Recording video and audio

A SHORT COURSE HOW TO RECORD GOOD VIDEO AND AUDIO

Codecs and formats

Common video file extensions: .mov, .avi, .mp4, .mpg
Common codecs: H.264 and MPEG4
Common audio file extensions: .wav, .mp3

Video File Comparison

Video:	VCD	SVCD	DVD	X(S) VCD	DivX	ASF	SMR/nAVI	RM	DV
Resolution PAL/NTSC	352x240 352x288	480x480 480x576	720x480 720x576	720x480 720x576 or lower	640x480 or lower	320x240 or lower	320x240 or lower	320x240 or lower	720x480 720x576
Video Compression	MPEG1	MPEG2	MPEG2	MPEG1 or MPEG2	MPEG4	MPEG4	MPEG4		
Audio Compression	MPEG1	MPEG1	MPEG2, AC3	MPEG1	MP3, WMA	MPEG4	MPEG4		
Size/min	10 MB/min	10 - 20 MB/min	30 - 70 MB/min	5 - 20 MB/min	1 - 10 MB/min	1 - 5 MB/min	1 - 5 MB/min		
Min/74 minCD	74min	35-60min	15-20min	35-100min	60-180min	120-300min	120-300min		
Hours/DVDR	–	–	2-4hrs	–	13-26hrs	13-26hrs	26-40hrs		
DVD Player Compatibility	Great	Good	Excellent	Low	None	None	None		
Computer CPU Demanding	Low	High	Very High	High	Very High	Low	Low		
Quality	Good	Great*	Excellent*	Great*	Great*	Decent*	Decent*		

* the quality depends on the size/min, more MB/min means higher qu

K-Lite is good codec pack!
http://www.free-codecs.com/download/
k_lite_codec_pack.htm
VLC video player

File Format / Extension	Component	Codec	Notes	RTSP Streaming
MP4 M4A 3GP 3GP2	Video	H.264	Baseline Profile, 480x360 pixels, up to 2 Mbps, 30 frames per second	Supported
		MPEG4	Simple Profile Level 3, 480x360 pixels, up to 2 Mbps, 30 frames per second	Supported
		H.263	Profile 0 and 3, Level 30	Supported
	Audio	AAC-LC, AAC+, eAAC+		Supported
		AMR-NB		Supported
		QCELP EVRC		
AVI	Video	MPEG4	Simple Profile Level 3, 480x360 pixels, up to 2 Mbps, 30 frames per second	Supported
	Audio	MP3		
ASF WMV WMA	Video	Windows® Media Video 9	WMV3, Simple Profile, 480x360 pixels, 30 frames per second	
	Audio	Windows Media Audio 9		Supported
		Windows Media 10 Standard/Professional		Supported
MP3	Audio	MP3		

HD formats (resolutions)

SD
720x576

HD
1280x720

Full HD
1920x1080

720p

1080i/p

4K (Ultra HD)
3840x2160 or 4096x2160

2160p (4K)
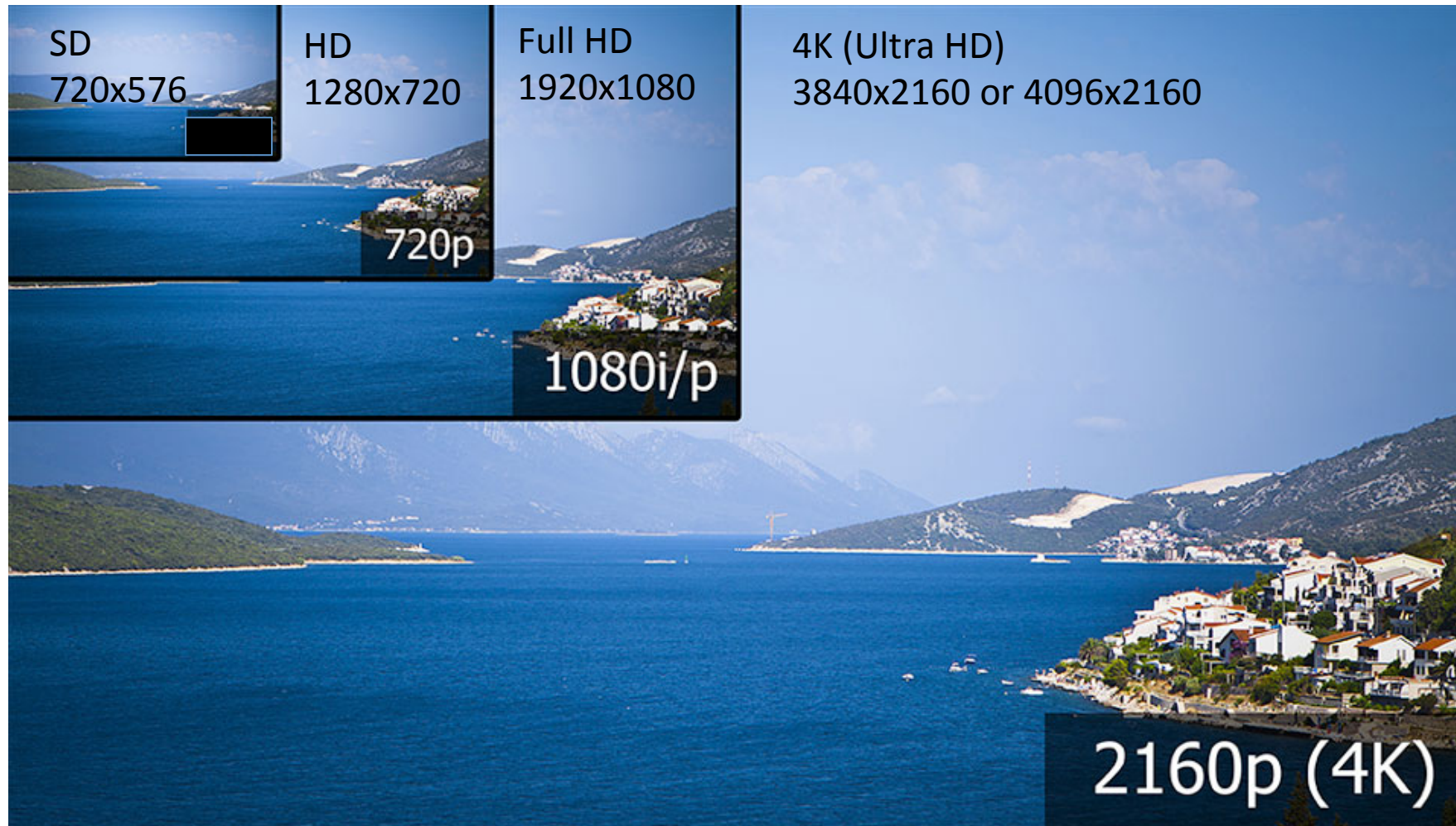
SD=Standard definition
HD=High definition

Frame rate:
25/30 or 50/60 fps
(frames per second)
Other frame rates
also available.

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Interlaced vs Progressive video (1080i/p)

Interlaced | Progressive

Always try record your video in progressive mode.
720p
1080p

Video editing software

Professional editing software:
Adobe Premiere Pro
Adobe Elements
Final Cut
Avid

Consumer and free editing software:
Windows Moviemaker
Imovie (Mac)
Virtual Dub etc.
Online services such as YouTube

ELAN for complex annotation of video and audio used by researchers.

Audacity free audio software.

The camcorder – set it up and use it!

Mount on tripod
Power or battery
Memory card
Zoom options
Start/stop and play
White balance
Display on/off

The camcorder – how to use the audio!

External audio recorder and
post sync in software?
Different type of microphones
Internal mic and external mic
2 channels audio
Channel 1: external mic (interview)
Channel 2: internal mic (environment)
Extend mic with audio cable
Dynamic mic: mic input
Condenser mic: +48v
Auto or manual
Levels
Headphones
Level for headphones
Make a test!

Framing basics – how to compose your picture

Establishing shot or wide shot.
Also known as a full shot.
To show the viewer where its taking place.

For researchers – this could be used as a over all shot with camera number two or three.
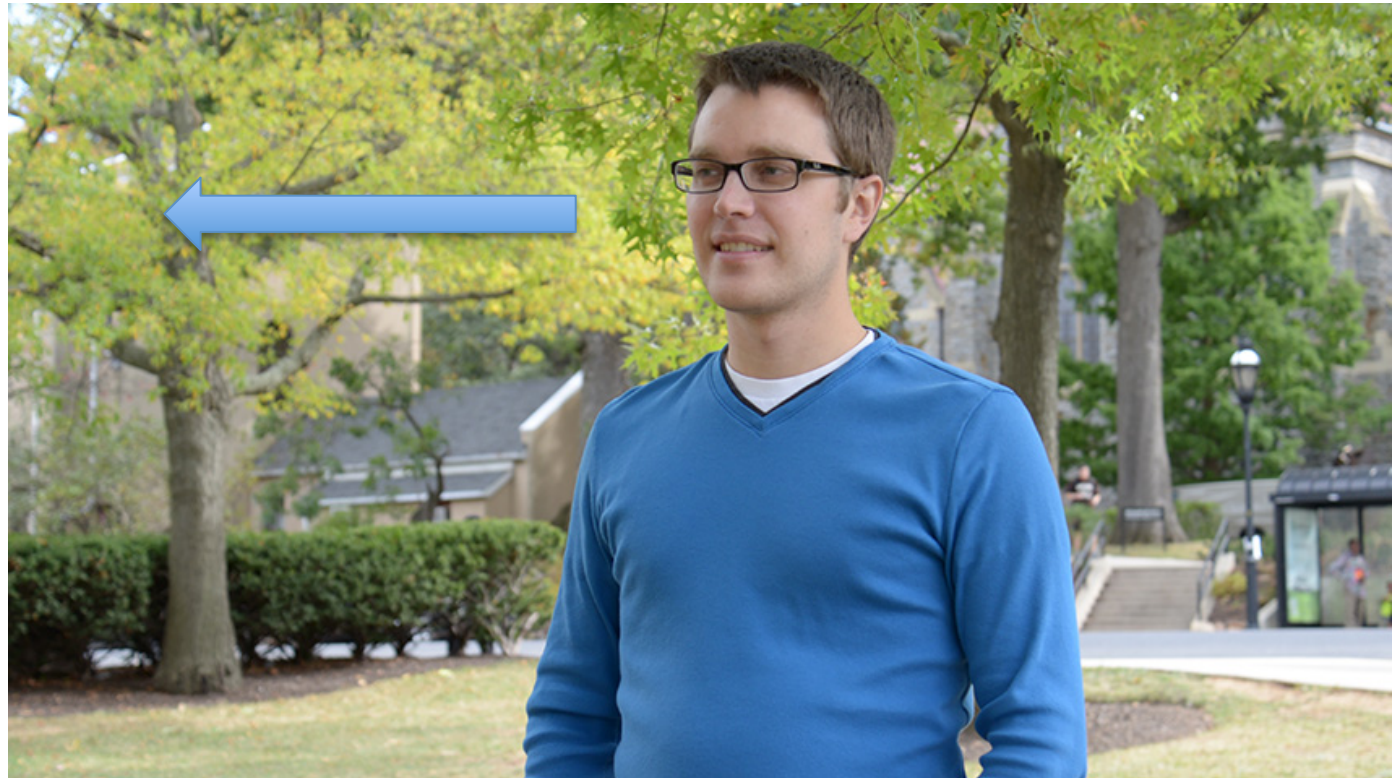
Framing basics

Medium shot.

Keep headroom!
Give space at the direction the person is looking.
Maintain eye contact.

For researchers – typical set-up. Could be standing or sitting down. Could also be a full view of the subject.

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Framing basics

Close up.
Don't be afraid to cut the head. Give space at the direction the person is looking.

For researchers – good if you need a closer look at facial expressions.

Framing basics

Extreme close up.
Still…. give some space at the direction the person is looking.

Sometimes used by Eye Tracking researchers.

180 degree rule

Light

- "Never" towards a window (bright light) – the backlight will fool the camcorder and darken the video. Ok if you bring your own light.
- Dark environment? Move or bring light!
- Locate the light – check where the ceiling lamp gives the best light. See how the light flows.
- Sometimes set the camcorder setting to manual iris to adjust the light.
- Additional light source! On camera or on tripod etc.
- Sun? Yes, in right angel! Maybe move to a shadow position. (ND-filter)
- Moving between OUT 5600K (blue) and IN 3200K (red). Check the whitebalance on the camcorder to get correct temperature.

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3-point lighting

The interview – preparation (journalism)

- Try make a pre-interview/research – but don't give away the questions in advance.

- Represent the viewer – ask for explanation of difficult words. Redo!

- Do the recording if possible in the right environment. If you are talking about trees, make the interview in the park with trees etc.

- **Don't let the background steal the moment while recording.**

The interview – during (journalism)

- Basic questions: who? what? where? when? why? how?

- Think about follow-up questions! Are there a conflict somehow?

- "What will the cost/impact be?"

- Avoid questions that can be answered with "Yes/No" unless that's the answer your looking for.

  WRONG: "Is English your native language?"

  BETTER: "What is your native language?"

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The interview - during

- Listen! Did you get the answer you wanted? If not, ask again by rephrase your question.

- Listen and think about supplementary questions!!!! "Can you give an example? How do you mean? Why?

- Long and/or complicated answer? Ask for a new and shorter answer.

- Emotional answers are ok to be longer.

- Be silent five seconds longer after you got your answer. It´s a classic journalism trick to remain silent after you get the answer. The "uncomfortable" situation that arises CAN get the him/her to fill the silence by developing its reasoning further.

The interview - during

- Give space after the answers for two seconds - don't ask next question directly. It makes editing and annotations easy.

- It´s ok to look at notes but mostly look the interviewee in the eyes.

- DON'T answer yes/no/hmm during the interview while the interviewee is talking. Annoying and makes editing and annotation difficult. Just nod the head that you understand.

The interview – at the end

- At the end of the interview; ask if you missed any questions, or if he/ she would like to redo a question or perhaps discuss another relevant subject?! Some times that's the best part of the interview.

The interview – the photographer

- Listen to the recorded audio in headphones – make sure it´s ok or stop the recording and fix the problem (air noise? construction work? hair?)

- Film "over the reporters shoulder". EYE CONTACT!

- 180 degree rule!!!

- Make sure you can see the interviewee´s eyes real good. The eyes don't tell a lie. Zoom in if it get "hot".

- Keep the camera´s lens in the same height as the interviewee´s eyes.

- Start the camera at least 5-10 seconds before you give ok to the reporter to start the interview. And stop 5-10 seconds after the interview.

- Sometimes you can let the camera rolling long before and after the actual interview to try and capture some extra material.

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The interview – the photographer

- LISTEN to the conversation and start planning your overlay clips.
- Afterwards film the reporter asking some question and nod to the camera (looking at a fake interviewee). Good for editing.
- Afterwards ask the interviewee if you can shoot some overlay clips for the editing. Him/her walking, sitting at the desk, working, close-up etc. Be creative!
- Shoot long and steady overlay clips! 10+ seconds – at least!

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That´s it! Questions?