Library of Congress,	**)**	
United States Copyright Office	**)**	
	)	**Docket No. RM 9907**
	)	
Hearing on Exemption to	**)**	
Prohibition of Copyright Protection	**)**	
Systems for Access Control Technologies	**)**	

Comments of the DVD Copy Control Association in Response to Hearing Testimony

The DVD Copy Control Association ("DVD CCA"), through its attorneys, submits the following written comments to the docket in the above captioned hearing pursuant to 65 *Federal Register* 14505-14506 (March 17, 2000) and in response to the invitation of David Carson, General Counsel to the Copyright Office.[1]

The DVD CCA is the sole licensing entity which grants licenses to the Contents Scramble System ("CSS") technology in the DVD Video format. It also enforces the CSS Agreement ("Agreement") and related specification requirements for use of the CSS technology for DVD video. DVD CCA files these comments in order to supplement and correct the record with respect to issues implicating the DVD CCA's activities, in particular with respect to the licensing of the CSS protection technology for DVD Video.

During the course of the Copyright Office hearings in Stanford, California, several questions were posed to Dean Marks, Senior Counsel, Intellectual Property for Time Warner and Stephen J. Metalitz, Esquire, Smith & Metalitz, regarding (1) the availability of licenses for implementing the CSS technology in computers using the Linux operating system; (2) DVD CCA's licensing practices; (3) the design and operation of the CSS technology; and (4) whether or not the CSS technology prevents particular classes of individuals from making fair use of the copyrighted content protected by CSS. DVD CCA provides the following responses to each of these issues:

1. The availability of licenses for implementing CSS in Linux systems.

As DVD CCA noted in its initial comments to the Copyright Office, there is no mandate to use or respond to CSS in order to use DVD technology. Content may be recorded onto DVD discs without using CSS technology, and such discs should be playable on all DVD players (stand-alone and computer-based). Moreover, other entities are free to develop competing copy control technologies.

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[1] Library of Congress, United States Copyright Office, Hearing on Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, Docket No. RM 9907, Hearing Held at Stanford Law School, 235-236 (May 19, 2000).

Likewise, any person wishing to create a player capable of reading DVD discs encrypted using CSS is free to apply to the DVD CCA for a license to use CSS. Licenses to the CSS technology are available royalty-free on reasonable and nondiscriminatory terms for use with any operating system. DVD CCA does not require that its licensees develop products for any particular operating system; a licensee can develop licensed products for multiple operating systems, without any requirement that DVD CCA be notified.[2] DVD CCA has nevertheless been told by several licensees that they plan to, or are in the process of, developing Linux-compatible DVD products. In fact, two licensees, InterVideo and Sigma Designs, recently announced the development of software and hardware DVD player/decoders for Linux. InterVideo has announced that it will make available for purchase on its website a $29 software/DVD player for Linux (called LinDVD) that will play back movies, interactive DVD titles, MPEG video contents, and video CDs.[3] In addition, an authorized, licensed Linux decoder card/player developed and marketed by Sigma Designs, Inc.,[4] is available on the market today.[5]

Accordingly, testimony by Ms. Robin Gross of the Electronic Frontier Foundation that an exception to the prohibition on circumvention of access control measures is warranted because Linux-based DVD players are not being made available is based on inaccurate information. DVD CCA has made, and will continue to make licenses to the CSS technology available royalty-free, on reasonable and non-discriminatory terms to Linux users as well as to users of any other operating system that agree to abide by the CSS license terms. Consequently no exception to the anticircumvention provision contained in § 1201(a)(1) is warranted.

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[2] Licenses for the CSS technology are available to users of the Linux operating system on the same terms as they are to users of any other operating system. Moreover, there are no license restrictions in either the CSS license or in the GNU license for Linux users that would preclude a software developer from implementing the CSS technology in an open source system such as Linux.

[3] InterVideo indicates that the LinDVD will be available for purchase on its website this month (June 2000). For more information about this product, please visit: http://www.cnn.com/2000/TECH/computing/04/19/linux.dvd.idg/index.html.

[4] For more information regarding the Linux compatible decoder/player developed by Sigma Designs, please refer to their website at: http://www.sigmadesigns.com/press/000201.htm.

[5] DVD CCA will update the Copyright Office as any further information becomes available regarding the development of additional licensed products compatible with the Linux operating system.

2. DVD CCA's licensing practices

In her testimony to the Copyright Office Ms. Gross also made unsupported and non-specific allegations that DVD CCA was engaging in unlawful and anti-competitive licensing practices analogous to those Microsoft is accused of by "tying the hardware, the machine, to the software itself, the DVD."[6] Ms. Gross' allegations are so vague and unsubstantiated that it is difficult to decipher her accusations. Nevertheless, DVD CCA would like to reiterate that:

- CSS is not required in order to manufacture products capable of using the DVD format. CSS is a purely optional add-on technology that is not required or necessary to manufacture software or hardware capable of playing DVDs.
- CSS is an enabling technology, designed to allow consumer electronics ("CE") and information technology ("IT") companies alike to launch a diverse array of new products that offer consumers compelling new ways to interact with and enjoy content delivered in the DVD format while providing protection from unauthorized access to and copying of the prerecorded video content contained on the disc.
- No particular hardware or software format is required to make use of the CSS technology. The technology is licensed to any manufacturer of CE or IT products and is available for use with any hardware or software platform.
- The technology has enabled the launch of a multitude of new product lines across the CE and IT industries and is likewise helping drive creativity in the entertainment industry – all to the benefit of consumers.
- Again, use of the CSS technology is in no way required in order to use the DVD format. It is entirely possible to manufacture use and sell DVDs which do not employ the CSS technology. There is likewise no contractual or legal compulsion to use the CSS technology in DVD players (whether in hardware or software). Nor is there any restriction on development and use of a different encryption system for protection of content on DVD discs. One such system was, in fact, developed and deployed into the market.

3. The design and operation of the CSS technology

Questions were also posed regarding the design and operation of the CSS technology, including why a technical measure such as CSS which employs encryption to control access to copyrighted works deserves protection, and whether CSS is truly an access control method. DVD CCA respectfully submits that CSS is indeed entitled to protection as an access control method and that its design and operation is not only consistent with a desire to control access to content, but is also the least burdensome (both to consumers and device manufacturers) and most transparent method by which to limit access to content to authorized users.

In beginning his line of questioning on this topic, Mr. Carson inquired why it is important to protect technological measures that control access to content.[7] DVD CCA agrees with

[6] Id. at 239.

[7] Id. at 240.

the comments of Mr. Metalitz and Mr. Marks on this topic. As DVD CCA and eight trade associations representing a panoply of interests indicated in their joint letter to the Copyright Office in these proceedings, the availability of CSS was a very important incentive for content producers to make available to consumers the high quality video content offered by the DVD format. Likewise, the protections provided to technological measures through the Digital Millenium Copyright Act (DMCA) were viewed as critical to enforcing the protections afforded by CSS and to creating a marketplace that fully protects copyrighted works distributed in digital form. A ruling that permits hackers to defeat CSS would seriously undermine the incentives for making copyrighted content available in new digital media and deprive consumers' access to high-quality entertainment content in these new formats.

CSS, and laws supporting the use of CSS, also enable innovation and creativity in the CE and IT industries[8] by allowing these industries to bring new products, with enhanced features, to market secure in the knowledge that entertainment content will be available for consumer use and enjoyment in these new platforms. It is precisely this type of innovation and creativity which the DMCA was enacted to facilitate.[9] Moreover, Congress specifically recognized and expressed support for the private licensing arrangements that are being developed to provide the technologies that the DMCA was designed to support.[10]

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[8] As indicated in DVD CCA's previous filing in this proceeding, CSS was the result of an interindustry cooperative development effort. The technology was not imposed by any industry or company.

[9] Congress enacted the DMCA to "facilitate the robust development and worldwide expansion of electronic commerce, communications, research, development, and education" by "mak[ing] digital networks safe places to disseminate and exploit copyrighted materials." S. Rep. No. 105-190, 105th Cong., 2d Sess. (1998).

[10] "[T]he expeditious implementation of technological protection measures, developed by the private sector through voluntary industry-led processes, is a key factor in realizing the full benefits of making available copyrighted works through digital networks…" H.R. Rept. 105-551, Part 2, 9 (July 22, 1998),

> The Committee is aware that multi-industry efforts to develop [technological protection measures] that are both effective and avoid [ ] noticeable and recurring adverse effects have been underway over the past two years. The Committee strongly encourages the continuation of those efforts, which it views as offering substantial benefits to copyright owners in whose interest it is to achieve the introduction of effective technological protection (and copyright management information) measures that do not interfere with the normal operations of affected product.

Id. at 41.

In his testimony Mr. Marks correctly elaborated on the reasons why the CSS technology is based on encryption. As Mr. Marks noted, the use of encryption – an access control technology – was deemed preferable to the use of other more passive modes of digital rights/access management (e.g. ancillary data) by the IT industry. The IT industry's view on this topic has been made clear in various contexts, including during the consideration of the DMCA. By using a voluntary, license based encryption scheme to protect copyrighted content from unauthorized viewing and copying instead of imposing a mandatory response to ancillary data carried with or embedded in the protected content, the developers and licensors of CSS hoped to limit any required response to copyright information contained in protected content to those devices that actually wished to receive and make use of that content. All other devices would be able to merely pass through the encrypted content without accessing it and without incurring any license obligations. This approach was very important to the IT industry, which argued that the use of any other method to protect content would impose unacceptable burdens on the operation of computer products because such products would be required to examine each stream of data entering the device in order to determine whether the data consisted of protected content.

Although the CSS technology also provides protection against unauthorized copying the technology is more than a "copy control device in access control clothing."[11] In this regard DVD CCA would like to correct a misstatement by Mr. Marks. In discussing with Mr. Carson the protections against piracy afforded by the technology, Mr. Marks misspoke in stating that a pirated DVD disc would play on any legitimate DVD player. CSS incorporates two separate means by which the playback of an unauthorized copy of a CSS encrypted disc would be thwarted. In fact, CSS prevents access to content on discs that contain unauthorized copies of content encrypted using CSS -- content that has through some means avoided the requirement that CSS players and computer-based playback systems employ particular measures to prevent CSS encrypted content (and content that was originally encrypted using CSS) from being directed in a way that allows copying in a usable form. The means by which this is accomplished include the following.

First, keys necessary for the authorized playback of the encrypted content are stored in an area of the DVD disc which is not normally accessible or copyable when a recording of a disc is made. Accordingly, if a user were to make a bit for bit copy of a CSS encrypted disc, the copy would be encrypted and the device on which playback is attempted would not be able to access the keys needed to decrypt the content. Moreover, even if the content were somehow copied in decrypted form, an authorized player would be unable to access the keys necessary to play back the unauthorized copy of the disc.

[11] Id. at 247.

Second, in the event that a disc is copied without authorization (e.g. if a copy is made from a prerecorded CSS encrypted disc), licensed players are required to employ means of detecting and identifying the media type on which content is stored. If content that is not authorized for copying is nevertheless recorded onto recordable media, a licensed player is required to reject attempts to play back such content. This is true in particular in the case in which the content on the recordable media retains the CSS encryption.

4. Fair Use issues.

Among the questions posed by Mr. Carson in exploring the impact of CSS on consumers' ability to make fair use of content protected by CSS, was whose rights are violated when an individual obtains the De-CSS code or manages to hack CSS themselves so that a DVD can be viewed on the individual's home computer. DVD CCA defers to Mr. Marks' comments outlining the impact of such a hack on copyright holder rights. With respect to the rights of licensors and developers of the CSS technology, DVD CCA notes that in *DVD Copy Control Association, Inc. v. McLaughlin*, 2000 WL 48512 (Cal. Superior), the court found that the rights of DVD CCA to maintain the trade secret status of CSS were violated by the hack of CSS.[12]

Moreover, the interests of millions of legitimate users and potential users of DVD and CSS technology are also harmed:

- as a result of the hack of CSS, the major music companies – all of which had previously been prepared to release sound recordings in the DVD audio format – withdrew support for the proposed encryption system for DVD audio and insisted that a new copy protection technology, unrelated to the "compromised" CSS technology, be developed to protect their works. As a result, the launch of DVD audio products that employ a copy protection system, planned for December 1999, was postponed for at least six months.
- CE/IT manufacturers are forced to incur costs and expend engineering effort to restore the protections guaranteed by the license,
- in a worst case scenario, in order avoid abandoning entire product lines for lack of adequate security, product manufacturers may incorporate additional technology to fix hacks in the devices rather than focusing efforts on consumer-oriented innovations that otherwise may have been developed and included in the products.

Several additional questions were raised, primarily by Ms. Gross, regarding fair use rights. Ms. Gross argued that circumvention of the regional coding functions in CSS should be permitted in order to allow individuals to view discs manufactured in different

[12] The court found that CSS is a protected trade secret and that the hack violated both the terms on which CSS was licensed and the trade secret rights of DVD CCA in CSS. 2000 WL 48512, 2. "Once the CSS trade secret gets into the hands of an innocent party using De-CSS, [DVD CCA loses its ability] to protect the trade secret status of CSS and the protection afforded by CSS becomes meaningless." 2000 WL 48512, 3.

regions. DVD CCA defers to Mr. Marks' testimony regarding the necessity of the regional coding function, but notes with respect to Ms. Gross' arguments that:

- the regional coding functions are not included in CSS and are entirely separate functions, therefore there is no incentive whatsoever to hack CSS in order to manipulate such functions,
- the licenses for CSS do not preclude the encoding and sale of multi-region discs. Thus, any content owner that wishes to distribute a disc viewable in multiple (or all) regions of the world is free to do so,
- the CSS license likewise does not restrict the sale and use of DVD players intended for one region to that region. Accordingly, consumers may purchase players from other regions of the world for use in the United States if they so desire,
- in fact, the CSS license allows resetting the regional playback codes on DVD-ROM drives to facilitate the playback of DVDs, for example, if a consumer moves from one region to another.

Ms. Gross' comments and personal interest in viewing discs purchased outside the United States notwithstanding, DVD CCA is not aware of any statements by hackers of the CSS technology that would lead to the conclusion that they were attempting to defeat the region control functions in CSS. Indeed, widely publicized comments by the hackers do not leave the impression that they were interested in promoting fair use in any form. Instead, it appears that those responsible for De-CSS were most interested in merely defeating the technology for sport.[13]

With respect to the other potential impediments to fair use cited by Ms. Gross:

- Ms. Gross asserted that DVDs fit into the exception in 17 U.S.C. 117 allowing individuals to make back up copies of computer programs for personal use. There is no case law supporting Gross' assertion that DVDs containing movies are software and come within section 117 of the Copyright Act.
- Ms. Gross asserted that librarians are unable to exercise "fair use" rights to make backup copies of DVDs for archival purposes. Section 108 of the Copyright Act, not the fair use provisions of the Act, allows libraries and archives to reproduce a copy of copyrighted work for archival purposes. DVD CCA supports this use and notes that Mr. Marks has already indicated in his testimony that copyright holders are amenable to making such copies available to libraries under special arrangements. This is a far preferable course than allowing hacking of CSS technology.
- Ms. Gross asserted that individuals are unable to use excerpts of movies for classroom use. DVD CCA agrees with Mr. Marks' comments that the DVD format actually makes the playback of excerpts of movies much easier than the VHS format

[13] The following statements are typical of statements made by individuals who posted De-CSS on their websites: "F[---] da feds! . . . [h]uh? Aren't these files legal? Oh, well, I didn't know that!", "Mark of the Scofflaw! Here's my local copy of the CSS decryption software, enjoy [;]". Plaintiff's Memorandum of Points and Authorities in Support of a Temporary Restraining Order , *McLaughlin* (No. CV-786804).

which require rewinding and fast forwarding in order to get access to a specific portion of the movie. The DVD format allows random access to any portion of the movie contained on the DVD and there is no need to copy or hack CSS to accomplish this.

Respectfully Submitted,

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