

Video editing
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I built on personal experience in video editing through 3 interviews with Weidi Zhang (media artist), Chengyuan Xu (professional video editor), and Leanne Lee (general user). Within my subjects, 2 worked with professional editing tools and 1 used a mobile app. Interviews lasted around 2 hours. From analysis of interview transcripts I distilled themes on *motivation* (usage), *process*, and *challenge*, which I describe in relation to photography and sound.

Motivation

All of the interviewees were interested in photography, and some of them mentioned that this interest became the point of entry to video making/editing. One of the interviewees described that 'video is continuous images.' Video editing has some similar aspects to image making. First, we need better equipment (e.g. camera) with high resolutions in order to get better image or video qualities. Second, either post-production editing or image processing techniques such as filtering is needed to finalize the product. Zhang answered that she adds time-based visual effects such as fade-in/out and transitions to her videos. Both Zhang and Xu mentioned that they use Final Cut Pro and Adobe Premiere as video editing tools. Zhang also said that sometimes she uses two different softwares for the animation parts and the arrangement of sequences of footage. She felt that the software can become more user-friendly by adding more visual effects to the video editing software. Lee mentioned that she does a lot of adjustments for images while for videos, she focuses on storytelling. This makes discrepancies between videos in adjustments depending on sources. From these interviews, I inferred an inconvenience of a separation between common video editing software and software which is excellent at animations/corrections.

Process

All of the interviewees described the most common way to begin a new project as collecting resources they have and organizing the materials. Xu and Lee mentioned that they like to organize all the footage based on the dates and events. Zhang tries to arrange the clips into different orders. For her, the most important thing is to make sure the viewer understands her art installation. Even though they have different purposes, organizing footage is a necessary part for all of them. Xu, as a professional editor, thinks that the existing tools are not good enough for organizing the footage. He thinks that making the rough cuts can be automated and tools can provide these rough cuts for video editors. Zhang, on the other hand, thinks that automation can block creativity. She feels that the automation can restrict her imagination. Lee also mentioned that small labors of editing can give her a sense of accomplishment. Like every other creativity tool, I realized that the video editing tools also need to find a balance between automatization for the laborious part and leaving room for the creative part. Xu described that the creative part in video editing is finding a way to come up with the composition of pictures to tell the story, in other words, putting the story together. He added that although the algorithm may generate rough cuts, it has to be the person who finishes the final look. Final touches and editing details are what make difference.

Challenge

Both Zhang and Xu identified the storytelling as being one of the biggest challenges in their video editing process. Xu thinks that if the story is good, users can then have the right pictures for the story. One thing that was entirely unexpected was that the sound is a leader and the key in this process. Xu mentioned that sound is more important than pictures. He said, "For journalism, when you're filming, you can forget to film the pictures. You cannot forget to record the sound." The other two interviews also emphasized the importance of sound in video editing. Zhang mentioned that the sound has to be consistent with the images. The sound can be music or the sound recording of the story. As Zhang put it, "how sound is used effectively is important." Choosing a beginning and an ending scene is also challenging. The user has to decide the first shot and adjust music length to the movie. Lee stated that it feels most laborious when she has to adjust background music to the movie. If she could automate any parts of her process, she hopes that the video editing tools can find a set of musics that go well with the video and adjust their length to the movie.

Design Goals

I used the themes from my interviews to generate design goals for video editing tools that support a diverse range of people, from experts to general users:

Add a variety of visual effects on top of video editing functions: The system should allow people to make interesting animations with video editing programs and easily correct/adjust their videos to maintain consistency. Users should be able to use one software to do the entire process.

Automatize generating rough cuts for users: The video editing tool should provide general rough cuts for the users given raw materials. The interface should support manual interaction (editing) as well as automatic process. The system should enable continuous editing as well as montage.

Background music generation and adjustment corresponding to videos: The system should provide access to various sound sources while adjusting their lengths to the video sources of users.

Reference

Jacobs, Jennifer, et al. "Extending manual drawing practices with artist-centric programming tools." *Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems*. 2018.