

How to play videos on Linux

“Nifty of the Month” presentation
by Ian Kluff

Silicon Valley Linux User Group (SVLUG)
Wednesday, October 5, 2005
Mountain View, California

How Do I Play Video on Linux?

- It used to be impossible to play videos produced on monopoly-OS systems. Free players were available but not for Linux.
- Eventually wrappers became available for the free libraries, unlocking the last holdouts.
- To show Linux can do this, in 2003 I started collecting videos about some of my hobbies, like rocketry.

Common Video File Formats

- MPEG2 (MPG)
- Apple Quicktime format (MOV)
- Windows Media (WMV WMA ASF)
- Windows Audio/Video Interleave (AVI)
- RealVideo (RV)
- DVD
- MPEG4 (MP4)

Video File Decoding over the Years

- The coder/decoder "codec" determines the low-level format, compression, quality, etc.
- Some are patented, such as the infamous Sorensen video codec.
- Free players were made available for Windows. But some companies like Sorensen refused to cooperate with anyone who offered to help adapt them to Linux.
- Around 2003, wrappers were made for Linux to play the Windows free codecs. So now we can legally use them even if they don't cooperate.

DVD Decoding over the Years

- DVD has an encryption mechanism called CSS (Content Scrambling System.) They also wouldn't make Linux versions.
- Though many had quietly cracked CSS, in 1999 a Norwegian teenager Jon Johansen was the first to publicly reveal how trivial CSS was with his "deCSS" decoder.
- On Jan 3, 2000, SVLUG helped EFF pack a courtroom in San Jose and defeat a Temporary Restraining Order against 500 web sites with deCSS source - first shot in the DVD CSS war.
- On May 29, 2003, EFF won in the California Supreme Court.
- The DVD Copy Control Association abandoned CSS as a trade secret. So now no one questions the legality of playing a DVD that you legitimately own on Linux, BSD or other Unix systems.
- This wouldn't have started if they had allowed a Linux player.

Applications that Play DVD and Video Files on Linux

- Mplayer
- Xine/GXine/KXine
- Ogle (DVD only)
- others

Mplayer

- www.mplayerhq.hu
- available in command line and GUI
- Be sure to get all the codecs, including the W32 codecs.
- available as source, RPM or Debs
- Yum RPM updates for Fedora from www.greysector.net

Mplayer tricks

- Make a script with your favorite command-line parameters like this
- ```
time mplayer -autoq 20 -cache 32768 -autosync 30 -framedrop -zoom -fs -stop-xscreensaver $*
```
- Or put them in your GUI launcher
- mplayer-plugin for Mozilla & Firefox
- Skip ads and start at 4<sup>th</sup> file on DVD with `dvd://4` (or whichever one starts the show on that DVD)

# Xine/GXine/KXine

- [www.xinehq.de](http://www.xinehq.de)
- GXine is a Gnome front-end on Xine
- KXine is a KDE front-end on Xine
- available only in GUI
- good DVD menu navigation with mouse and keyboard

# Ogle

- <http://www.dtek.chalmers.se/groups/dvd/>
- DVD player only, no other video file formats
- best DVD menu navigation
- currently not updated? doesn't seem to work on Fedora recently (program quits on start)
- provided the original libdvdnav and other libraries now used by Xine