

22 March 2000

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and other interested parties

Re: Rulemaking on Exemptions from Prohibition on Circumvention of Technological Measures that Control Access to Copyrighted Works

Comment #43, by Time Warner, states
... digitization makes it possible to reproduce copyrighted works in unlimited quantities with no degradation of quality and to transmit copyrighted works all over the world – all very quickly and at trivial expense.

This varies substantially based on the type of work. Some works, such as sculpture, current technology has no good digital form for. Books are excellent candidates for digitization: Once digitized, they can be edited easily and copied quickly, and their digital forms allow for additional features not possible in a printed form, such as advanced searching. The digital form is especially convenient in cases like the *Encyclopaedia Britannica* and the *Oxford English Dictionary*, where their comprehensiveness renders the printed forms unwieldy.

Audio (such as music) also digitizes compactly, though not as effectively as the printed word. Motion pictures require immense amounts of digital data to encode them, and certainly cannot be transmitted “all over the world ... very quickly and at trivial expense”. Though one can download the text of Shakespeare’s *Hamlet* in a matter of moments, transferring the movie based on that text will take a prohibitively long time with all but the very quickest (and most expensive) digital connections. (And then there’s the problem of where is all this data stored? The media to hold it will be costly. Better to save the time and money and buy the movie.)

The point is not all works are equally susceptible to duplication. For many works the most practical method of transmission will be a physical artifact (such as an optical disk), and the “rapid and cheap” duplication through digital connections will be impractical.

Because of the ease of duplication, Time Warner states “Hence, the critical necessity for effective protection both technological and legal against unauthorized *uses* of copyrighted works and for effective prohibition against circumventing such protections.” [emphasis added]

Time Warner doesn’t state that there need to be effective protections against illicit duplication, but rather against unauthorized (presumably authorization is by the copyright holder) uses. It is difficult to see how the ease of duplicating digital data leads to the “critical necessity” for restrictions (by the copyright holder) on the data’s *use*, not merely its duplication.

Time Warner:

Will such protections and prohibitions adversely affect users as described above? Certainly, at present and for the foreseeable future, the answer is “no”.

These protections and the prohibitions on circumventing them are already adversely affecting large classes of users. First off, copy protection techniques obviously inhibit the legally sanctioned duplication of work for archival. More insidiously, the protections can be (and are) coupled with proprietary viewing techniques, creating artificial barriers to the viewing device market, and the prohibition on circumventing the technique amounts to a ban on reverse engineering of the viewing device.

I propose that defeating access controls to the extent of building a reverse-engineered viewing device be exempted.

Reverse engineering, the process of analysing a product and working out the mechanism of its operation, has a long history of speeding technological advance, and the art has traditionally been protected by the law. The reverse engineering of IBM's original P.C. resulted in a flood of inexpensive "clone" machines, driving in a large part the explosion in computer use that in turn has led to legislation like the DMCA, so it's appropriate that there is a clause in the DMCA explicitly allowing reverse engineering for "interoperability".

Unfortunately, even given the allowance of that clause and the general legal protections behind the art, the DMCA makes life perilous for the reverse engineer. The clause in the DMCA that forbids attempts to defeat "a technological measure that effectively controls access" means a company need only declare that the product it's trying to safeguard uses an "access control" to make reverse engineering forbidden.

This is not a mere academic concern with the law, but in fact is currently being used as the basis for a consortium of large corporations to preserve their market power. The technique being reverse engineered in this case is the scrambling done to motion picture DVD's, called "Content Scrambling System", or "CSS". If one wishes to build a player capable of showing these scrambled DVD's, one must license the descrambling technique, which is expensive and involves signing a restrictive contract drawn by the consortium, if they choose to let you have the technology at all. Unless, of course, you reverse engineer the CSS technique. Which is precisely what Jon Johansen did, as a part of a larger effort to develop a movie DVD player without signing away rights to the consortium. The large corporate interests behind DVD players quickly filed suit and obtained an injunction, on the grounds that reverse engineering their scrambling technique was defeating access control under the DMCA. This despite that Jon Johansen's "De-CSS" method doesn't make pirating of DVD's much more economical: one could already copy DVD's, scrambling and all, and a device that records the video from a DVD player ("video capture card") is inexpensive. With or without "De-CSS", DVD piracy is uneconomical because the pirate can never hope to match the economies of scale of the commercial vendors, and will actually find it cheaper to purchase a legal DVD than make an illegal copy.

What the consortium is protecting is not the sanctity of its DVD's, but its total market power over movie DVD players. Jon Johansen's "De-CSS" technique provides is a way to view DVD's without agreeing to the consortium's terms. By allowing copyright holders to control the access of their work, and prohibiting the circumvention of any controls, the DMCA allows copyright holders, such as the members of the consortium, to make their works viewable only under their terms, and provides no limits on those terms. The law does not restrict how printed matter may be viewed, only how it may be copied, and the policy for digital material should be similar, and allow the legal owner of a copy to view its information without facing arbitrary additional restrictions.

We should not give the consortium power over who may and may not make DVD viewers, any more than we should have given IBM the power over who may and may not make P.C.'s. It should be allowed to reverse engineer viewers of digital media as other devices are allowed to be reverse-engineered, and we should not let restrictions on "circumventing access controls" poison the legality of such reverse engineering.

Time Warner:

I am aware of no works or classes of works that have, because of the implementation of technical protection measures, become [unavailable or less available] to persons who desire to be lawful users.

The "Region" keying of DVD's and DVD players makes works released in one locality unavailable or less available to users in another locality, because their DVD players will not display other-Region DVD's.

Comments #60 by Jacob H. Bechtel V and #61 by Brian Hellman, among others, note that piracy of DVD's over the Internet or with DVD burners (devices that plant data on DVD blanks) isn't economically effective compared to purchase of legal DVD's.

Descrambling technology together with the artificial barrier of DVD "Regions" does make one form of piracy potentially economical: Selling descrambled copies of Region 2 DVD's that can be played on Region 1 players. If the commercial Region 1 DVD is unavailable or inferior to the Region 2 version, a consumer may be willing to pay for an expensive pirated DVD, rather than go through the time, considerable expense, and considerable effort to obtain an out-of-Region DVD and DVD player. Declaring CSS circumvention illegal is unlikely to deter such hypothetical pirates; they're already violating ordinary copyright. Making the descrambling technology legal will defuse this kind of piracy, however: Because makers of DVD players will no longer have to adhere to the DVD association's requirements in order to play the scrambled disks, some will build DVD players that will play any Region's DVD's. With DVD players available that will play other-Region DVD's, there will be little market for pirated Region 1 copies of Region 2 DVD's.

In addition, and more importantly, the viewing of a legally purchased DVD outside its Region of manufacture is clearly a "fair use". For these reasons, I feel exemption should be granted allowing bypass of access controls which require "Region" keys on the media and the viewing device to match.

As Stuart Brady states in Comment #169 "CSS is not meant to prevent copying. It is meant to stop the people who don't pay the \$10,000 [and agree to restrictive licensing terms] from making players." This is a key point. CSS does not protect copyrighted works, it protects market power over DVD players. Congress' purpose in passing the DMCA was to protect copyrighted works, not to protect corporations' market power, therefore access control schemes like CSS that protect market power but not the media itself should be exempted and circumventions allowed (and even encouraged, if you believe as I do that competition is good for the market).

In Comment #209, the MPAA states that access controls are used largely in tandem with license agreements*. In accordance with this view, I propose that access controls that don't enforce a license agreement signed by the consumer and that inhibit fair use be exempted. If a copyright holder wishes extraordinary legal protections beyond the Fair Use Doctrine, the holder should negotiate with the consumer for those rights; the consumer should enjoy full fair use rights unless he knowingly and willfully relinquishes them.

In summary, I feel there should be exemptions for:

- Reverse engineering playing devices and building competing playing devices.
- Circumventing geographic "Region" keys.
- Fair use of the copyrighted work, where the access controls inhibit such fair use and the consumer has not signed a license agreement waiving fair use rights.

because not allowing these circumventions of access controls would infringe the rightful use of these works by their legal owners.

* MPAA:

To the contrary, most "lawful users" [of access controlled works] are licensed users, and most "non-infringing uses" are uses that are carried out pursuant to a license agreement.

Respectfully,
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The views here expressed are my own, and need not match those of my employer.