Extracting Audio from House Video:

C:\Users\mahamr>D:
D:\>cd Lydo/
D:\Lydo>ffmpeg -i test.mov -vn -acodec copy Fredag11_audio.wav

[The 'copy' command ensures that the other specs of the original input are preserved when you do the conversion. Otherwise the output file has standard specs.]

SSO Uke 7 23 Kam 6 Torsdag 1. konsert (1) = 16-02-2023_C1.wav
SSO Uke 7 23 Kam 6 Torsdag 2. konsert = 16-02-2023_C2.wav
SSO Lydo kamera 6 1. konsert Fredag = 17-02-2023_C3.wav
SSO Lydo kamera 6 2. konsert Fredag = 17-02-2023_C4.wav
SSOUke 7 Total 2. konsert Lørdag = 18-02-2023_C5.wav

Folder path:
\\hypatia.uio.no\lh-div-ritmo\Research\Project\Bodies_in_Concert\2023\Data\Raw\Extracted House Audio

House Video:

Original house video files are very huge in terms of file size. This causes jittery playback in VLC player when you play directly from the Felles drive. They play normally in VLC from the fourMs Media HDD.

Making a local copy of a video file on your computer helps get smooth VLC playback. But this is not feasible because the files are huge and often your computer does not have that much space.

Folder path:
\\hypatia.uio.no\lh-div-ritmo\Research\Project\Bodies_in_Concert\2023\Data\Raw\House Video

RECOMMENDED WORK FLOW FOR VIEWING:

1. Watch original house videos from the HDD in VLC player.

OR

2. Convert to .mp4 (example below) to decrease the file size. Then you can view directly from Felles with no jitter in Windows Media Player.

RECOMMENDED WORK FLOW FOR EDITING:

1. Final Cut Pro: Use Adobe Media Encoder to convert original house video to .mov and an Apple ProRes codec. Move the converted videos to an SSD and then edit in Final Cut.

2. DaVinci Resolve: Use Adobe Media Encoder to convert original house video to an .mp4, .avi or other readable codec.

3. Adobe Premiere Pro: You can use the original house video now that we have NDI 5 Tools installed on the lab processing computer. So Premiere now has the plugin needed to read the NewTek SHQ2 codec.

When converting to other codecs, you must pay attention to settings like video resolution, frame rate, audio sample rate, bits per sample etc. Convert according to your needs.

Original House Video Specs
.MOV files

Video >
Codec: NewTek SpeedHQ (SHQ2)
Video resolution: 1920 x 1080
Buffer dimensions: 1920 x 1088
Frame rate: 50
Decoded format: Planar 4:2:2 YUV
Color space: ITU-R BT.601 Range

Audio >
Codec: DVD LPCM Audio (lpcm)
Channels: 2F2R (2 Front, 2 Rear)
[4 channels. But only 2 channels have audio.]
Sample rate: 48000 Hz
Bits per sample: 32

File size: 64.5GB

[SIDE NOTE] ALPHA TRANSPARENCY CHANNEL IN ORIGINAL HOUSE VIDEO:
Used command line to check if the original house videos had an alpha transparency channel

C:\Users\mahamr>cd Documents
C:\Users\mahamr\Documents>ffprobe -v 0 -select_streams v:0 -show_entries stream=pix_fmt -of compact=p=0:nk=1 "sso.mov"

If you have an alpha transparency channel, you will get "rgba", otherwise you get "yuv422p"

Running this prompt on a house video gave me "yuv422p". So, we do not have an alpha transparency channel. Therefore, while codec conversion to a more readable one, I do not need to think about maintaining the alpha transparency channel.

Sample Compressed House Video Render
.MP4 files

Video >
Codec: H264 - MPEG-4 AVC (part 10) (avc1)
Video resolution: 1920 x 1080
Frame rate: 25

Audio >
Codec: MPEG AAC Audio (mp4a)
Channels: Stereo
Sample rate: 48000 Hz
Bits per sample: 32

These play relatively well on Windows Media Player than on VLC directly from the Felles drive.

File size: 5.35GB

Sample File Path:
\\hypatia.uio.no\lh-div-ritmo\Research\Project\Bodies_in_Concert\2023\Data\Raw\HouseVideo_Compressed\2023-02-16_C1_Front.mp4

RECOMMENDATIONS FOR WORKING WITH AV DATA:

1. If you don't need the best video quality, convert it to .mp4 or such with lower specs.

2. Break the concert-length videos into the compositions played.

3. Use as SSD. Reasons:

    i) File transfer is much faster
    ii) Video editing is possible without having to save big amounts of video data on the computer (assuming your computer has that much space in the first place). With hard drives, editing can be slow and jittery.
    iii) External tech people don't like hard drives because it takes a lot of time to upload data on them.
    iv) It is possible. For reference on data demands for huge projects like Stavanger, 5 concerts with 4 video angles each took a total of <2TB.