

Processing Video Editor (PVE)

Team: 'Murica

Members: Elbert Dang and Jacob Gronert

Website: <http://mirix5.github.io/processingvideoeditor/>

Summary: Our Processing Video Editor will be an easy-to-use, Java-Based video editing platform that is able to take in multiple video, audio, and SubRipText (srt) subtitle files and allows users manipulate these along a timeline. The editor will contain a few basic video effects that users can pick and choose from, whether it's in real-time while the video plays, or preset using the timeline. PVE will also allow users to set which audio clips play along the timeline and create subtitle tracks to align with these music and/or video clips. Users can save all loaded files and effects as a project file and subtitles as srt. Project files will load all files used in addition to the video/audio timeline timings.

Use Cases/User Stories:

- User A wants to quickly add interesting effects to a video in real-time, so using our Processing Video Editor (PVE), he plays the video to his friends while playing around with different visual effects in real-time.
- User B wants to add cool music to a video file, so he combines them with PVE and saves the project to send to friends.
- User C has movie and SubRip text (srt) files and just wants to watch them without needing to install anything on his friend's computer. Using PVE, he can load both files and use it as a video player.
- User D wants to learn the lyrics of his favorite song, but wants to see it it displayed while he listens to it. Since he's on the go a lot, he doesn't have an internet connection to watch it on YouTube, so using PVE and an appropriate srt file, he'll be able to listen to his songs while seeing the lyrics displayed as the music plays.
- User E wants to help out User D when he can't find the lyrics to his songs, so using PVE, he is able to add subtitles in a timeline to create an srt file for User D's favorite songs.

Input Media Types:

- Local video files (avi, mp4, mov, ogg),
- Local audio files (mp3, wav, flac),
- Local SubRipText files (srt),
- Local Project file

Output Media Types:

- Local Project file
- Local SubRipText files

Platform: All Java based platforms (Processing)

Libraries:

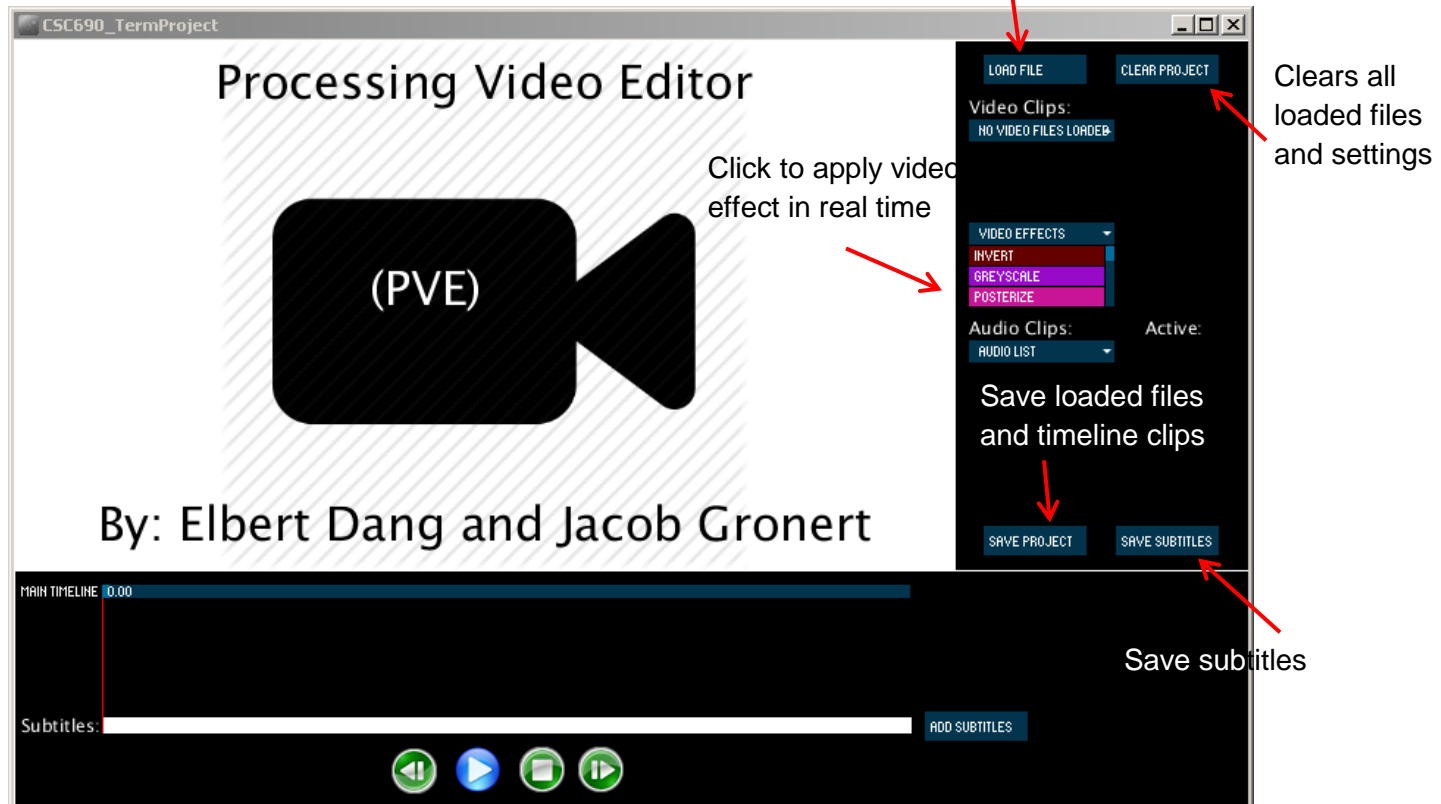
- **ControlP5:**
 - Buttons for loading, saving and fullscreen
 - Slider for timeline
 - Listbox for video selection
 - DropDownList for audio effect selection
 - Textfield for inputting subtitles
- **Minim:** Playing audio and video files
- **Video:** Playing video files and some video effects

Usage:

- Load video, audio, or srt subtitle files with Load Files button
 - For video: avi, mp4, mov, and ogg files supported
 - For audio: mp3, wav, and flac files
 - For subtitles: SubRipText (srt) files
- Clear all loaded files and settings with Clear Project button
- Video to play can be selected using DropDownList
- Audio clips can be selected using ListBox
- If video file loaded, click to place Active audio clip on timeline to play when timeline is ran
- If no video file loaded, main window will display audio metadata
- Press play to start timeline.
 - Current time will be displayed on right of timeline and by red bar.
 - If video loaded, selected video will play in main window
 - If audio placed on timeline, it will start playing once timeline reaches it.
 - Multiple audio tracks can play simultaneously
- Video effects can be triggered using ListBox, timeline, or keyboard commands
 - To activate using Listbox, simply select video effect when video is played
 - To activate by timeline, click to choose duration and video effect to display when timeline is ran
 - To activate by Keyboard:
 - 'I' for Inverted colors
 - 'G' for Greyscale

- 'O' for Posterize
 - 'P' Pixelate
- Note that Pixelate will do so based on video's original width/height and may display incorrectly on scaled/stretched playback windows.
- Once video and/or audio files are loaded, you may start adding subtitles
 - Add to current timeline time by pressing the Add Subtitle button
 - Add to custom time by typing into start/end time text fields or by clicked subtitle timeline
 - Currently loaded subtitles will display on timeline.
 - Save subtitles by pressing Save Subtitles button.
- Press Save Project to save all loaded files and timeline settings
 - If subtitles were loaded or saved, they will be included in the output PVE file
 - Make sure you save any edited subtitles before you save your project or subtitle changes will not be saved

Default view

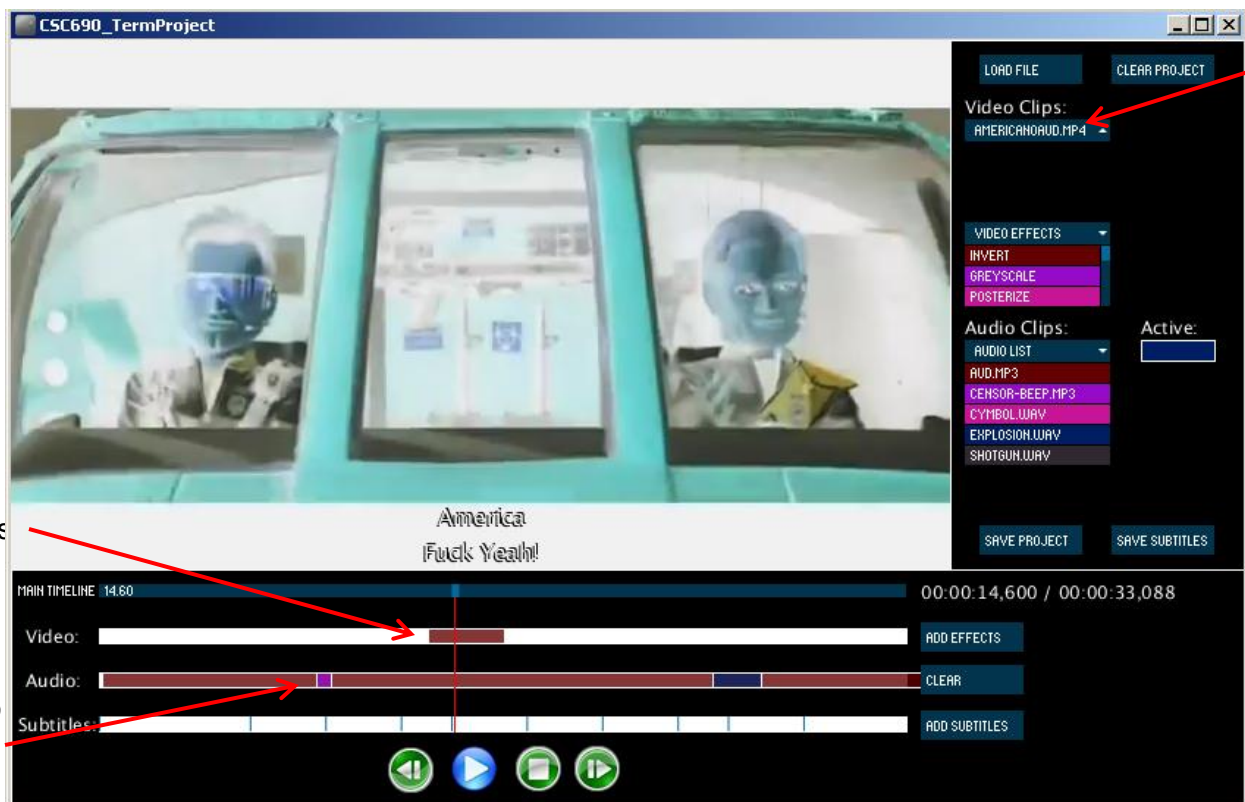


Audio metadata

Audio Only

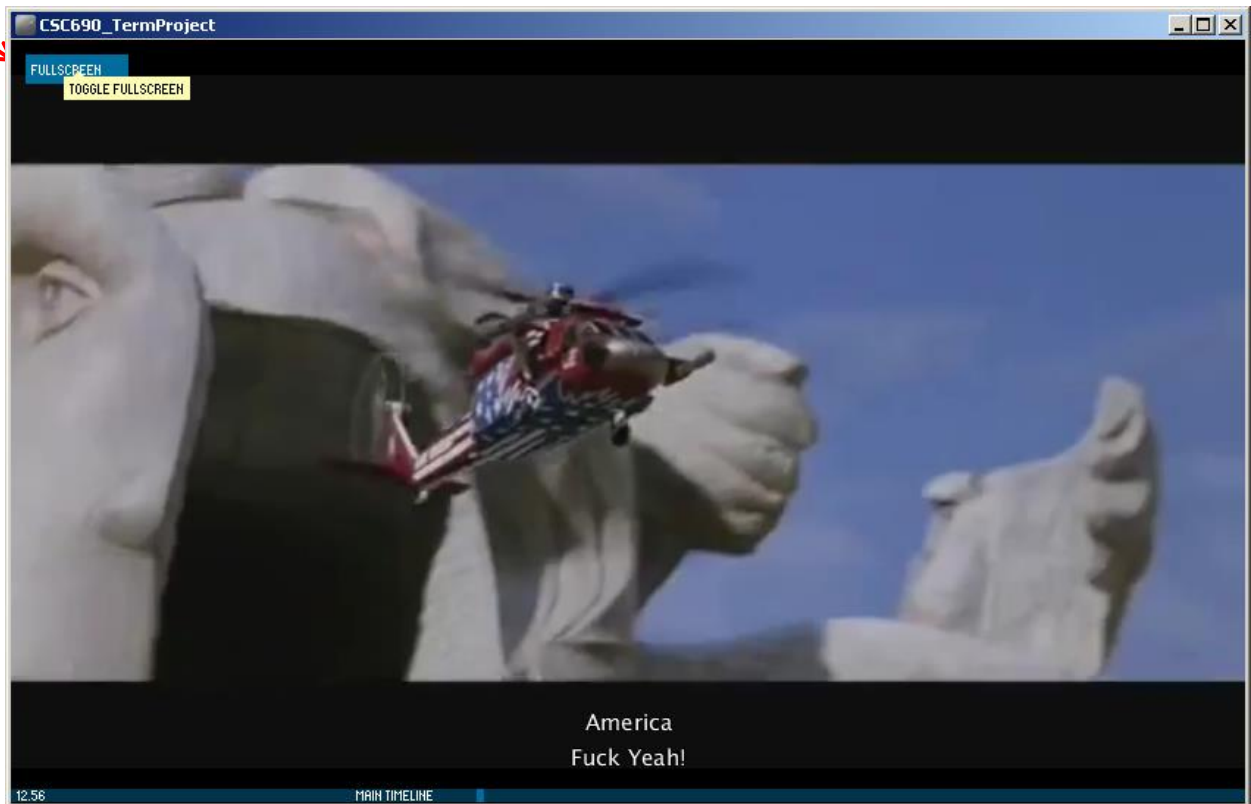


Video/Audio/SRT Files Loaded



Fullscreen Mode

Activate fullscreen mode via this hidden button, or pressing "F" key



Click to skip ahead/back in time