ViDiVOX

User Manual

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1.0 Introduction

VidiVOX is a software tool that can be used to manipulate videos and synthetic speeches with high level of flexibility. User can add music and commentary to a selected video. User can also apply audio and video effects to create a more sophisticated video. This user quick guide shows the functionalities of the components on the Graphical User Interface and how to perform overlay audio and video files.

2.0 Getting Started

2.1 Operating Systems Requirement

ViDiVOX is an exclusive software for machines with linux operating systems. To have the best experience using ViDiVOX make sure you have the Ubuntu operation system installed.

2.2 Software Requirement

In order to use ViDiVOX, you might need to install few extra software that did not come with the default Ubuntu. These software are:

- FFMPEG: follow these steps to download ffmpeg from the terminal for Ubuntu:
    - Step 1: type "sudo add-apt-repository ppa:mc3man/trusty-media" into your system terminal and press Enter.
    - Step 2: type "sudo apt-get update" into your system terminal and press Enter.
    - Step 3: type "sudo apt-get dist-upgrade" into your system terminal and press Enter.
    - Step 4: type "sudo apt-get install ffmpeg" into your system terminal and press Enter.
- MGP321: to install mgp321 type "sudo apt-get install mgp321" into your terminal and press Enter.
- TTS FESTIVAL: is usually come with the Ubuntu package. Otherwise you can type "sudo apt-get install festival" into your system terminal and press Enter.

2.3 Run ViDiVOX

To run the application, follow the steps below:

Step 1: Open the terminal

Step 2: Go to the directory where the application is by typing the terminal

cd "the path of the application(directory)"

Example: The application is in my home directory /home/john/

cd /home/john/

This will take you to this directory.

Step 3: Type:

java -jar ViDiVOX.jar

3.0 ViDiVOX User Interface

3.1 Launcher

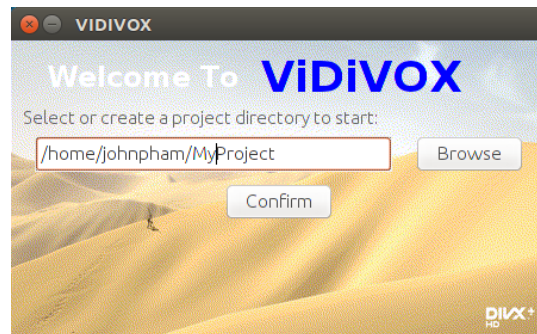First launching the application will take you to the **Launcher Window**, *Figure 1.*

Figure 1. Launcher Window

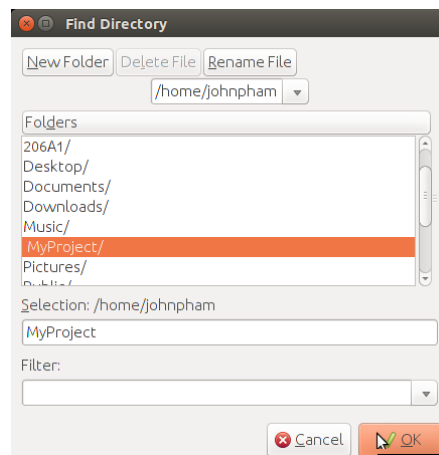Click the Browse button to will open the **directory browser**, *Figure 2.*

Figure 2. Directory Browser

Select a project folder and click .

Click the Confirm button will set up the project folder. In the process, the selected project directory is checked to make sure it actually exists. If it does not exists already a message window will be displayed, *Figure 3.*
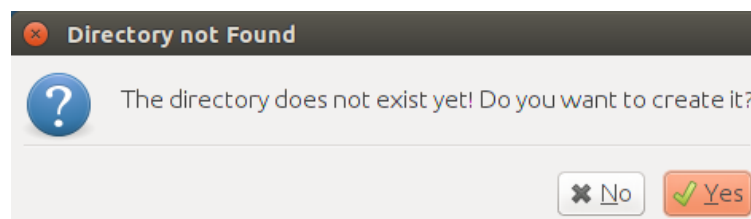

Figure 3. Create the non-exist project directory confirmation.

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Click ✓ Yes to create the non-existing directory and set it up. A message will be displayed when the new project folder has been created, *Figure 4*.
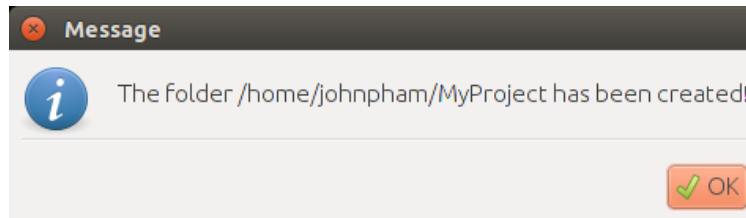

Figure 4. Message

Click ✖ No to cancel and return the **Launch Window** and select a different directory.

3.2 Media Player User Interface

Once the project folder is set up, the **Media Player Window** will be displayed, *Figure 5.*

Media Player Window consists of following 4 main areas:

- Video Screen Area
- Controls Area
- Speech Area
- Merger and Effects Area. Consists of 3 sub-sections:
  - o Media Files Choosing Section
  - o Audio and Video Effects Section
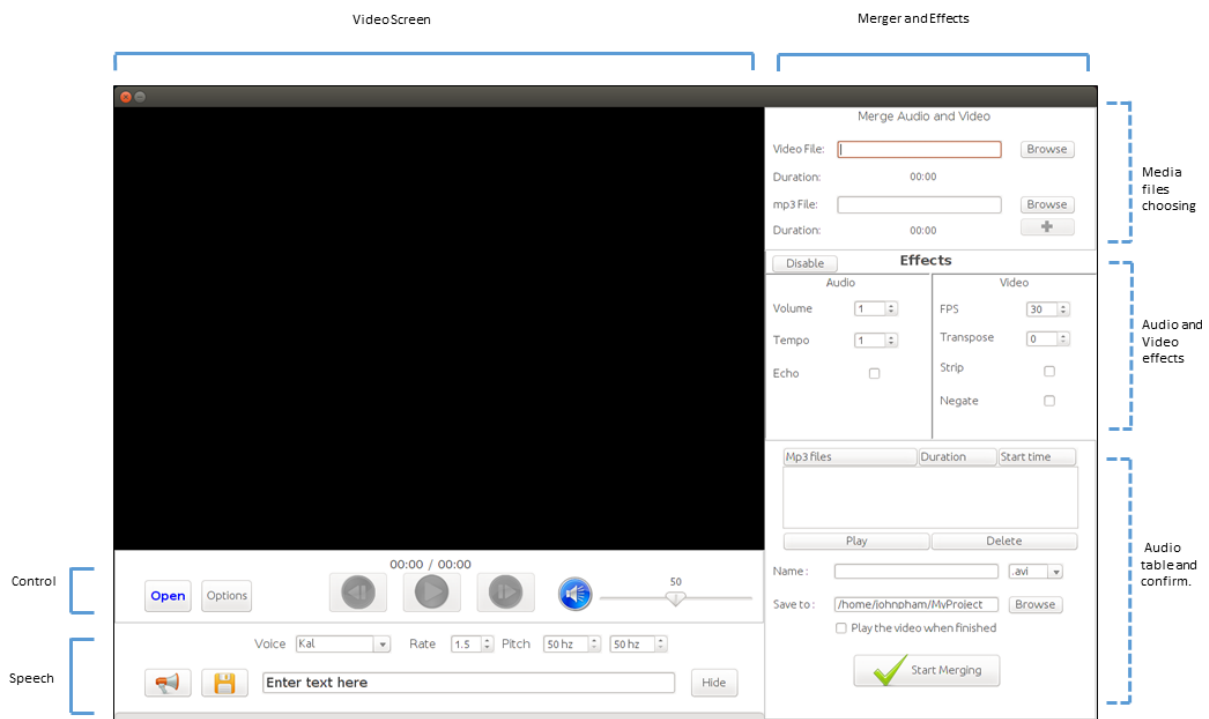 - o Audio Files table and Confirmation Section

Figure 5. Media Player Window

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3.2.1 Video Screen

The video will be displayed in this area.

3.2.2 Controls

The **Controls** area provides various video and volume controls.

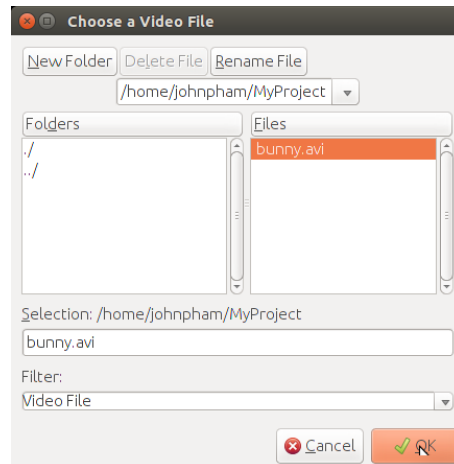Click [Open] button to open the **Video file Browser**, *Figure 6.*

Figure 6. Video File Browser

In the **Video File Browser**, select a video file from the project directory or navigate to a different directory where your video file is in. Then, click [✓] to play the video or [✗ Cancel] to return to the main interface.

Click [Options] button to open the **Options**, *Figure 7*.

Figure 7. Options

In the **Options** panel, choose the speed of the video by just clicking the buttons on the frame. Click **1** will reset the video to normal speed. Click on **0.5** will slow the video by half of the normal speed and **2** will double the speed of the video. Click **Done** to close the panel.

Click [▶] or [■] button to play or stop the video. These buttons will be enabled as long as there is a video playing.

Click ![fast backward button] or ![fast forward button] button to continuously fast forwards or backwards by 3 second per skip. The fast forward or backward will be stop if the ![play button] button or ![stop button] button is clicked or the video have reached the beginning or the end.

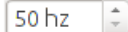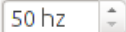![volume slider showing 50] is the volume slider which enables user to change the volume of the video.

The timer 00:00 / 00:00 consists of 2 time stamps, the left time stamp shows the timer of the video and the right time stamp is the length of the currently playing video.

3.2.3 Speech

The **Speech** panel provides necessary tools to create a festival speech.

Choose a festival voice from the drop down box Voice [Kal ▼]. The three voices available are Kal_diphone, Auckland and Rab_diphone.

Set the rate of the speech using the spinner Rate [1.5 ⇅]. The minimum rate is 0.5 and the maximum is 5.

Set the start and end pitch of the synthetic voice Pitch [50 hz ⇅] [50 hz ⇅]. The left spinner is for the start pitch and the right spinner is for the end pitch.

Test the synthetic speech with the ![speaker icon]/[Cancel] button. Click ![speaker icon] button start the synthetic speech using the message in the [Enter text here] text field with specified voice, rate and pitch. Click [Cancel] button will stop the synthetic speech.

Click the ![save icon] button to save the synthetic speech as an mp3 file. The **Save Synthetic Speech** window, *Figure 8,* will be displayed for user to enter name for the new mp3 file and the directory to save the file to.
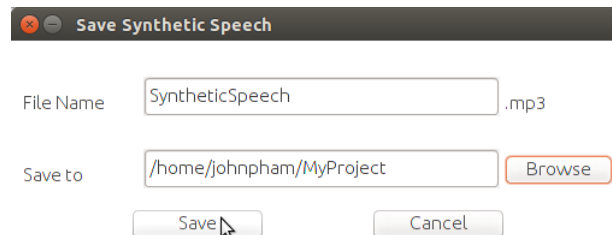

Figure 8. Save Synthetic Speech window

Click [Browse] button to open the **directory browser**, *Figure 2*, and select a directory.

Click [Save] button to start the saving process or click [Cancel] button to return to the main window.

Note: the [🔊] / [Cancel] and [💾] buttons will only be enabled when there are text in the text box.

Click [Hide] or [Show] button to hide or display the **Merge and Effects** panel, *Figure 9*.
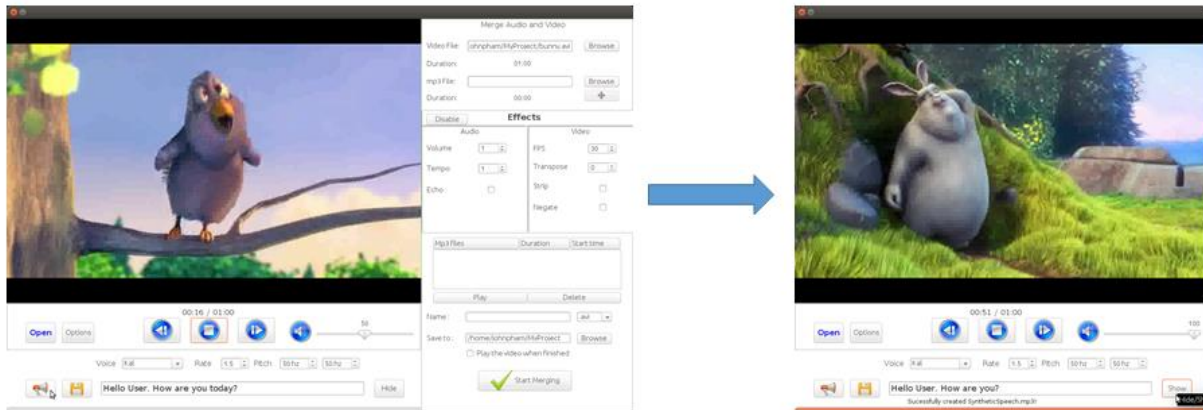
Figure 9. Hide/Show Merge and Effects Area

The **Status message** and **Progress Bar** show the process of saving mp3 files or video files.

3.2.4 Merge and Effects

The **Merge and Effects** panel provides tools to overlay or replace the audio of the video at multiple time points with selected effects.

Media Files Choosing

Click [Browse] button on the top opens the **Video file Browser,** *Figure 6*, and choose a video file. This video file will be used in the merging process. Click [✓] to confirm, the video file path will be displayed in the text field Video File: [ohnpham/MyProject/bunny.avi] and the duration of the video will be shown in the label below the text field Duration: 01:00 .

Click second [Browse] button opens the **Audio file Browser**, *Figure 10.*

On the **Audio file Browser**, choose an mp3 file from the project directory or from any other directory. Click [✓] to confirm selection. The mp3 file path will be displayed in the text field mp3 File: [yProject/SyntheticSpeech.mp3] and the duration of the mp3 file will be displayed in the **Duration** label.

Figure 10. Audio File Browser

Click button to add the mp3 file to the table, *Figure 11.*

Audio and Video Effects

Click or to disable or enable the **Audio and Video Effects** panel.

Choose a desired volume for the audio from the **volume spinner,** Volume   1 ⬍ .

Choose a suitable tempo for the audio from the **tempo spinner**, Tempo   1 ⬍ .

Select the **echo checkbox** to have echo effect on the audio, Echo   ☐ .
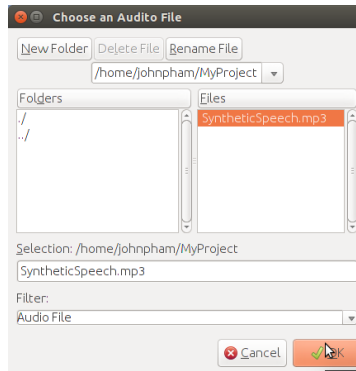
Choose number of frame per second for the new video from the **FPS spinner,** FPS   30 ⬍ .

Choose the orientation of the video from the **transpose spinner,** Transpose   0 ⬍ .

Select the **strip check box** to strip the audio off of the original video Strip   ☐ .

Select the **negate check box** to negate the color intensities of the original video Negate   ☐

Audio Files Table and Confirmation
The **mp3 files table** shows the selected mp3 files.

Mp3 files	Duration	Start time
SyntheticSpeech.mp3	00:03	00:05
SyntheticSpeech.mp3	00:03	00:00
good.mp3	00:03	00:00

Figure 11. Mp3 files table

Click [Play] button to listen to selected mp3 files from the table.

Click [Delete] button to delete selected mp3 files from the table.

Enter a start time for each of the mp3 file in the **Start time column** of the table.

Name of new file can be entered in the **new file name text field** Name : [　　　　　　　　　　　].

Click the [Browse] opens the **Directory browser**, select a directory to save the new file to.

Directory to save the file to is displayed in the **save to text field**, Save to : [/home/johnpham/MyProject].

Choose a file extensions for the new video file form the **extensions spinner**, [.avi ▼].

Select the **play check box** to play the video right when it is finished, ☐ Play the video when finished

Click [✓ Start Merging] will start the merging process.

4.0　Create New Video

4.1 Merge multiple audio files to one video file

Step 1: Select one video file by browsing or just entering the valid file's path to the **video text field**
Video File: [ohnpham/MyProject/bunny.avi] .

Step 2: Select an mp3 file by browsing or just entering the valid file's path to the **mp3 text field**,
mp3 File: [yProject/SyntheticSpeech.mp3] .

Step 3: Add the selected mp3 file to the table using the [✚] button.

Perfrom step 2 and 3 again to add all desired mp3 files to the table.

Step 4: Select effects from the **Audio and Video Effects** panel or disable the effects to just plainly overlay the audio files on the video.

Step 5: Set the start times for audio files in the **start times column**.

Step 6: Hold **Ctrl** on the keyboard and select the desired audio files.

Step 7: Enter a valid name for the video file and select an **extension**.

Step 8: Select a directory to save the file to, the default directory is the initial Project Folder.

Step 9: Select or deselect the **play check box** and Click the [✓ Start Merging] to start merging.

4.2 Merge one audio file to one video file
Perform the same steps in 4.1 for one audio file.

5.0 Possible Errors

5.1 Incomplete GUI

When starting the application, the bottom part of the GUI might be cut off due to unknown reason, thus, you cannot see the **Progress bar** and the **status label**.

Re-launch the application until the complete GUI is displayed.

5.2 User Errors

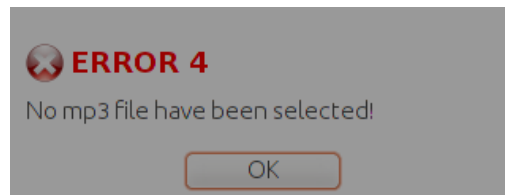An **Error window**, example *Figure 12*, will be shown if user enter an invalid input. The Error window shows a message of what causes the error and help user to fix it.

Figure 12. Example Error window