Betamax and Piracy – Re: Linux Thieves Breaking The Law?

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Abby Gail wrote:
> *If using libdvdcss is totally legal then why is it so difficult to*
find?
>
> *Why are sites like Packman running scared?*

> http://packman.links2linux.org/?action=122

Keep in mind that the Betamax ruling stated that if there were a LEGAL
use for the tool, that the device or tool would be legal. In the
United States, this meant that libdvdcss would be legal, because it was
being used for legal purposes, specifically to display legally obtained
movies on Linux systems.

The Digital Millineum Copyright Act was intended to protect things like
databases full of credit card information, private and confidential
customer lists and customer databases. In effect, the goal of the DMCA
was to outlaw the tools used by hackers to illegally obtain and
distribute illegally copyrighted materials.

The legal status of libdvdcss is still uncertain. On one hand, under
the betamax ruling, it is a legitimate tool for the legitimate viewing
of legally obtained copyrighted materials in a manner consistent with
the license (personal home viewing or laptop viewing).

On the other hand, there have been sites which have encouraged users to
used dvdcss to decode the movie back into unencrypted form, then to
make that unencrypted format available via web sites. Such activity is
illegal, but because napster was able to convince millions of PC users
to rip CD–ROMS and then publish them on the internet, the MPAA made a
preemtive strike.

The MPAA has been trying to find some means to nullify the betamax
ruling, while still protecting it's ability to allow "fair use" such as
viewing on a PC or other miniature viewers. In all countries, it's

illegal to use libdvdcss to convert the movie into unencrypted formats and then distribute the unencrypted format. This would be illegal regardless of what tool was used to decrypt the movie.

One of the key sensitive issues of DVDcss is that when DVDs are circulated, they are encrypted with keys which prevent them from being played in countries where the movie has not yet been released. For example, if I purchase a DVD in the USA because it's just come out for retail sale, it will play on the US DVD player. On the other hand, that same DVD will not play on an Australian player. In fact, I would have to wait until the DVD was distributed in australia before I would get a legitimate "decrypt" confirmation that would allow me to play it on that player. The DVD makers put as many as 255 different confirmation codes onto the DVD, and those for which the DVD has been authorized will get a correct confirmation code, other countries will not get a valid code.

The problem here, is that dvdcss doesn't know which country code to use. There is nothing in the hardware or the software to provide certainty that the proper country code has been provided. the original dvdcss decoder had the ability to simply "find" a valid key by trying thousands of keys until it found one that matched with a valid "confirm". This meant that a user in India could look at a DVD that was mastered for the United States and Canada only.

The simplest solution would be to have users of libdvdcss purchase or obtain their keys through a licensed vendor. The user would simply obtain the certificate the way users currently obtain SSL server certificates from certificate authorities. The MPAA would be the best possible source for selling these certificates. All the MPAA would have to do is use the credit card to validate the national origin of the purchaser. Anyone attempting to use illegal credentials to obtain the decryption key for another country would be subject to criminal prosecution under existing laws including identity theft laws, communication laws, and fraud laws.

The problem is that the NDA agreements with the vendors are being enforced by Microsoft. Microsoft doesn't want libdvdcss to be legal, because they don't want people purchasing Linux powered DVD players. In reality, the CSS encryption key can be obtained for a nominal fee – about $5.00, which then makes the libdvdcss decoder "legal" for use with the approved and purchased key only.

The Open Source community has also been partially to blame. They could easily make the trivial change required to apply the "single key" decoder, but they don't want to acknowledge the right to control the decryption keys. They would like it to be as simple as "download this software and you can decrypt any movie anywhere in the world". This is where libdvdcss violates the betamax ruling. The "default" setting for dvdcss is to be able to view ANYTHING.

When content is electronically distributed, the solution is to send the content encrypted, then sell a single encryption key which decodes only that movie or music. This is the principle behind pay–per–view as well as premium cable channels, and also works perfectly well with encrypted content that has been captured on recording devices such as TIVO. In fact, it's better for the media provider to send the encrypted content and record the encrypted, then allow the decoder to decode the recorded media, than to allow the media docder to stream the unencrypted format to the recorder, which removes all control over viewing.

I might be able to purchase the key which would allow me to view a film for 24 hours from the time I first request the decryption key. This key would cost only $2. A "permenant" key (actually a key that can be re–requested every time it's needed) would be $10–$20 depending on the content.

> *Or making it real difficult to compile and make the library work*
instead
> *of distributing an RPM*

Again, part of the issue is what specifically is legal in which country. Some countries allow the use of the "read anything" libdvdcss, while others only permit the use of the proper country key.

> *http://download.videolan.org/pub/libdvdcss/*
>
> *FWIW it was included with my DVD player and works great with my*
Windows XP
> *installation.*
>
> *So why are Linux users condoning breaking the law?*

Making the libdvdcss legal based on the batamax ruling is actually quite trivial. All the author has to do is disable the "key finder" and enable a "fixed key" which will allow the key to be read from a file or other fixed location.

This impasse has been going on for about 6 years, since the release of Windows 98. Windows 98 had the ability to view DVDs, and Linux developers were able to figure out the decoder based on some trivial but very public documentation.

The principles of DVD encoding are pretty trivial. The content is encoded with a 48 bit DES key. There are a series of "confirmation" blocks which decode a control message to a known pattern. The problem is that the decoder is supposed to ONLY use it's internal key, then see if the pattern was properly decoded. If the decode failed, then it should tell the user that the movie cannot be played. This was a problem with certain JVC recorders, which "forgot" their encryption key and tried to use the code for "uganda" instead of "United States". I've had two DVD players that "lost their mind" this way.