

Video Formats

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Two Technical Rules

- Quality
- Standards

Standards

- Are important for almost any industry
- When followed, they make tasks easier
- Examples:
 - Fuel for your car
 - Internet
 - TCP/IP HTML DNS FTP
 - Tools
 - Video devices

Video Standards

These standards allow us to watch video on different devices:

- 1080i
- 720p
- NTSC (480i)
- MPEG
- etc

NTSC

- Works on any TV in North America
- Highest resolution is 720x480
- 720x480 = 480i
 - Standard DVD format
 - » What does the “I” stand for?

Progressive Scan vs. Interlaced

- Interlaced = 30 fps
 - Alternate lines
- Progressive scan = 24 fps
 - Whole frames
 - Great for slow motion and scrubbing
 - Smoother pans

High Definition

- 1080i
 - 1920x1080 at 30 fps
- 720p
 - 1280x720 at 24 fps
- NOTE:
 - HD uses 16:9 ratio (widescreen)

16:9

- 480p and 480i is a 4:3 standard
- To get a DVD to play in widescreen
 - We must change the shape of the pixel
 - 720x480 with a .9 pixel = 4:3
 - 720x480 with a 1.2 pixel = 16:9
- Computers & Scanners use square

Export Summary

- We use 720p (1280x720 at 24 fps)
- You can export your film to any of these formats:
 - DVD on a regular TV
 - 480i (720x480)
 - DVD on a progressive scan TV & DVD player
 - 480p (720x480)
 - HD TV
 - 720p (1280x720) ← the format that we use

Formats to Create your Film

- Remember: Quality and Standards
- Select working resolution
 - Must maintain the quality of your film
 - Must be able to export it to different formats
 - Must be a standard that other software packages can use

Things NOT to do

- Never “res up”
- Never go from Interlaced to Progressive Scan
- Never use compression on compression
 - Mpeg on Mpeg
 - Quicktime to Mpeg
 - Always work with RAW files (AVI and TGA)

Our Standard

- 720p widescreen
 - 1280x720
 - 24 fps
 - 16:9
 - Square pixel
- 720p can easily be exported to
 - 720p
 - 480p (720x480 at 24 fps)
 - 480i (720x480 at 30 fps)

Backgrounds

- Ensure your background's resolution is high enough
 - If you zoom/truck in at 50%
 - 2 times larger than the resolution of your film
 - File resolution should be 2560x1440 (for 720p)

File Sizes

- 720p requires a lot of disk space
 - 3.5Mb for each frame
 - 84 Mb for a second of film
 - 5 Gb for one minute of film
- You can work with smaller files
 - Limits what you can export to (don't res up)
 - 16:9 issue
 - must use 1.2 pixel
 - Or use 720x405 with a square pixel
 - Square pixels work better when using a scanner

Two Sets of Settings

- Working resolution (source)
- Export resolution
 - Tailored to your playing device
 - TV
 - DVD player
 - HD TV
 - Theatre

Compression

- Mpeg2 standard
- When a film is exported to a playable DVD, it is compressed using mpeg2
- Compression on Compression = bad!
- Don't compress your film then export to DVD
 - Unless the “export to DVD” will not recompress

Backups

- Backup often
- Backup to DVD
- Backup to hard drive is not a real backup
 - IDE
 - Not meant to be turned off and on
 - Consumer grade, unlike SCSI
 - Short life span