

Greetings.

I am an IT professional with over twenty years of experience in the computer industry, and have been working with DVDs since their inception. I would like to comment on the current situation with the MPAA and the DVD CCA (Copy Control Association) regarding the DeCSS decryption code.

To summarize their claim: DVDs are digital medium that can contain copyrighted material such as movies. CSS is a copy protection scheme for DVDs; it prevents DVDs from being copied. To facilitate this, all DVD players must have a registered code in order to play DVDs. The DeCSS circumvents this and allows the copying of DVDs, therefore the perpetrators must be prosecuted to the fullest extent of the law, in order to protect copyrighted material.

I believe this argument is false for two reasons, but first I would like to make it clear exactly what DeCSS is:

Encryption is a method by which information is given a "secret code." Like the popular child's toy, the "secret decoder ring," you can write a message to your friend which can only be decoded by someone else with an equivalent decoder. Same principle, except it uses complex algebraic functions to scramble the code so that it is completely unreadable without the information to decode it, known as a "key."

To decrypt a message, you need two items:

- a) The encryption key, which is like the secret decoder ring, and
- b) The algorithm, which is the sequence of algebraic functions that generate the code itself.

Ordinarily, just the coded data is given to the recipient, who must separately obtain the key to decode it. In the case of DVDs, the encryption key is encoded on the first 40 bits of the DVD (a "bit" is the smallest piece of information a computer can store: a 1 or a 0).

So, the decryption key is given to anyone who buys the DVD. All the hackers in question have done is figure out the algorithm behind the decryption. This same algorithm is built in to every DVD player. DeCSS is simply an independently created version of this algorithm.

Now, to the first of my two reasons why their argument is specious:

- 1) DVDs can be copied without being decrypted.

-----

There are two methods by which this can be achieved:

a) A straight bit-copy of the DVD

In other words, every bit stored on the DVD, in order, is copied. It's like taking the coded message from your friend and making a photocopy. You're copying the coded information, even though it still cannot be read without decrypting it. But, as mentioned above, the decryption algorithm is included in every player! You can stamp out copies by the truckload! (I understand this is already happening in China.)

Even without using an actual DVD, though, it can still be placed into one huge file called an "image," and a piece of intervening software can fool the DVD player into thinking it's a physical DVD. (I would like to specify that the DeCSS code does NOT do this, nor does it contain the information necessary to show how to do this.)

b) An image grabber

Or a frame grabber, or video capture, or whatever you want to call it. Take the DVD player's output and plug it into the video capture port on your computer, and play the DVD while running the appropriate recording software. You now have a copy of the DVD video on your computer that you can play at any time, no DeCSS required!

Now, I believe that--DeCSS or no DeCSS--no one will be doing this. It's expensive (blank DVDs run \$50 and up; DVD movies are \$15-\$30), it's time consuming (not counting any case where you might have to start over because of a software error), it takes up a LOT of space on your hard drive (4-17 Gigabytes for a straight image, upwards of 100 Gigabytes for a separate copy! This is due to the decompression of the DVD data), and you don't get the cool case with the liner notes etc. So, you pay more, and go through more hassle, for much less.

2) DVDs cannot be played without being decrypted.

-----  
To get the information in a viewable form, the bitstream MUST be decrypted. It is necessary for VIEWING, NOT COPYING. Every DVD player decrypts the bitstream; it has to. There's simply no other way to view it.

So, instead of being a "copy protection scheme," it is, in fact, a "playback protection scheme." Why would they do it this way?

In order to be granted a legitimate license, a company creating a DVD player must pay \$10,000 dollars to the DVD CCA. They are going after

those trying to write a DVD PLAYER--NOT A COPIER--for the Linux operating system. It's clear to me that the real reason they're doing it is to protect their monopoly and keep raking in those license fees.

I submit that this is anti-consumer. This license fee--WHICH IS REQUIRED BY NO OTHER VIDEO MEDIUM IN EXISTANCE--means that they must approve all players, and are preventing Linux users from playing DVDs on their home computers. Quite simply, they want the money from the license fees; and I'd think a lot better of them if they'd just come out and admit it.

One more reason why this is anti-consumer: Their actions, if fruitful, would violate our basic right to make a backup copy of media that we purchase. Several court cases serve as precedence, I would just like to quote one.

In *SONY CORPORATION OF AMERICA ET AL. v. UNIVERSAL CITY STUDIOS, INC.*,

*ET AL.* (464 U.S. 417, 104 S. Ct. 774, 78 L. Ed. 2d 574 (1984)), the Ninth Circuit Court of Appeals guaranteed us this right, saying,

"...there is no precedent for imposing vicarious liability on the theory that petitioners sold the VTR's with constructive knowledge that their customers might use the equipment to make unauthorized copies of copyrighted material. The sale of copying equipment, like the sale of other articles of commerce, does not constitute contributory infringement if the product is widely used for legitimate, unobjectionable purposes, or, indeed, is merely capable of substantial noninfringing uses."

Sounds like this describes DVD players to a "T". Also, it's much easier to copy videotapes than DVDs.

I love DVDs. I play DVDs on my Windows 95 machine. I've purchased upwards of 20 of them; I have copied none. All we are asking is to be able to have a choice of which computer operating system we can use to play the DVDs we have legally purchased. And choice is what freedom is all about.

Please fight for our freedoms, and not for special interests out to make a buck at the expense of those freedoms.

Sincerely,  
Shane Killian