

DMCA Comments

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I'm commenting in reply to the request for comments on the Digital Millennium Copyright Act. What I believe to be a major misuse of this act has recently happened; the use of this Act to restrict the playing of DVDs on and the creation of DVD playing software (especially "open-source software") for the Linux operating system.

1. What technological measures that effectively control access to copyrighted works exist today?

DVD encryption controls the access to the content on DVDs. Most DVDs are encrypted, and a computer (or even a standalone player) cannot play one without using the decryption algorithm. The decryption algorithm is tightly restricted by the DVD Copy Control Association (DVD-CCA) and has been kept secret.

5. Are there specific works or classes of works which, because of the implementation of such technological measures, have become less available to persons who desire to be lawful users of such works? If so, identify those works or classes of works, explain the ways in which they have become less available, and explain whether those works or classes of works are also available in other formats to which such technological measures have not been applied.

The Motion Picture Association of America (MPAA) has sued people under the DMCA for distributing the DeCSS software, which implements the encryption algorithm that would allow playing of DVDs under the Linux operating system.

Since the MPAA will also not allow its licensees to create DVD playing software for Linux except in a very narrow range of cases,¹the content on DVDs is not available to most Linux users who wish to legally play the DVDs under Linux. This content is "less available" instead of "not available" only in the sense that the Linux user can purchase a standalone player or can purchase Microsoft Windows (at a cost of a hundred dollars) along with a Windows-based DVD-playing program. (Linux and DeCSS are "open-source" software, which can be freely studied and modified, and which is available free of cost although selling it is permitted.)

This situation is very unlikely to change in the future. The MPAA only allows creation of Linux drivers for DVD playing in the limited case where the DVDs are played through a hardware decoding board that does decryption in a way that the computer user cannot access. Future hardware boards will likely be released that meet this specification, but this is no help for current owners of hardware boards whose use under Linux is not allowed. Furthermore, hardware decoding boards are only needed on older computers which are not fast enough to play a DVD using software alone, so they are becoming obsolete as computers get faster. A computer that is approximately as fast as a Pentium II-350 and has proper playing software does not need a hardware decoding board to play DVDs; even a relatively slow new PC can meet that requirement.

6. If there are works that are available both in formats to which technological measures have been applied and in formats to which technological measures have not been applied, to what

¹Quoting a developer for Sigma Designs on the LiVid electronic mailing list, January 14 2000:

"We are making an honest, open effort to work with the Linux community and provide a product which makes Linux users happy. However, we are doing this within the world of legitimate business. In our world, we license technology and obey licensing contracts. We cannot deliver a CSS licensed driver for the Hollywood Plus running under Linux, so we created a newer chip which can."

The Hollywood Plus (and the rebranded version, the DXR3) are the most popular DVD hardware decoders available for computers, so the refusal to license CSS under Linux for them is significant.

extent can the works in the latter formats substitute for the works in the formats to which technological measures have been applied?

Some DVDs are of material which also has been released on VHS tape. The VHS tape cannot be an adequate substitute for DVD because VHS tapes are lower resolution than DVDs, and can wear out from repeated viewing where DVDs do not. DVDs often contain extra material which is not available on the VHS version, such as optional subtitles, commentary tracks, or even full documentaries. Finally, there is no reasonable way to play a VHS tape on a computer.

7. Are there works or classes of works that are available only electronically and only in formats to which such technological measures have been applied? If so, what are they?

Some DVDs are of material which has not been released in other formats such as VHS tape. The boundary between “less available” and “not available” is fuzzy; for instance, if a movie comes with a documentary only on DVD, this might be considered either as “less available” in the sense that movie-with-documentary and movie-without-documentary are considered two versions of the same work, or it may be considered as “not available” if the documentary is treated as a separate work. As an example, subtitled editions of some Japanese animation videos such as Sakura Diaries are only available in the DVD format.

13. What impact has the use of technological measures that effectively control access to copyrighted works had on the ability of interested persons to engage in noninfringing uses of such works, including fair use and activities permitted by exemptions prescribed by law?

The impact of the DMCA with respect to DVD playing on Linux has been devastating. Playing a legally purchased DVD under Linux is clearly a noninfringing use, but anyone who writes or distributes software which makes this activity possible is subject to prosecution under the DMCA.

14. Are there specific works or classes of works with respect to which the ability of interested persons to engage in criticism, comment, news reporting, teaching, scholarship, or research has been hindered because of the implementation of such technological measures? If so, identify them, explain how such activities have been hindered, and explain whether those works or classes of works are also available in other formats to which such technological measures have not been applied.

The most obvious way in which such activities have been hindered is that if a DVD cannot be played, it also cannot be criticized, commented upon, etc. Since the DMCA has been used to restrict the playing of DVDs under Linux, it automatically restricts these other activities. Linux is becoming more popular in educational institutions (especially in poor countries) where using Microsoft Windows would imply having to buy many separate Windows licenses, one for each computer, so the limitation would be especially noteworthy there.

Another way in which these activities has been hindered is that it has become impossible to (without the threat of prosecution under the DMCA) release “open-source” software which plays DVDs under Linux. “Open-source” software is software for which the source code is freely available, allowing any interested programmer to copy the program, study and learn from the program, or modify the program. It is not the same as public domain because some open-source is released under licenses, but the licenses, rather than restricting distribution, encourage it as long as source code is made available. The Linux operating system is open-source and the release of open-source programs for Linux is very widespread.

The writing of open-source software is similar to scientific research in several ways; for instance, code is developed and released to the community, which is permitted to freely use it, building on the work of the previous coders. It may also be classified as comment or scholarship, since the existence of a freely modifiable and freely examinable operating system enables other programmers to easily learn from that work. In the open software world, programmers often learn by doing. Such activity has been hindered by the fact that people who write or distribute unlicensed DVD-playing software have been sued under the DMCA, so they can neither write such software, nor study it because source code cannot be made available to them.

17. For purposes of this rulemaking, in classifying works that are to be exempted from the prohibition against circumvention of technological measures that control access, should any classes of works be defined, in part, based on whether the works are being used in ways that do not constitute copyright infringement, e.g., as fair use or in a manner permitted by exemptions

prescribed by law? Explain why or why not.

Playing legally purchased DVDs, and writing software which makes it easier to play legally purchased DVDs, is fair use. A class of works exempt from the prohibition should be defined in such a way that this activity becomes legal.

One exception should be to explicitly permit circumventing access-control measures for the purpose of compatibility. The DMCA already includes a similar exception for computer software, but the judge in “MPAA v. Reimerdes, Corley and Kazan” has stated, when explaining his preliminary injunction in that case, that he doesn’t consider movies, even when being played on computers, to be computer software.

Another exception should widen the definition of research and scholarship to explicitly cover the uses I have described. Few individuals writing software on their own can afford a license fee (which is \$10000 for CSS), nor are companies very willing to license out systems such as CSS to individuals anyway. If such individuals were to somehow get a license anyway, they would not be able to release software that is open-source, and thus, other programmers could not learn from their code. The exception could either classify open-source software as research and scholarship, classify all non-profit software writing as research and scholarship, or simply state that in the case of software not written for profit, the default should be assumed to be that it is being used for research and scholarship unless shown otherwise.

18. In what ways can technological measures that effectively control access to copyrighted works be circumvented? How widespread is such circumvention?

The DVD encryption can be circumvented by DeCSS or a similar program. The program is fairly widespread on the Internet, but it is not yet widely used because available Linux DVD-playing software is slow, of limited functionality, and not very easy to use. If programmers were allowed to continue writing software which decrypts DVDs under Linux, faster, more user-friendly, software would eventually be written and would likely be used by millions of Linux users. (The number of Linux users as of 1998 is estimated as about 12 million by Red Hat, Inc., producers of Red Hat Linux, although the number is difficult to measure because Linux can be freely copied.)

19. Has such circumvention (or the likelihood of circumvention) had any impact on the price of copyrighted works? Please explain.

20. Has such circumvention (or the likelihood of circumvention) had any impact on the availability of copyrighted works? In particular formats or in all formats? Please explain.

21. Has such circumvention had any other impact on the marketing of copyrighted works? If so, please explain the impact and which works or classes of works have been affected.

The circumvention has had no negative impact in any of these ways and is likely to still have none in the future. The DVD viewed by a Linux user is purchased, in the same stores and at the same price as, the DVD viewed by a Windows user; no loss of profit to the DVD manufacturer results.

The DVD Copy Control Association (DVD CCA) and MPAA have claimed that this circumvention is used for piracy and could impact prices through piracy, but piracy has already been possible without decrypting DVDs; furthermore, copying a DVD would cost more than buying a new one. (To the best of my knowledge, no MPAA member has declared any DeCSS-caused “losses” to their stockholders.)

In addition, a comparison can be made to music CDs. It is easy to copy a CD to tape, or to copy a CD to a blank CD using a computer; however, the price, market, and availability for CDs has not been affected.

If anything, the circumvention would increase the market for DVDs as Linux users, formerly unable to play DVDs without paying extra money and supporting the Microsoft monopoly, would then be able to play them, and thus, would purchase them.