This secondary value is based on a proprietary algorithm licensed by the

Step 1, Part B:

The second part of HDCP authentication is when Receiver 1 parses Transmitter 1's communication and then returns (1) its own key Selection Vector back to Transmitter 1 along with (2) a unique value that identifies Receiver 1 as a repeater (see "**HDCP Overview Definitions**" above for the definition of a receiver).

Step 1, Part C:

If this exchange of data between Transmitter 1 and Receiver 1 is successful, then a secret value, shared only between Receiver 1 and Transmitter 1, is generated. This shared secret is generated from a proprietary algorithm licensed by Digital Content Protection LLP, and the shared secret's creation involves two steps: (1) Transmitter 1 using its Device Private Key (not shared with Receiver 1) and Receiver 1's Key Selection Vector and (2) Receiver 1 using its Device Private Key (not shared with Transmitter 1) and Transmitter 1's Key Selection Vector

The overall purpose of this key-based exchange serves the purpose of confirming to Transmitter 1 that Receiver 1 is actually Receiver 1, and separately confirming to Receiver 1 that Transmitter 1 is really Transmitter 1.

Step 1, Part D:

If Receiver 1 and Transmitter 1 have completed Part A, Part B, and Part C of Step 1 and ultimately verified to one another that each device matches the identity of what it purports to represent, then content may be transmitted from the Source by Transmitter 1 to Receiver 1. This transmission stream is encrypted using the key-based exchange authentication process described in Step 1. The encryption process uses two technical avenues to create an encrypted stream of content from Source and transmitted between Transmitter 1 and Receiver 1.

HDCP Encryption Step 2 (conditional)

Step 2 is a conditional step, meaning that it may or may not occur depending on whether or not Receiver 1 is a repeater. Suppose that instead of being a high-definition television (as the original example above instructs), Receiver 1 is a video-splitting device that enables the Source's contents to play on multiple television screens. If Receiver 1 is a repeater, then an intermediary step is performed: checking how many downstream Key Selection Vectors are present. This quantity is important because, as Digital Content Protection, LLC notes: "HDCP sources, repeaters and sinks may connect together in a tree-shaped topology with up to seven levels and 127 devices. This enables many different combinations of devices. Encrypted HDCP content flows through this topology over HDCP-protected interfaces."⁷

HDCP Encryption Step 3 (Periodic Checks) (conditional)

Step 3 does not involve the initial authentication and authorization steps, but instead involves subsequent authentication and authorization. Specifically, every 128 frames of video or at least once every two seconds (but not necessarily once per second), a certain process occurs that has two purposes:

- (1) Receiver 1 sends a communication back to Transmitter 1 to verify that Transmitter 1 is *still* Transmitter 1, which simultaneously confirms to Transmitter 1 that Receiver 1 is still Receiver 1.
- (2) Receiver 1 and Transmitter 1 communicate to verify that the encrypted stream of content from Source to Transmitter 1 to Receiver 1 is synchronized.

⁷ See https://www.digital-cp.com/sites/default/files/resources/HDCP_deciphered_070808.pdf at 4.

HTML 5 Encryption

Netflix, a major on-demand media provider, detailed its recent support for HTML 5 streaming video in a March 2017 Medium post.⁸ The company wrote, “we have launched HTML5 video on Chrome OS, Chrome, Internet Explorer, Safari, Opera, Firefox, and Edge on all supported operating systems.” In the same post, Netflix further described that “[our] adoption of HTML5 has resulted in us contributing to a number of related industry standards,” including MPEG-DASH, WebCrypto, and Encrypted Media Extensions. In a Comment submitted as part of the 2014-2015 § 1201 Anticircumvention Rulemaking, HTML5’s encryption mechanism was discussed at the time of writing (late 2014).⁹ This memorandum expands upon that submission by discussing new or updated types of online media protection mechanisms.

WebCrypto API

WebCrypto is a “JavaScript API for performing a wide array of basic cryptographic operations in web applications,”¹⁰ including hashing, generating and verifying signatures, data encryption and decryption, derivation of shared secrets, and importing and exporting cryptographic keys.¹¹

Web applications are, of course, the means by which streaming video content is delivered to end customers. Netflix, Hulu, HBO Now, and YouTube are both web applications (as accessible from a web browser), but also operate through mobile OS-specific platforms like iOS and Android.

The WebCrypto API has two features that make it relevant in the context of digital rights management:

- (1) **Encryption without exposure of cryptographic keys:** The ability to utilize private keys without making the contents of the key available to JavaScript. Otherwise, the risk is such that cryptographic content that should never be made available to the general public, like a private key, could operate in the web browser’s DOM tree and therefore potentially be exposed. Accessing the DOM tree is typically accomplished by right clicking on a web page and then selecting “Inspect Element” or “View Source” (or some variation thereof).
- (2) **Data integrity protection:** Online video streaming services often cache static content to execute faster load times. The Web Crypto API can encrypt the contents such as to

⁸ <https://medium.com/netflix-techblog/update-on-html5-video-for-netflix-fbb57e7d7ca0>

⁹ Comment of Authors Alliance et al., Docket No. 2014-07 (filed Feb. 6, 2015).

¹⁰ <https://www.w3.org/TR/WebCryptoAPI/>; https://developer.mozilla.org/en-US/docs/Web/API/Web_Crypto_API.

¹¹ <https://webkit.org/blog/7790/update-on-web-cryptography/>.

prevent the inappropriate taking of the protected media content or separately to confirm that it has not been tampered with (data integrity protection).

MPEG-DASH

The “MPEG” in “MPEG-DASH” is an acronym for the Moving Picture Expert Group (“a working group of ISO/IEC with the mission to develop standards for coded representation of digital audio and video and related data.”)¹² and the “DASH” in “MPEG-DASH” stands for “Dynamic Active Streaming over HTTP.”¹³ MPEG-DASH is supported by a veritable consortium of technology companies, including:

Google, Adobe, Akamai, Cisco, Comcast, Dolby, Ericsson, Microsoft, Netflix, Qualcomm, Samsung, Experi, Arris, Brightcode, Verizon (Digital Media Services), technicolor, Nexstreaming, and more.¹⁴

MPEG-DASH supports the ability to apply different encryption protection schemes to different parts of a media file. For example, a movie can have different licensees available for the audio and video components of the movie file within the ContentProtection element.¹⁵

Encrypted Media Extensions (EME)

As specified by the W3C, EME is a proposed standard that “extends `HTMLMediaElement` [HTML51] providing APIs to control playback of encrypted content.”¹⁶ The full technical standard is available at <https://www.w3.org/TR/encrypted-media/#introduction>.

Like MPEG-DASH, EME permits licensors and other parties that have an interest in DRM diverse control over how, and by what mechanism, media content is encrypted. Implementations may “select content protection mechanisms, control license/key exchange, and execute custom license management algorithms.”¹⁷

¹² <https://mpeg.chiariglione.org/>.

¹³ The ISO/IEC standard ISO/IEC 23009-1:2014(E) is available in PDF format at http://standards.iso.org/ittf/PubliclyAvailableStandards/c065274_ISO_IEC_23009-1_2014.zip and serves as the technical resource for this brief description.

¹⁴ <http://dashif.org/members/>.

¹⁵ ISO/IEC 23009-1:2014(E), pg. 75 (5.8.41: Content Protection).

¹⁶ <https://www.w3.org/TR/encrypted-media/>.

¹⁷ *Id.*

Widevine

Widevine is a DRM solution produced by Google. Per its “Supported Platforms,” Widevine is deployed on a variety of living room media players, the main mobile OS platforms (Android and iOS), significant desktop operating systems (MacOS, Windows, Linux, and Chrome OS), and a variety of chipset vendors.¹⁸ Widevine includes support for several media encryption technologies discussed in this writing (MPEG-DASH, CENC, and EME).¹⁹

¹⁸ http://www.widevine.com/supported_platforms.html.

¹⁹ https://storage.googleapis.com/wvdocs/Widevine_DRM_Getting_Started.pdf;
https://storage.googleapis.com/wvdocs/Widevine_DRM_Encryption_API.pdf.