

*Before the*  
**U.S. COPYRIGHT OFFICE**  
**LIBRARY OF CONGRESS**

**In the Matter of Section 1201 Exemptions to  
Prohibition Against Circumvention of Technological  
Measures Protecting Copyrighted Works**

**Docket No. 2014-07**

**Reply Comment of**

- **Peter Decherney, Professor of Cinema Studies and English, University of Pennsylvania,**
- **Michael X. Delli Carpini, Professor and Dean, Annenberg School for Communication, University of Pennsylvania,**
- **American Association of University Professors,**
- **College Art Association,**
- **International Communication Association,**
- **Library Copyright Alliance, and**
- **Society for Cinema and Media Studies.**

**Requested Class of Work for Exemption – Proposed Class 1 (Audiovisual Works—  
Educational Uses—Colleges and Universities)**

Audiovisual works embodied in physical media (such as DVDs and Blu-Ray Discs) or obtained online (such as through online distribution services and streaming media) that are lawfully made and acquired and that are protected by various technological protection measures, where the circumvention is accomplished by college and university students or faculty (including teaching and research assistants) for the purpose of criticism or comment.

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## **I. Commenter Information**

This written reply comment is submitted on behalf of Peter Decherney, Professor of Cinema Studies and English at the University of Pennsylvania, Michael X. Delli Carpini, Professor and Dean of the Annenberg School for Communication at the University of Pennsylvania, the American Association of University Professors (AAUP), the College Art Association (CAA), the International Communication Association (ICA), the Library Copyright Alliance (LCA), and the Society for Cinema and Media Studies (SCMS). Parties interested in contacting the submitter should contact Sarah O'Connor and Mark Patrick at (202) 274-4148 or by email at so6921a@student.american.edu or mp9853a@student.american.edu.

The joint petitioners [hereinafter referred to as "Joint Academics"] filing this written reply comment represent over 360,000 artists, art historians, curators, critics, collectors, educators, librarians, publishers, professors, scholars, professional university staff, and professionals in the visual arts, all interested in improving the quality of higher education in the United States. The AAUP is an organization of university faculty whose purpose is to advance academic freedom and shared governance, to define fundamental professional values and standards for higher education, and in general increase the usefulness and advance the standards, ideals, and welfare of the profession. The College Art Association (CAA) is a professional association that promotes excellence in scholarship and teaching in the history and criticism of the visual arts and in creativity and technical skill in the teaching and practices of art. The International Communication Association (ICA) is an academic association dedicated to the study, teaching, and application of human and mediated communication. The Library Copyright Alliance (LCA) consists of three major library associations—the American Library Association, the Association of Research Libraries, and the Association of College and Research Libraries—with a unified goal of fostering global access and fair use of information for creativity, research, and education. The Society for Cinema and Media Studies (SCMS) is an organization dedicated to the study of the moving image. The AAUP, ICA, and SCMS were all petitioners in the corresponding 2012 request for exemption,<sup>1</sup> and their involvement in this Comment is a testament to the continued importance of this process.

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<sup>1</sup> 2011 Comment of Peter Decherney, et al.

## II. Overview

Technological protection measures and exemptions for education have coexisted peacefully for years. The explosive growth in the availability of motion pictures to consumers has happened alongside modest and incremental growth in an exemption for educational users. Opponents of the proposed class acknowledge the continuing need for the exemption granted in the previous rulemaking,<sup>2</sup> so we will confine our reply comments to the incremental adjustments requested in this iteration of the triennial rulemaking.

To meet the evolving needs of college and university faculty and students in the digital age, the Joint Academics filing this written reply comment are seeking an exemption that includes: the use of audiovisual works on Blu-ray discs; use beyond “short excerpts”; and use by courses that do not necessarily require “close analysis.” These incremental changes represent the movement of education toward an experience increasingly enriched by advancements in technology. Previous exemptions have been extremely valuable, but also difficult to parse, and have left out important lawful educational uses. The Copyright Office should recommend that the Librarian of Congress take this opportunity to modify the previous exemption so that it covers a wider range of lawful educational uses and does so unambiguously. Just as it is important that the exemptions keep pace with the evolving needs of college and university faculty and students, it is important these beneficiaries of the exemption can determine clearly which educational uses are permitted by the exemption.

The opponents of the proposed exemption rely on an artificially narrow view of fair use and caselaw that is irrelevant in the current proceeding. Opponents also contend that a modification of the previous exemption to include high quality content is unwarranted due to lack of substantial adverse effects. In fact, high quality media is an essential tool of the modern classroom. Without direct access to audiovisual works on Blu-ray discs and other high definition

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<sup>2</sup> See Comment of DVD Copy Control Association [hereinafter DVD CCA] on Proposed Class 1 at 2 (“DVD CCA does not object to issuance of a new three-year exemption under the same terms and conditions as were contained in the 2012 exemption applicable to this class . . . .”); Comment of Joint Creators and Copyright Owners on Proposed Class 1 at 2 (“Joint Creators and Copyright Owners would not oppose a renewal of the educational exemptions for universities and colleges granted in the last proceeding . . . .”); see also *id.* at 5 n. 7 (stating that “Joint Creators and Copyright Owners do not oppose renewal of the current exemptions for screen capture technologies”).

formats, college and university faculty and students are unable to use content only visible in HD or content only available in HD formats. Additionally, students cannot experience and analyze the visceral effect intended by a work's original creator without access to media of appropriate quality. Screen capture technology—one of the alternatives to circumvention suggested by the opponents of the proposed class—cannot create clips that retain the full richness of the creator's intended experience of the work. Similarly, streaming platforms present a host of problems including contractual limitations on use, reliance on robust Internet connectivity, limited selection, unpredictable advertisements, lost time cuing up clips, and cropped frames. Finally, the proposed class of works and its uses qualify for an exemption under the factors enumerated in § 1201(a)(1)(C).

For the above-mentioned reasons, not only must the existing exemption be renewed, as the opponents concede, but that exemption must also be modified to cover unambiguously a fuller range of lawful educational uses adversely affected by the prohibition against circumvention including audiovisual works embodied in physical media (such as DVDs and Blu-ray discs) or obtained online (such as through online distribution services and streaming media), where the circumvention is accomplished by college and university students or faculty (including teaching and research assistants) for the purpose of criticism or comment.

### **III. Technological Protection Measures and Methods of Circumvention**

According to the opponents, technological protection measures (TPMs) “have increased the availability of works and have allowed for a vast proliferation of platforms on which consumers can enjoy authorized access to an increasing variety of content,” and specifically enabled “creators of motion pictures to expand their streaming and downloading options and to experiment with a broad range of business models to increase access to their works.”<sup>3</sup> The Joint Academics are glad to see that exemptions for education have had no detrimental effect on the various business models that the Digital Millennium Copyright Act was supposed to enable.<sup>4</sup>

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<sup>3</sup> Comment of Joint Creators and Copyright Owners on Proposed Class 1 at 3.

<sup>4</sup> See *infra* Section VI (addressing the statutory factors, including the effect of circumvention of TPMs on the market for or value of copyrighted works).

Opponents stated that Joint Academics failed to state how circumvention is accomplished.<sup>5</sup> As previously stated, the most common method of circumvention for educational use is through software programs that disable the various TPMs referenced above.<sup>6</sup> These programs are readily available online and can rewrite the desired portion of a protected work with the exact same frame rate, preserving content and maintaining the same resolution. Additionally, these programs do not require decryption of the entire work—faculty and students can decrypt only the portion of the work needed for the asserted educational purpose. The techniques used may differ widely based on the experience and sophistication of the student or faculty member attempting to use the copyrighted work for any of the fair uses described below.

#### **IV. Asserted Noninfringing Uses**

Opponents exaggerate both the breadth of fair use assumed by the proposed class and the narrowness of fair use in the courts. In reality, the proposed class better reflects the law of fair use than previous exemptions have. There is no legal requirement that fair uses be of “short portions,” nor is “close analysis” the only, or even the highest, form of “teaching . . . criticism, or comment.”<sup>7</sup> Moreover, the protection of a broad sphere of free educational use of audiovisual works in 17 U.S.C. § 110(1) signifies congressional policy favoring exactly the types of uses covered by this proposed class.<sup>8</sup> In short, the uses enabled by this modified exemption would be lawful fair uses.

##### **A. Opponents’ View of Fair Use is Artificially Narrow**

Opponents of the proposed class attack a straw man by arguing that “not all educational uses are fair uses *per se*.”<sup>9</sup> Joint Academics never suggested otherwise. Opponents seem to suggest that balancing of the statutory factors is an unpredictable process that may not apply consistently to like cases. In reality, educational uses of audiovisual works in the circumstances

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<sup>5</sup> Comment of DVD CCA on Proposed Class 1 at 4.

<sup>6</sup> See Comment of Peter Decherney et al. on Proposed Class 1 at 3-4 (describing the TPMs that control access to the works in the proposed class and the methods of circumvention).

<sup>7</sup> 17 U.S.C. § 107 (2010).

<sup>8</sup> See Comment of Peter Decherney et al. on Proposed Class 1 at 4-11 (discussing non-infringing uses sought for inclusion in modified educational exemption for colleges and universities).

<sup>9</sup> Comment of Advanced Access Content System Licensing Administrator LLC [hereinafter AACS LA] on Proposed Class 1 at 4-5; Comment of DVD CCA on Proposed Class 1 at 4-5.

described by proposed Class 1 are highly likely to be fair uses.

First, educational uses are more likely to be fair than other types of uses. Teaching, criticism, and comment are specifically enumerated as favored uses in § 107 of the Copyright Act.<sup>10</sup> Courts have recognized repeatedly that “copyright has always been used to promote learning” and that allowing some leeway for educational fair use furthers the purpose of copyright.<sup>11</sup> Of course this does not mean that all educational uses are fair uses, but it does mean that the analysis is more likely to favor educational uses than other types of uses not so closely tied to the text and purpose of the doctrine.

Second, it is now clearer than ever that fair use for educational purposes need not be limited to “short portions.” Revisiting exemptions every three years provides the Librarian an opportunity to take account of judicial application of fair use as the doctrine evolves, and the latest caselaw on educational fair use shows the courts measuring appropriate amount in light of educational purpose, not an arbitrary requirement of “brevity.” In *Cambridge Univ. Press v. Patton*,<sup>12</sup> the U.S. Court of Appeals for the 11th Circuit found that Georgia State University professors’ sharing of excerpts from copyrighted works with students in their courses “is of the nonprofit educational nature that Congress intended the fair use defense to allow under certain circumstances.”<sup>13</sup> After hearing testimony from several GSU professors as to the reasoning behind their choice of a particular excerpt and how use of that excerpt furthered the professor’s goals for a particular class, “the District Court found that all of the selections furthered the legitimate educational purposes of the courses in which they were used.”<sup>14</sup> In analyzing the third statutory factor, “the amount and substantiality of the portion taken,”<sup>15</sup> the court explained that whether a fair amount was used is determined in relation to a professor’s pedagogical goals.<sup>16</sup> Where the District Court had set a hard numerical limit on the appropriate amount per work, the

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<sup>10</sup> See 17 U.S.C. §107 (providing that “the fair use of a copyrighted work . . . for purposes such as criticism, comment, news reporting, *teaching (including multiple copies for classroom use)*, scholarship, or research, is not an infringement of copyright” (emphasis added)).

<sup>11</sup> *Cambridge Univ. Press v. Patton*, 769 F.3d 1232, 1263 (11th Cir. 2014) (quoting *Suntrust Bank v. Houghton Mifflin Co.*, 268 F.3d 1257, 1261 (11th Cir. 2001)).

<sup>12</sup> 769 F.3d 1232 (11th Cir. 2014).

<sup>13</sup> *Id.* at 1267.

<sup>14</sup> *Id.* at 1249.

<sup>15</sup> 17 U.S.C. § 107(3).

<sup>16</sup> *Cambridge Univ. Press*, 769 F.3d. at 1267, 1271-75.

11th Circuit rejected such a limitation as inappropriate given the flexibility of the doctrine.<sup>17</sup> The Court rejected the notion of any kind of quantitative “limit” on fair uses, pointing out that even the Classroom Guidelines’ “brevity” requirement “suggest[s] a minimum, not a maximum” amount permissible under the statute.<sup>18</sup> Thus, to be a lawful, noninfringing use suitable for protection under this exemption, the use must simply be congruent and proportional to the pedagogical goals it is selected to fulfill.

The uses described by the proposed class are highly likely to be transformative. Transformative uses “lie at the heart of the fair use doctrine’s guarantee of breathing space within the confines of copyright.”<sup>19</sup> In transformative uses, “the quoted matter is used as raw material, transformed in the creation of new information, new aesthetics, new insights and understandings—this is the very type of activity that the fair use doctrine intends to protect for the enrichment of society.”<sup>20</sup> When faculty and students use audiovisual works for educational purposes, the use falls squarely within Judge Leval’s description of transformative use, and when unencumbered, these uses result in the societal enrichment fair use was intended to protect.

Courts have also held that a use is likely to be transformative when its purpose differs from that of the original work. All the uses proposed in this request for exemption are for education, criticism, or commentary. The vast majority of audiovisual works in circulation were not made for classroom use. When students and professors make use of these works, and apply their own criticism, commentary, or creative arrangement, they are making core productive, transformative uses. Additionally, the transformative nature of these uses neutralizes any concern regarding the fourth factor and potential market harm because transformative uses by definition do not impermissibly harm the market for the original work.<sup>21</sup>

Given these developments in fair use caselaw, the uses sought by Joint Academics under the proposed class will qualify easily as fair, noninfringing uses.

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<sup>17</sup> *Id.* at 1275.

<sup>18</sup> *Id.* at 1274.

<sup>19</sup> *Campbell v. Acuff-Rose Music, Inc.*, 510 U.S. 569, 579 (1994).

<sup>20</sup> Pierre N. Leval, *Toward a Fair Use Standard*, 103 HARV. L. REV. 1105, 1111 (1990).

<sup>21</sup> *See Author’s Guild, Inc. v. HathiTrust*, 755 F.3d 87, 99 (2d Cir. 2014) (“[A]ny economic ‘harm’ caused by transformative uses does not count because such uses, by definition, do not serve as substitutes for the original work”).



## **B. Confusion Regarding the Scope of the Previous Exemption Highlights Need for Clearly Defined Exemptions**

The Joint Academics agree with opponents about the importance of “clear definitions.”<sup>22</sup> Opponents of the proposed class suggest that Dr. David Wallace was operating outside the previous exemption because he showed “longer extracts from films” in courses allegedly not “requiring close analysis of the clips themselves.”<sup>23</sup> We would argue, to the contrary, that these extracts still constitute short portions relative to the full motion picture, and that the point of showing those clips in class is so that his students can closely analyze the film’s modern depictions of medieval literature and culture. The room for disagreement on this point only shows that “short portions” and “close analysis” are terms that can create needless uncertainty, which could lead to faculty and students foregoing lawful uses in order to steer clear of potential liability under § 1201.

## **V. Asserted Adverse Effects**

The opponents of this exemption have repeatedly mischaracterized the burden of proof in this proceeding, ignoring the plain text of the statute and invoking language from inapposite cases. They also propose alternatives to circumvention that continue to be insufficient for educational uses.

### **A. Opponents Overstate our Burden in this Proceeding.**

According to opponents of the proposed class, “Educators’ desire to use the best quality content in the most convenient manner available does not mean it is essential to their pedagogical purpose.”<sup>24</sup> Opponents also state, “Circumvention is clearly not necessary to create these kinds of visual aids,”<sup>25</sup> and that proponents “have not demonstrated that circumvention is necessary in general college classes beyond those requiring close analysis of the media.”<sup>26</sup> Of

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<sup>22</sup> See Comment of Joint Creators and Copyright Owners on Proposed Class 1 at 4-5 (pointing out that there is a “need for clear definitions and limitations in any recommended exemption”).

<sup>23</sup> Comment of Joint Creators and Copyright Owners on Proposed Class 1 at 4-5 (quoting Comment of Peter Decherney et al. on Proposed Class 1 at 8).

<sup>24</sup> Comment of AACCS LA on Proposed Class 1 at 7; Comment of DVD CCA on Proposed Class 1 at 3-4.

<sup>25</sup> Comment of AACCS LA on Proposed Class 1 at 12.

<sup>26</sup> Comment of Joint Creators and Copyright Owners on Proposed Class 1 at 5.

course, the statute does not require that circumvention be “necessary” or “essential to [a] pedagogical purpose.” Under § 1201(a)(1)(C), the Librarian must determine “whether persons who are users of a copyrighted work are, or are likely to be in the succeeding 3-year period, adversely affected by the prohibition . . . in their ability to make noninfringing uses.”<sup>27</sup> While the adverse effects should not be *de minimis*, they need not be catastrophic. The ban on circumvention adversely affects education when faculty and students must abandon an objective completely, but the adverse effects can still be substantial when the ban forces compromised approaches that harm pedagogy. Joint Academics have met our statutory burden.

**B. Opponents Attempt to Short-Circuit this Proceeding and Minimize the Value of Access to High Quality Video by Misrepresenting *Corley* and *Elcom***

Opponents of the proposed class all cite to *Universal City Studios, Inc. v. Corley*<sup>28</sup> and its holding that “[f]air use has never been held to be a guarantee of access to copyrighted material in order to copy it by the fair user’s preferred technique or in the format of the original.”<sup>29</sup> Similarly, opponents cite to *U.S. v. Elcom Ltd.*<sup>30</sup> and that court’s observation that “no authority . . . guarantees a fair user the right to the most technologically convenient way to engage in fair use.”<sup>31</sup> However, these cases are irrelevant to the current proceeding. In both cases, the courts discuss whether the fair use provision and the First Amendment could be used on their own to bypass or even nullify the anti-circumvention provisions of § 1201. This proceeding is “the ‘fail-safe’ mechanism in section 1201(a)(1)” employed every three years precisely because the statute is not subject to direct challenge on fair use (or First Amendment) grounds.<sup>32</sup> Granting an exemption where, but for § 1201, lawful uses would be “optimum” and “convenient” is therefore perfectly consistent with this line of cases.

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<sup>27</sup> 17 U.S.C. 1201(a)(1)(C).

<sup>28</sup> 273 F.3d 429 (2d Cir. 2001)

<sup>29</sup> Comment of AACCS LA on Proposed Class 1 at 7 (quoting *Corley*, 273 F.3d at 459); Comment of DVD CCA on Proposed Class 1 at 7 (quoting *Corley*, 273 F.3d at 459); Comment of Joint Creators and Copyright Owners on Proposed Class 1 at 9 (quoting *Corley*, 273 F.3d at 459).

<sup>30</sup> 203 F. Supp. 2d 1111 (N.D. Cal. 2002).

<sup>31</sup> *Id.* at 1131.

<sup>32</sup> Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, 79 Fed. Reg. 55,687, 55,688 (Sept. 17, 2014).

### **C. The Harm Caused by the Bar on Circumvention to Access Works Stored on Blu-ray is Real**

Opponents of the proposed class contend that faculty and students are motivated by “convenience.”<sup>33</sup> Our standard for measuring appropriate media quality and method of delivery, however, is educational effectiveness rather than personal desire. Often only the highest quality available will suffice pedagogically, and professors must abandon their planned curriculum due to lack of access to content stored on Blu-ray discs. In other cases, professors may choose to move forward using substitutes, but at substantial cost to their effectiveness.

#### **1. Blu-ray High Definition Video Contains Teachable Content Not Present in Standard Definition**

Since Joint Academics’ initial comments were filed, we have continued to hear from educators adversely affected by their inability lawfully to access high definition content on Blu-ray discs. Professors have been forced to alter their teaching plans and even to restructure their proposed syllabi for courses. The high definition content on Blu-ray discs is characteristic of the modern age of cinema, where media is being created for 2k or 4k consumption with higher frame rates driven by the demand for better quality. Downsampling the original format results in lesser quality, which distorts the creator’s intent. High definition also makes it possible, for the first time, to capture works first shot on film in quality that matches the original experience of seeing the film in a theater, as the director intended.

Eric Faden is an English professor at Bucknell University who consistently relies on Blu-ray content, which he describes as “vital and important in providing images at much higher detail, in addition to communicating the author’s intent.”<sup>34</sup> However, due to the lack of an exemption, Professor Faden must use Blu-ray discs in a manner that complies with the anti-circumvention prohibitions. He typically accomplishes this by scrubbing through a disc to the desired scene. Between loading the disk, navigating through start-up menus, copyright warnings, and then selecting the clip, Professor Faden has calculated that screening clips from Blu-ray disc can waste up to 8 minutes of valuable class time, not including the screening of the clip itself. All in

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<sup>33</sup> Comment of AACCS LA on Proposed Class 1 at 5; Comment of DVD CCA on Proposed Class 1 at 5.

<sup>34</sup> Phone call with Professor Eric Faden, Associate Professor of English at Bucknell University (Apr. 16, 2015).

all, the process could eat up to 1/5 of the total class time for each clip. Professor Faden describes this loss of class time as enormously frustrating, and sometimes opts to not show clips at all rather than struggle with the technology and sacrifice precious class time.

Oksana Dykyj, Head of Visual Media Resources at Concordia University in Montreal, described the frustrations of the experience of working with Blu-ray disc players to cue up particular portions of a work:

The quality of the image is obviously great . . . . But, if you want to show a 2-minute clip, it typically takes about 4 minutes to get to the clip because all the information is on the individual disc and the player is so slow at getting to where you want to go: It looks for updates, then loads, then searches, then you have a menu that is usually almost impossible to navigate, and you have to skip all the previews, then it loads again then you press play and it takes about 15 more seconds before you start the film. Did I mention that it's slow to load? No wonder academics want to circumvent the discs. Half the students would be out the door rather than wait for the great clip to finally show up. The absolute worst thing is if you press stop by mistake, you are obligated to start all over again, as if you just turned on the blasted machine. Yes, I have one at home and I curse a lot.<sup>35</sup>

High definition can bring to light the smallest perceivable differences, which can provide new material for academic analysis. As previously noted, the reissue of *The Wizard of Oz* on Blu-ray made apparent technical details of the set, like doors on backdrops and wires for props, which added a “stage-like” quality to the film. In John Carpenter’s *Halloween*, the difference in high definition actually added interesting facts to the storyline of the film. For example, the continuity issues created when the viewer can notice Michael with the Kirk mask in the background of a shot, long before it is ever established that masks and other items have been stolen from the local hardware store.<sup>36</sup>

As mentioned in the 2011 Comment of Peter Decherney et al., high quality audiovisual works play a crucial role across disciplines.<sup>37</sup> Recreating theatrical conditions in a classroom allows Communications students to share and reflect on spectators’ emotional responses to

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<sup>35</sup> Lori Widzinski, “Step away from the machine”: A Look at Our Collective Past, LIBRARY TRENDS, pp. 371-72 (Vol. 58, Number 3, Winter 2010), available at <https://ubir.buffalo.edu/xmlui/bitstream/handle/10477/2029/58.3.widzinski.pdf?sequence=1>.

<sup>36</sup> See Comment of Peter Decherney et al. on Proposed Class 1 at 16.

<sup>37</sup> 2011 Comment of Peter Decherney, et al. at Part II.B.

violent images; allows Film History students to feel, first hand, the impact of the “Odessa Steps Sequence” in Serge Eisenstein’s *Potemkin*; and allows History faculty to draw on the impact of World War II footage to illustrate their lectures with the immediacy moving images provide.<sup>38</sup>

Additionally, during the June 4, 2012, Hearing at the Library of Congress, Peter Decherney explained why it is necessary to have the highest quality images to aid in the depth of analysis, which rises with the quality of the image used.<sup>39</sup> Using stills from the Blu-ray and DVD versions of *Citizen Kane*, Decherney demonstrated that there was a noticeably richer tonal range, increased depth of field, enhanced modeling of black and white, or chiaroscuro effects in the Blu-ray. He explained, “The Blu-Ray is much closer to the original image—rather, to the image as the director, Orson Wells, and the cinematographer, Gregg Toland, intended. It's also closer to the original spectator's 35-millimeter experience.”<sup>40</sup>

To show how access to high-resolution sequences can reveal important narrative elements of a film, Professor Decherney explained how American Studies professors Michael Denning from Yale University and Amy Kaplan from the University of Pennsylvania have both written about the political discourse in the background of *Citizen Kane* and how it comments on the main story:

In one scene in particular, the child Charles Foster Kane, yells, “Unions forever” in the background while his mother endows his trust fund. The Blu-ray shot models dark and light to emphasize the distance between the two planes of action, while the DVD’s washed-out image flattens the space and thus the political commentary.<sup>41</sup>

Access to the highest quality versions of audiovisual works is not just a matter of convenience or preference (though, again, an educator’s wasted time and frustrated pedagogical goals are genuine adverse effects). Rather, it is a necessity for faculty and students serious about experiencing works as their authors intended.<sup>42</sup>

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<sup>38</sup> *Id.*

<sup>39</sup> 2012 Hearing on Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies at 12-13 (statement of Peter Decherney).

<sup>40</sup> *Id.* at 13.

<sup>41</sup> *Id.* at 14.

<sup>42</sup> See Comment of Peter Decherney et al. on Proposed Class 1 at 14 (explaining the value of the original authors’ intent).

Blu-ray technology has presented society with the most comparable audiovisual format to 35 mm film, leading to a mass movement to convert old films to Blu-ray disc. Older films shot on film were subject to an entirely differently technology that recorded visible images photochemically instead of encoding them electronically or digitally. Comparing this process and its results to standard television technology of the late 20th century, film has always been high-definition, whereas until the digital transition and the introduction of HDTV channels, consumer video has always been low-definition.<sup>43</sup>

Professor Faden explains his preference for Blu-Ray because it most closely matches 35 or 70 mm film, but presents the content in a format that can be manipulated and fit into a lecture:

Blu-ray has allowed me to finally teach many important films that depend on image quality for close analysis. For example, Jacques Tati's film *Playtime* was originally shot on 70mm film in a widescreen format. Tati's style often depends on staging material in the close foreground simultaneously with action deep in the background. Tati composed the film assuming audience would view it on a large cinema screen and not television. As a result, many consumer formats (VHS, streaming, and DVD) do not offer the resolution and detail necessary to understand the film's very detailed and complex composition.<sup>44</sup>

Works originally shot on film, or analog, photochemically fixed the exact frame, thus flawlessly capturing the author's intent. However, showing a film on this medium requires the equipment, the time to screen the entire film, and the patience for labor-intensive exhibition procedures. All of the aforementioned issues were resolved by the Blu-Ray format, which presents the highest and most directly comparable quality since 35 mm, and does so in a convenient and easily manipulated format, but for the limitations on access and manipulation imposed by TPMs.

In Peter Decherney's course on the history of Hollywood, he lectures on the development of film and media technology, including sound, color, widescreen, VHS, laserdisc, DVD, computer graphics, Blu-ray, and streaming video. Professor Decherney is able to use slides to illustrate and compare clips of different media formats, until he gets to Blu-ray. Without an exemption for circumventing high definition media, students are prevented from comparing the

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<sup>43</sup> Christopher Jacobs, *Older Movies (from before 1980) on Blu-Ray* (Sept. 9, 2014), available at <http://www.und.edu/instruct/cjacobs/OlderMoviesOnBluRay.htm>.

<sup>44</sup> Statement of Professor Eric Faden, Associate Professor of English at Bucknell University (Apr. 28, 2015).

Blu-ray format with others, and they are prevented from examining Blu-ray in classroom presentations or video essay assignments that ask students to analyze media style and technology. There is a palpable hole in the course, because the DMCA exemption process has not yet been updated to accommodate new formats in the way that it has successfully enabled the teaching of media technology for the last nine years.

While content encoded on Blu-ray is often preferable to DVD or other formats when there is a choice, in some cases the market does not provide a choice. The market continues to be populated with media that is only available on newer formats. As cited in the Joint Academics 2012 Comment, the Blu-ray-only “Fight Club: 10th Anniversary Edition” came out in November of 2011 and included bonus material not available on any of the previous DVD releases. Similarly, the most recent installment in the Terminator series, “Terminator Salvation Director’s Cut” is only available on Blu-ray.<sup>45</sup>

## **2. Higher Quality Video has a Visceral Effect on Viewers that Extends Beyond Close Analysis**

Opponents of the proposed class quote the 2012 Recommendation, which stated “[W]here precise detail is not required for the particular use in question – for example, where a clip is presented simply to illustrate a historical event – lower-quality screen capture images may be fully adequate to fulfill the noninfringing use” to support the general assertion that high quality is only necessary for “close analysis.”<sup>46</sup> However, the depiction of a historical scene in high definition facilitates feelings of presence that *are* required for the most effective use of audiovisual works for teaching. Where immersion in an audiovisual experience is part of the pedagogy, lower-quality images are not fully adequate to fulfill the noninfringing use.

Audiovisual representations of information can be powerful teaching tools. For example:

[T]he moving, transient nature of video presentations may help learners build the dynamic properties of their mental models. A film about the Battle of Gettysburg, for example, might be especially effective in helping students understand not only specific battlefield conditions but how those conditions changed over the three days of fighting and transformed what might have been a Confederate triumph

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<sup>45</sup> 2011 Comment of Peter Decherney, et al. at 16 n. 41-42.

<sup>46</sup> Comment of Joint Creators and Copyright Owners on Proposed Class 1 at 5 (quoting 2012 Recommendation of the Registrar of Copyrights at 134).

into a Union victory. By helping the student understand the transformation of information (for example, the state of the battle) from one situation (its state on July 1) to another (its state on July 3), the film might promote the creation of a mental model that includes a sophisticated awareness of this transformation as well as of simple facts.<sup>47</sup>

This learning potential is amplified when viewers feel more engaged. Psychological studies show that high definition video is more effective than standard definition video at conveying a sense of “presence,” i.e., “a physical sense of ‘being there’ in a remote, mediated location.”<sup>48</sup>

Experiments comparing viewers’ experience of HDTV and NTSC television found that, “improved image quality increases the amount of presence sensations experienced by HDTV viewers,”<sup>49</sup> and “the higher levels of immersion reported by viewers in the HD condition suggest that they were more involved with the content.”<sup>50</sup> Dr. Bracken found that this immersion experience was enhanced with respect to HD video of people: “HD viewers reported being able to observe the people’s facial expression and body movement on the screen significantly better than the viewers who watched the same scenes in NTSC. Again, the improved image quality of HDTV provided audiences with the opportunity to see more of the action (in this case) nonverbal communication.”<sup>51</sup> When faculty and students cannot use HD content stored on Blu-ray discs, their multimedia presentations are correspondingly less immersive, less compelling, and less able to convey nuances of human interaction on-screen.

In addition, students studying the history of war must also consider the changing representation of combat, including both technological and aesthetic changes. Not only are students affected differently by the representation of war depicted on different media, but audience responses have changed over time as well. In 1918, viewers were stunned by cartoonist Windsor McCay’s animated film depicting the *Sinking of the Lusitania* (1918), one of the catalysts of World War I. There were no photographs of the incident, and even an animated

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<sup>47</sup> Robert B. Kozma, *The Influence of Media on Learning: The Debate Continues*, SCHOOL LIBRARY MEDIA QUARTERLY (Vol. 22, No. 4 Summer 1994).

<sup>48</sup> Cheryl Campanella Bracken, *Presence and Image Quality: The Case of High-Definition Television*, MEDIA PSYCHOLOGY 191-205 (Vol. 7, Iss. 2 2005), available at [http://www.tandfonline.com/doi/abs/10.1207/S1532785XMEP0702\\_4#](http://www.tandfonline.com/doi/abs/10.1207/S1532785XMEP0702_4#).

<sup>49</sup> *Id.*

<sup>50</sup> *Id.*

<sup>51</sup> *Id.*



movie offered visual access and emotional connection to an event that otherwise only existed in words. Audiences have similarly felt the impact of post-WWII combat films and CNN's video game-like depiction of the first Gulf War. The late 1990s saw a new movement in the war film with *The Thin Red Line* (1998), *Saving Private Ryan* (1998), and *Three Kings* (1999). These films use a process called bleach bypass, which leaves the silver on the film stock during processing, giving much crisper contrast and color. They also use hyper-real details and complex soundscapes. The DVD format could never come close to capturing impact of the 35mm versions of these films. But Blu-ray comes much closer. As *Slant* magazine notes about the Blu-ray edition of *Saving Private Ryan*, "[Cinematographer] Janusz Kamiński's sharply delineated images are a challenge for home video, but this Blu-ray makes sure all those clods of earth thrown into the air with each artillery strike are crystal clear."<sup>52</sup> The review notes that the Blu-ray's audio capabilities deliver a visceral experience close to the theatrical one. "If you were ducking in the theater," the review comments, "you'll be cowering in your living room."<sup>53</sup> There is a history of media representation and a history of media affect that run parallel. Allowing educators and students to use the latest technology will bring greater clarity and a wider range of affect to classrooms.

Dr. Muller helped explain that lower quality audiovisual works can also convey a series of implied messages to students: that the depicted groups and practices are less contemporary, less valuable, or simply more alien compared to the groups and practices they see depicted in high quality media outside the classroom.<sup>54</sup> The effect of these implicit messages is not only loss of attention, but also loss of appreciation and understanding. Although of course this proceeding cannot provide Dr. Muller with a way to access high quality media that was never created, it can certainly prevent the law from recreating Dr. Muller's predicament for professors and students seeking access to media that is very much available, but for the ban on circumvention.

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<sup>52</sup> Eric Henderson, *Review of "Saving Private Ryan,"* SLANT MAGAZINE (May 10, 2010), <http://www.slantmagazine.com/dvd/review/saving-private-ryan>.

<sup>53</sup> *Id.*

<sup>54</sup> Telephone interview with Dr. Carol Muller, Professor of Ethnomusicology at the University of Pennsylvania (Jan. 16, 2015).

## **D. Alternatives Proposed to Circumvention are Insufficient**

### **1. Screen Capture Degrades Quality and Results in an Experience Divorced from the Director's or Creator's Original Intent**

First, although the Joint Academics did not request an exemption to permit use of screen capture, we would not oppose such an exemption, suitably modified to encompass the same uses contemplated in this proposed class.<sup>55</sup> Since the opponents of the proposed class and others have never conceded that screen capture is not circumvention, an exemption would give additional comfort to educators who use it. That said, screen capture is hardly sufficient for the full array of uses of media in contemporary higher education classrooms.<sup>56</sup>

Opponents of the proposed class argue that screen capture is a viable alternative to circumvention with respect to Blu-ray discs.<sup>57</sup> In reality, screen capture degrades the quality of the work in important ways and requires vast amounts of time and data. This is especially true when it comes to the sound reproduced in the screen-captured version of an audiovisual work. Opponents also assume that colleges and universities across the country will have access to the most technologically advanced screen capture tools available, which is not the case. Additionally, the use of screen capture software presents unique problems for colleges and universities hoping to remain compliant with the Americans with Disabilities Act (ADA).<sup>58</sup>

While screen capture software is available at a wide range of price points, only more expensive products possess functionality adequate for use in education. Some screen capture software creates degraded clips due to the loss or compression of data. The issues are only amplified when capturing video on Blu-ray discs, as there are a greater number of pixels, and thus, a greater potential for the loss of data. The technical issues causing this loss in video

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<sup>55</sup> See Comment of Joint Creators and Copyright Owners on Proposed Class 1 at 5 n. 7 (“While there is no request in this proceeding for a screen capture exemption, the Joint Creators and Copyright Owners do not oppose renewal of the current exemptions for screen capture technologies (but would oppose any expansion of those exemptions).”).

<sup>56</sup> See generally Statement of Prof. Tisha Turk, Comments of Electronic Frontier Foundation and Organization for Transformative Work on Proposed Class 7 at Appx. 101 (describing the deficiencies of screen capture software as a viable alternative to circumvention in the case of noncommercial remix videos).

<sup>57</sup> Comment of AACCS LA on Proposed Class 1 at 9-14; Comment of DVD CCA on Proposed Class 1 at 8-12.

<sup>58</sup> 42 U.S.C. §§ 12181-89 (1990).

quality are due to a combination of the reduced framerate and ineffective deinterlacing, among others.<sup>59</sup> Screen capture software is not designed to capture motion pictures, and, as such, is typically ill-equipped to preserve a motion picture's aspect ratio. This results in captured video with a non-standard frame size, making it more difficult to edit and manipulate the content to display it in line with or alongside other works. Screen capture may use deinterlacing (the process that separates merged frames that can result from making video files that will display on a standard television set) when capturing video. This leads to lost frames and a lower quality file. When professors are attempting to show a particular scene or scale up an image for analysis, this lower quality file is insufficient compared to the file you would get with circumvention.

The use of screen capture technology also typically results in files with dramatically inferior sound quality. When performing a screen capture, the resulting excerpt or file will be downsampled to stereo—a means of reproducing sound that creates an illusion of directionality and audible perspective by channeling sound to the left or right. The surround sound intended by the director or original creator is lost. Surround sound provides an immersive experience by projecting sound from 360 degrees in relation to the listener. Thus, screen capture software cripples the soundtrack of the work, severely damage to fidelity to the creator's intent.

Degraded sound and image quality lead to a viewing experience different from the one the director or creator of the work originally intended. In the courses he teaches at Bucknell University, Professor Faden routinely “scales up” stills from films to show details that demonstrate composition and technique. However, DVD almost always “falls apart” at some point due to the more limited number of pixels. Although these kinds of still images from high definition formats can be created and scaled up using screen capture software, Dr. Faden says they are often inferior versions.

In addition to the output limitations, screen capture software seriously burdens compliance with ADA accessibility requirements. For example, when using screen capture software you can choose to have burned in captions or none at all; you cannot encode or capture with selectable audio tracks, but only one at a time. Audio tracks, director commentary, and alternate scenes are all examples of things that would have to be captured separately instead of

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<sup>59</sup> See Statement of Prof. Tisha Turk, *supra* note 56 (outlining the numerous other problematic technical issues faced when using screen capture technology).

stored in a single, universally accessible file. The creation of multiple copies for multiple users is inconsistent with universal design, a core principle of accessibility.<sup>60</sup> These considerations are in addition to the internal standards by which libraries attempt to provide the best possible quality and the broadest possible access.

Finally, screen capture is an inadequate alternative to circumvention because it is not intuitive to use as a mode of copying high-quality excerpts from professional media formats. Screen capture software is designed for recording videos of activity on a computer screen, such as tutorials about software use.<sup>61</sup> Its features and default settings are optimized for that purpose. Faculty and students may be deterred by the difficulty of hacking the settings of screen capture software as an alternative to circumvention.<sup>62</sup>

## **2. Streaming Is a Flawed Alternative to Circumvention for Educational Uses**

Opponents say “Given the increase in availability of digital online content, and in particular high definition digital streaming or downloadable films, an exemption to circumvent AACS on Blu-ray is even less warranted now than it might have seemed three years ago.”<sup>63</sup> While streaming, and proprietary programming across various platforms, has become a major competitor for traditional sources of audiovisual materials, it does not serve as a satisfactory alternative to DVD and Blu-ray discs for educational use. Streaming audiovisual works is not an alternative to circumvention because of restricted access to the works due to Terms of Use or End User License Agreements, potential Internet connectivity issues, the lack of consistent availability of the works sought for educational purposes, the lost classroom time due to cueing up online streams, image cropping, and the practical issues faced when embedding clips.

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<sup>60</sup> See generally, Universal Design.com <http://www.universaldesign.com/about-universal-design.html> (last visited April 30, 2015).

<sup>61</sup> See, e.g., Meet Students’ Individual Learning Needs, <https://www.techsmith.com/education-tutorial-student-practice.html> (last visited April 30, 2015) (a use case described by the makers of Camtasia).

<sup>62</sup> For example, a recent entry on the tech support forums for Camtasia suggests that Windows users have to navigate deep into the system settings of the Windows XP operating system to enable DVD capture. *Camtasia (Windows): Capturing DVD Playback with Camtasia Studio/Recorder is Blank*, <https://support.techsmith.com/hc/en-us/articles/203728418-Camtasia-Windows-Capturing-DVD-playback-with-Camtasia-Studio-Recorder-is-blank> (last visited April 30, 2015).

<sup>63</sup> Comment of Joint Creators and Copyright Owners on Proposed Class 1 at 7.

The Terms of Use or End User License Agreements that often accompany streamed media may deter faculty and students hoping to use online streaming services as an alternative to circumvention. Netflix and similar commercial streaming sites require users to accept a set of “terms and conditions” that may waive any fair use rights the user would otherwise have. For example, by agreeing to the “Netflix Terms of Use,” users “agree not to archive, download (other than through caching necessary for personal use), reproduce, distribute, modify, display, perform, publish, license, create derivative works from, offer for sale, or use (except as explicitly authorized in these Terms of Use)[ streamed works].”<sup>64</sup> The Terms of Use make no mention of teaching or fair use.

Because streaming services require a robust Internet connection, connectivity issues are a serious challenge to their use for education. At any given time, the connection in a classroom, lecture hall, dorm room, or entire institution may suffer from a downed network. This could be a result of hardware failure, network problems, or even inclement weather. If professors use embedded links to files online in their presentations, they will be unable to deliver the entire lecture in a class without an Internet connection. Additionally, faculty and students would be unable to edit and review materials while offline. Faculty and students increasingly do their work outside the confines of an office, home, or study hall, without the benefit of a reliable Internet connection.

Streaming services often have carefully curated libraries, but their libraries are not curated for academic use. Instead, online video libraries are typically assembled for entertainment purposes. Professor Faden at Bucknell University cannot locate online over 90 percent of the films he uses in his classes on film and media studies.<sup>65</sup> Value in an audiovisual work is not strictly based on entertainment value, and media libraries curated with profits or popularity in mind will rarely meet the educational needs of the faculty or students looking for a particular work. Additionally, the lack of continuity regarding what content is provided through streaming services in any given month makes streaming an unreliable alternative to circumvention. CNET.com publishes a monthly list of titles that will be added to and taken

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<sup>64</sup> Netflix Terms of Use, NETFLIX, <https://www.netflix.com/termsfuse> (last accessed Apr. 20, 2015).

<sup>65</sup> Phone call with Professor Eric Faden, Associate Professor of English at Bucknell University (Apr. 16, 2015).

away from the Netflix library.<sup>66</sup> According to the most recent listing, “May will see a lot movies going offline at Netflix,”<sup>67</sup> including the classic science fiction film “*Fantastic Voyage*.” At this rate of change, professors cannot rely on the availability of a work from one month to the next, let alone from semester to semester or year to year.

Professor Faden described some of the challenges students have encountered and that he has noticed in relying on streaming in support of education:

I've had instances where a student began a project about a certain film only to discover that the film disappeared from streaming access in the middle of their research (I assign video essays that ask them to appropriate stills and video from films as evidence to support their project's arguments). In addition, streaming assumes a level playing field in terms of Internet access. For lower income and/or rural students, Internet access sufficient for ubiquitous streaming at high quality is anything but guaranteed.<sup>68</sup>

Queuing up streams over and over is also a cumbersome process and a more risky option than creating a single video file or embedding video files directly into PowerPoint. It is a time consuming process to cue up streams and prepare them for viewing before each class. As previously discussed, time is a valuable commodity in the contemporary classroom.<sup>69</sup> Professors often do not have the time before class to cue up all the videos they hope to show. Additionally, taking time during class to cue up video streams takes time away from teaching and risks losing students' attention.

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<sup>66</sup> Iyaz Akhtar & Caitlin Petrakovitz, *What's coming and going on Netflix for April 2015*, CNET (Mar. 18, 2015, 7:00 AM), <http://www.cnet.com/news/netpicks-whats-coming-and-going-on-netflix-for-april-2015/>.

<sup>67</sup> Iyaz Akhtar, *What's coming and going on Netflix for May 2015*, CNET (Apr. 22, 2015, 7:00 AM), <http://www.cnet.com/news/netpicks-whats-coming-and-going-on-netflix-for-may-2015/> (noting specifically that his high school biology teacher had screened *Fantastic Voyage*).

<sup>68</sup> Email message from Professor Eric Faden, Associate Professor of English at Bucknell University (Apr. 30, 2015) (on file with authors).

<sup>69</sup> See Comment of Peter Decherney et al. on Proposed Class 1 at 12-13 (highlighting the ways time constraints continue to necessitate an exemption).

Additionally, questions have been raised recently about the preservation of original aspect ratios on services like Netflix. Often times the alteration of the aspect ratio results in the cropping of an image and the loss of valuable information.<sup>70</sup>

The opponents contend that embedding streaming clips into presentations provides a simple alternative to circumvention.<sup>71</sup> However, most streaming services, especially the free services, have advertisements that a viewer cannot bypass. Websites like YouTube contain ads that can pop up before, and even during, the presentation of a clip. Such an interruption can disrupt the message and waste valuable class time. In some cases, advertising messages can be embarrassing or inappropriate for the classroom setting.

## **VI. Statutory Factors**

The four statutory factors are designed to ensure that the Librarian balances the interests of rightsholders in using TPMs to facilitate their business models against the needs of the public, especially the needs of educators and their students, to make lawful uses. Years of experience now show that these interests can co-exist quite peacefully: the motion picture industry has grown and thrived while the exemption for educational uses of motion pictures has steadily grown to allow more and more lawful activity.

The first statutory factor is “the availability for use of copyrighted works.”<sup>72</sup> Opponents of the proposed class suggest that “the use of access controls has facilitated wider availability of copyrighted motion pictures than ever existed prior to the DMCA.”<sup>73</sup> The link between TPMs and availability is debatable, but the growth of distribution methods for these materials is

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<sup>70</sup> See Matt Brian, *Netflix Does Not Crop Movies, Except When It Does*, THE VERGE (July 18, 2013), <http://www.theverge.com/2013/7/18/4534160/netflix-cropping-movies-streaming>; Peter Ha, *You Won't Believe How Much Netflix Crops Your Movies*, GIZMODO (July 13, 2013), available at <http://gizmodo.com/you-wont-believe-how-much-netflix-crops-your-movies-816686310>.

<sup>71</sup> Comment of Joint Creators and Copyright Owners on Proposed Class 1 at 6.

<sup>72</sup> 17 U.S.C. § 1201(a)(1)(C)(i) (1999).

<sup>73</sup> Comment of Joint Creators and Copyright Owners on Proposed Class 1 at 9.

certainly real. The industry is indeed thriving. “In 2015, the entertainment and media market in the United States is expected to be worth over 589 billion U.S. dollars.”<sup>74</sup>

Opponents of the proposed class also suggest that new modes of distribution have increased the availability of copyrighted works for educational and related purposes, which is weighed in the second statutory factor. In reality online streaming (which makes up the vast majority of growth in modes of distribution) is not a useful option for many educational and related uses. The combination of technological and contractual limitations can render these services useless to teachers, librarians, and students in many contexts. Indeed, education may suffer as physical media is displaced by streaming, making an exemption to preserve the utility of physical formats all the more crucial.

The third factor addresses the impact of the DMCA on teaching uses. As we have described above, that impact is still substantially negative despite the existence and steady growth of exemptions for some educational uses.

That brings us to the fourth factor, the effect of circumvention of TPMs on the market for or value of copyrighted works. Here we can turn to history as our guide. The movie industry has continued to thrive despite the concomitant modification of the exemption for educational purposes. Despite historical proof of successful coexistence, opponents of the proposed class argue that “physical media distribution of HD content will be undermined as a business model” if the Librarian grants an exemption for the proposed class.<sup>75</sup> Opponents of the proposed class highlight, however, that “DVD format remains widely popular”<sup>76</sup> and “continues to outperform [Blu-ray discs] in the marketplace by a significant margin.”<sup>77</sup> This is true “notwithstanding the advent of high definition format offered on Blu-ray discs and the online services with standard and high definition offerings,” but also notwithstanding the growth of exemptions allowing

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<sup>74</sup> Value of the entertainment and media market in the United States from 2014 to 2018, STATISTA.COM, *available at* <http://www.statista.com/statistics/237769/value-of-the-us-entertainment-and-media-market/>

<sup>75</sup> Comment of AACCS LA on Proposed Class 1 at 14. *See* Comment of DVD CCA on Proposed Class 1 at 12 (“Creating a broad new exemption for any educational use is not warranted and would otherwise risk the DVD distribution model.”).

<sup>76</sup> Comment of DVD CCA on Proposed Class 1 at 13.

<sup>77</sup> Comment of AACCS LA on Proposed Class 1 at 14.



circumvention of CSS for educational and other purposes.<sup>78</sup> With each triennial rulemaking proceeding, additional groups have been brought under the umbrella of exemptions, but the opponents have yet to produce one instance of piracy or point to a single damaging effect due to this expansion.

## **Conclusion**

The individuals and groups submitting this written reply comment—which represent over 360,000 individuals interested in improving the quality of higher education in the United States—are seeking an unambiguous exemption that covers a fuller range of lawful teaching uses adversely affected by the prohibition against circumvention. Opponents take an unjustly dim view of fair use and education, and an unjustifiably rosy one of streaming and screen capture. In reality, educational use and the film and media industries have thrived side-by-side for years, and will continue to do so under the proposed exemption. For the above-mentioned reasons, not only must the existing exemption be renewed, but that exemption must also be modified to cover unambiguously a fuller range of lawful educational uses adversely affected by the prohibition against circumvention.

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<sup>78</sup> Comment of DVD CCA on Proposed Class 1 at 13.