VAMIX User Manual

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Introduction

What is VAMIX?

VAMIX is an acronym for **V**ideo **A**udio **MIX**er. The software provides basic features in video and audio editing such as:

- Download Audio from the internet
- Play media files.
- Extract audio from media file.
- Replace audio to a video file.
- Overlay audio to a video file
- Change volume in a video file
- Add additional audio tracks to a video file
- Drawing text to a video
- Adding fade in or fade out effects to a video
- Edit subtitles and add subtitles to a video.

The software is an open source project and is meant to be used in the Linux operating system (Ubuntu) and needs VLC and avconv to function.
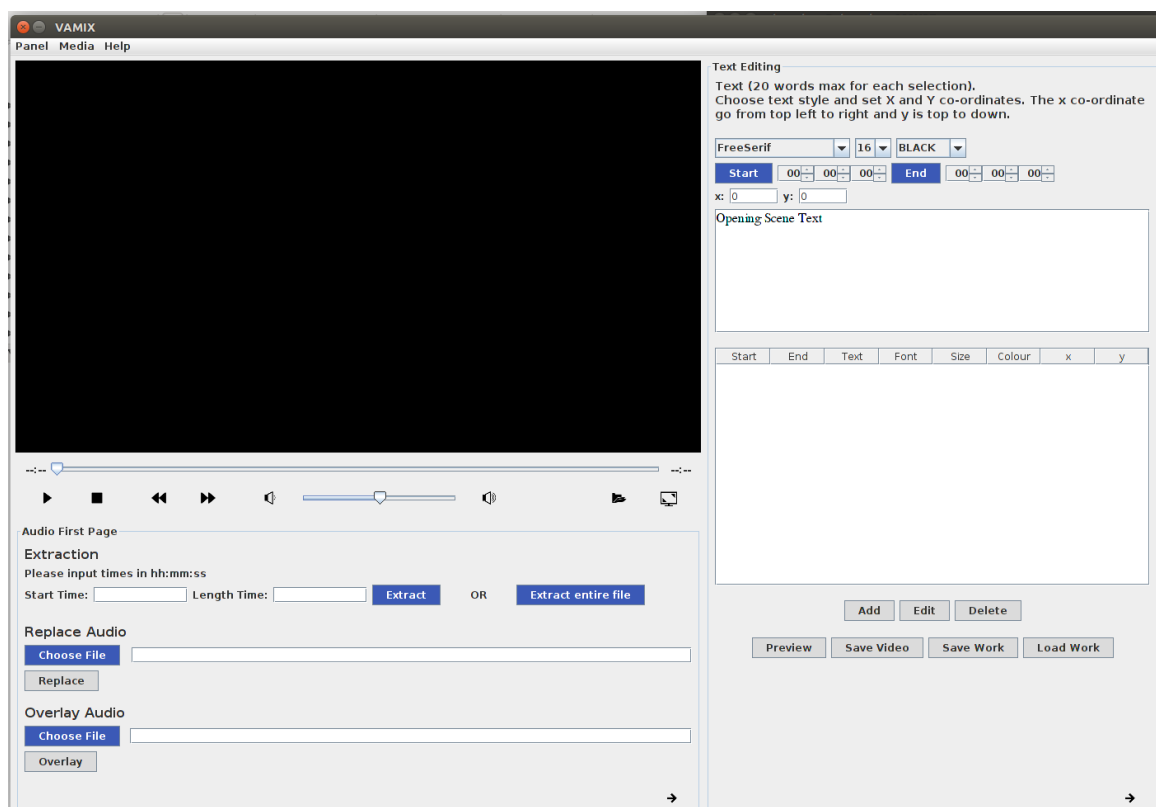

Figure 1 Look of VAMIX during start up

Getting Started

The Vamix software will be stored inside a zip file. The zip file contains the following files:

- src
- res
- lib
- help
- vamix.jar

There are two ways to run the vamix, through the terminal or by an IDE (Integrated Development Environment) such as eclipse.

Terminal

If you just want to run the software without using eclipse, run through the terminal. Enter the following command in terminal.
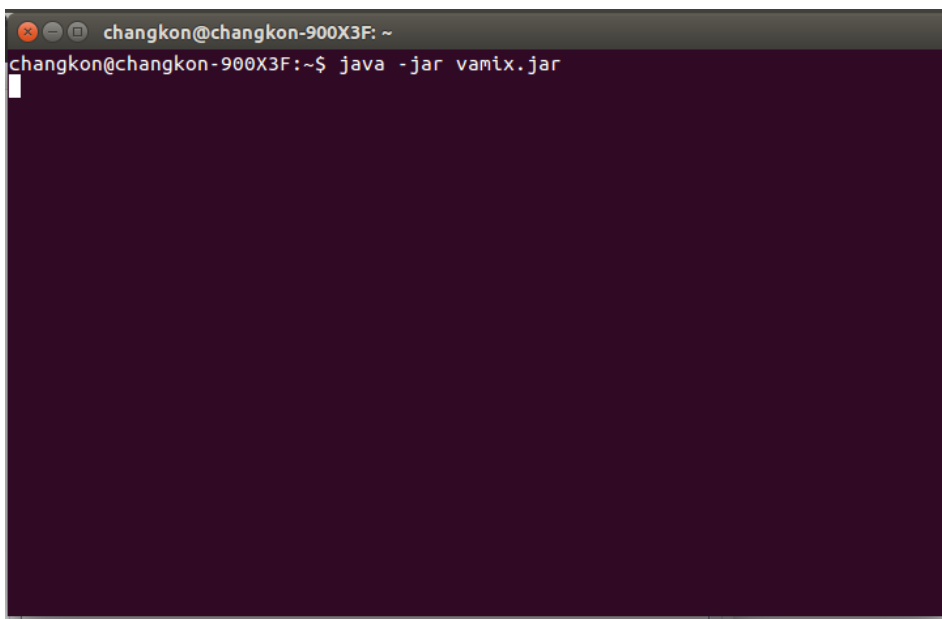
java –jar vamix.jar

Figure 2 Running VAMIX through terminal

Eclipse

Start eclipse and create a new Java Project. Import the following files into your project directory:

- src
- res
- lib
- help

This is done by dragging and dropping the files into the project directory or by importing the files. To import the files, right click the project name on the Package Explorer tab and select Import. Choose File System under the General tab and then import the above files.

Figure 3 Completed set up in Eclipse

Once the files have been imported, there will be error messages and some additional steps are required to get the project to run successfully.

Firstly, add the following folders to be source folders if they are not already; src, help and res. Right click the folders in the Package Explorer and hover to Build Path and then select Use as Source Folder. If the above step has been done correctly, the folder icon should now also have a brown square next to it.

Furthermore, add miglayout-4.0-swing.jar and vlcj-3.0.1.jar to build path by right clicking the file, hover to Build Path and select Add to Build Path. If done correctly, Referenced Libraries can be seen in your project and 4 files be inside. Along with the 2 jar files you have added, two additional files will have been added, this is done automatically when you add vlcj-3.0.1.jar to Build Path. Figure 3 shows the completed project directory set up and VAMIX is now ready to run by pressing the green play button on the menu.

Features

Download

Download menu can be accessed by pressing Panel -> Download on the menu. Put URL and press the download button to start downloading. The download can be cancelled by selecting the download and pressing the cancel button. Invalid URLs will not start downloading and a warning message will be given. Overwriting existing mp3 files are allowed and a message will be shown asking if overwriting is desired. If the file was interrupted previously, the download will continue from previous progress. Multiple files can be downloaded.

Media Player

The media player is on the main panel and has standard features in most video players such as playing, pausing, fast forward etc. To open a file, press the folder icon or on the menu bar, Media -> Open... Time and volume can be adjusted by dragging the slider or clicking on the desired position. Fullscreen can be toggled on and off by pressing the fullscreen icon or by double clicking the media player. Once in fullscreen, users can exit fullscreen by double clicking again or pressing esc. Play and pause during fullscreen can be toggled by pressing space. Moving the mouse will show the playback panel if user wants to play, pause, stop etc.

Extraction

Extracting audio from a media file can be achieved in two ways, extracting part of the audio or extracting the entire audio track. Extraction is located in the main panel and on the first page.

Extracting Part of the Audio

On both text box, place the input in correct format hh:mm:ss. The first text box is when the extraction should start and the second text box is the duration of the extraction. Press Extract button to start extracting. Specify the name of the output and extraction will begin. A progress monitor will appear showing the progress of the extraction task. When extraction finishes, a message will appear saying extraction has finished.

Extracting Entire Audio

Press Extract entire file button. Specify output name and extraction will begin. A progress monitor will show the progress of the extraction and a message will be output when extraction has finished.

Replace Audio

Choose an audio file to replace the video with. Press the Choose File button and select an audio file from the menu pop up. The selected file location will be placed on the text box beside the Choose File button. Alternatively, place the file location on the text box manually if you already know the location of the desired audio file. Press Replace button and specify output filename and output video type. A progress monitor will show the progress of replacing audio and output message will be shown when process has finished.

Overlay Audio

Choose an audio file to overlay with. Press the Choose File button and select an audio file from the menu pop up. The selected file location will be placed on the text box beside the Choose File button. Alternatively, place the file location on the text box manually if you already know the location of the desired audio file. Press the Overlay button and specify output filename and output video type. A progress monitor will show the progress of overlaying audio and output message will be shown when process has finished.

Change Volume

This is located in the Audio Second Page. If you are on the main page and on Audio First Page, go to the second page by pressing the button on the bottom right that points right. Adjust volume by choosing values from 0 – 5. By default, 1 is selected. The values is a multiplier of the current media file. E.g. 2 means double the volume of the media file. Once the desired volume has been selected, press Change Volume. Depending on the media that is currently playing, an appropriate pop up menu will be shown and indicate the output name and output type. A progress monitor will be show the progress of the process and a message will be output when the process has finished.

Add Track

This is also located in the Audio Second Page. If you are on the main page and on Audio First Page, go to the second page by pressing the button on the bottom right that points right. Choose the audio file to add to the video file. Press the Choose File button and select an audio file from the menu pop up. The selected file location will be placed on the text box beside the Choose File button. Alternatively, place the file location on the text box manually if you already know the location of the desired audio file. Press Add Track button to start adding the audio file to a video file. Choose the desired output name and output file type.

Text Editing

Select text to encode to a video file. Input desired text in the text box. Choose the font type, font size and font colour. Choose the position to place the text by specifying the x and y co-ordinates. X co-ordinate values go from left to right. Y co-ordinate start from top to bottom. Specify the time to show text and when the text should disappear in the video by placing the start and end times next to the start and end buttons. If you want to get the time from the media player, press start or end button and it will automatically place the current time to the spinners. When desired values have been placed, add the text filter to the table by pressing Add. Press the Edit button to edit values. Change to desired values and press Change button to change the values for that data. Delete values by selecting the data in the table and pressing the Delete button. Preview text editing by selecting the data to preview and then select Preview button. Save the filters in the table by pressing Save Video. Specify output name and output video type.

Fade Filter

Add fade in or fade out filters to a video file. Likewise with text editing, specify the start time to start fade effect and end time to end the fade effect. If you want to get the time from the media player, press the start or end button and it will automatically place the current time to the spinners. Choose Fade In or Fade out option and then add the value to the table by pressing Add button. Edit data by selecting a row in the table and pressing the Edit button. Edit the time values and press the Change button to change the values for that row. Delete values by selecting the row on the table and pressing the Delete button.

Save Work and Loading Work

This feature is available for Text Editing and Fade Filters. Save the work to a text file by pressing Save Work. Specify the output text filename and the current work will be saved. If you want to load back the work, press Load Work button and it will load the previous work back into the table. All the previous work will be put into the table so you can continue working on the filters.

Subtitles

This feature allows you to create/edit subtitle files and add subtitles to a video file.

Create/Edit Subtitle

Create subtitles by specifying the time for the text to be displayed. Put the desired text to be placed in the subtitle on the text box. Press Add to add the data to the table. Edit values in the table by pressing the Edit button and change the values and then press the Change button to modify the values. Delete values by selecting the row on the table to delete and then press Delete. Alternatively, import existing subtitle files by pressing Import. Pressing import will load the subtitle in the text file to the table and you can add, edit or delete the imported subtitle. To save the subtitle press the Save Subtitle and specify the output filename.

Add Subtitle to a Video

Press the Add Subtitle to Video button. Choose the subtitle file to add to the video and then specify the output video filename.

Readme

On the menu bar, press Help -> About to open the readme.

Frequently Asked Questions(FAQ)

Progress monitor is not updated. The percentage remains the same but eventually I get a message saying process has been completed.

This is an issue because of how the progress is being updated in the code. During any avconv operation, the progress is output and VAMIX takes the output and extracts the relevant information and notifies users the progress of the operation. However, sometimes, the process is continuing but the progress output for the relevant information is not changing hence the progress monitor will output the same value as output values from avconv is the same.

I keep getting a message saying I need to play the media file before editing files. Why must the media player be playing a file?

The media player must be playing a file before editing because many of the processes involve getting information from the media player. If the media player is not playing, the information cannot be obtained therefore to avoid producing errors, it asks users to make sure the media player is playing a file first.

There seems to be a limited support for different media formats, especially for audio files, there is only option for mp3.

This was a design decision made during software construction. Having less formats make the software simpler to implement therefore only common formats were included. For audio, mp3 is the only available format as it is the most common. Other audio formats such as aac, wma, wav was not included. For videos, files can be mp4, mkv or avi format.

I'm running VAMIX through the terminal and whenever I play a media file, I get a message "Fontconfig warning: FcPattern object size does not accept value "0"". Is this an error?

No, it is not an error. This is a common message displayed when playing media files so the message can be ignored.

I don't understand how Fade Filters work. For example, I put the start time near the end of the video and end time at the very end and use Fade In but the video output is just black

To clarify, the start time is when the fade effects will start happening and the end time is when the fade effect will finish. Furthermore, fade in is going from a black background to the video image and fade out is going from the video image to a black background. So, for example, if the fade type is fade in and you have the start time near the end of the video, the time before the start time will just be black because this is the default colour and then it will go the video image.

Some of the file conversions such as mp4 to avi. The avi file is so much larger.

This is due the file conversion in avconv. VAMIX tries to keep the same quality when the file conversions occur so sometimes there are differences in filesizes.

When I press the preview button, a new window appears showing the video but I don't know how to navigate through the video. How do I skip time or play/pause?

Playing and pausing is done by space and skipping time is done by pressing the left and right button.

Known Bugs

- Fullscreen is not perfect. If the media player is paused during the main menu, when the media player enters fullscreen, it will start playing media instead of remaining paused. Similarly, mute icons also do not update properly when going from normal to fullscreen mode.
- For some progress monitors such as during Replace Audio, the progress bar does not update after some percentage. It stays at the same percentage but the process is still going. This is a result of avconv command progress output not updating its time completed section. The progress monitors use the time completed section output by avconv command to update its progress monitor but because the value stays the same, the progress monitor is not updating properly.
- The preview for fade filters doesn't always work. It is noticeable that when you input a fade effect later than a minute or so from the start of the video, the video remains black in the preview window shown to the user. If the user keeps playing with the preview window until the end of the video, the window freezes and user is unable to close the window unless VAMIX is closed. However, the filter does work when you save the fade filters to a video.

Additional Information

VAMIX was made with the help of avconv and vlcj. To better understand the software and how it works, please look at the below links to acquire additional information.

The avconv documentation:

https://libav.org/avconv.html

The vlcj project page and its documentation page:

http://www.capricasoftware.co.uk/projects/vlcj/index.html

http://caprica.github.io/vlcj/javadoc/2.1.0/

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