

Video Editing on Linux



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Video Resolutions

Name	Horizontal	Vertical	Common Sources
CGA	320	240	Old Webcam, Crappy mobile camera
VGA	640	480	Low end webcam
480p	720	480	Current smartphone video camera
DVD	720	576	
720p	1280	720	Low end HD video camera
1080p	1920	1080	High end HD video camera

Multimedia File Contents

Multimedia Container

.3gp, .asf, .avi, .dv, .mov, .mp4, .ogg

Video

*raw, mpeg2,
mpeg4, WMV,
Vorbis, h264*

Audio

*PCM
MP3
AAC*

Metadata

subtitles, author info, timing, etc

Common Multimedia Files

File Extension	Common Source
.3gp	3G Phones
.asf	Microsoft
.avi	Microsoft
.dv	Older Camcorders
.mov	Apple Quicktime
.mp4	YouTube, Handbrake, HD Camcorders
.ogg	Open Standard
.wmv	Microsoft

Common Video Codecs

Codec	Description	Library
DV	MiniDV, Older camcorders	
MPEG2	DVD	
MPEG4	MPEG4 Part 2	libavcodec-extra
H264	MPEG4 Part 10	libx264, h264enc
WMV	Windows Media	w32codecs
Theora	Open standard	

Common Audio Codecs

Codec	Description	Library
AAC	Apple Audio Codec	libfaac
MP3	Surely you've heard of me	lame
PCM	Old Codec	
Vorbis	Open Standard	

Ben's Target Formats

Container	Video	Codec	Audio	Codec
.mpeg	MPEG2	mpeg2video	MP2	mp2
.mp4	MPEG4 Part 2	mpeg4	AAC	libfaac
.mp4	H264	libx264	AAC	libfaac

FFMPEG: The Video Miracle Utility

Web site say:

“FFmpeg is a complete, cross-platform solution to record, convert and stream audio and video. It includes libavcodec - the leading audio/video codec library.”

Ben say:

Whenever you want to do something to the whole audio or video file, you should probably use FFMPEG.

FFMPEG Examples – Part 1

Anything -> MPEG2

```
ffmpeg -i <infile> -vcodec mpeg2video -sameq -r <framerate>  
-acodec mp2 outfile.mpg
```

Anything -> MPEG4

```
ffmpeg -i <infile> -vcodec mpeg4 -sameq -r <framerate>  
-acodec libfaac outfile.mp4
```

Anything -> H264

```
ffmpeg -i <infile> -vcodec libx264 -sameq -r <framerate>  
-acodec libfaac outfile.mp4
```

FFMPEG Examples – Part 2

Turn a Video into a Series of JPEGs

```
ffmpeg -i <infile> -vcodec mjpeg -sameq temp/out-%d.jpg
```

Make sure temp/ exists before you start or it will fail.

Quickly Fix a Broken Container

```
ffmpeg -i <infile> -acodec copy -vcodec copy <outfile>
```

Make sure to use the same file extension on outfile as exists on infile.

FFMPEG Examples – Part 3

Check framerate and codecs in a file

```
ffmpeg -i <infile>
```

Fix incorrect framerate (to 30fps)

```
ffmpeg -i <infile> -r 30 -sameq <outfile>
```

Make sure to use the file extension on outfile as on infile

FFMPEG Examples – Part 4

Shrink a Video for Portable Media Player

```
ffmpeg -i <infile> -vcodec mpeg2video -s 480x272 -aspect 16:9  
-acodec mp2 -sameq <outfile>.mpg
```

Shrink a Video for Droid

```
ffmpeg -i <infile> -vcodec libx264 -s wxga -acodec libfaac -sameq  
<outfile>.mp4
```

More Useful Tips – Part 1

Better Multimedia Codecs for Ubuntu:

Add the Medibuntu Repos

<https://help.ubuntu.com/community/Medibuntu>

Install these Packages:

w32codecs

libdvdcss2

libavformat-extra-52

h264enc

libquicktime1

More Useful Tips – Part 2

How to play pretty much any video:

Install VLC (Windows is useless without VLC)

<http://www.videolan.org/vlc/>

How to get video off of a DVD:

Install Handbrake

<http://handbrake.fr/>

How to Download YouTube and Web Videos:

Firefox Plugin: Video DownloadHelper

<https://addons.mozilla.org/en-US/firefox/addon/3006/>

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