MULTIMEDIA TRANSCODER

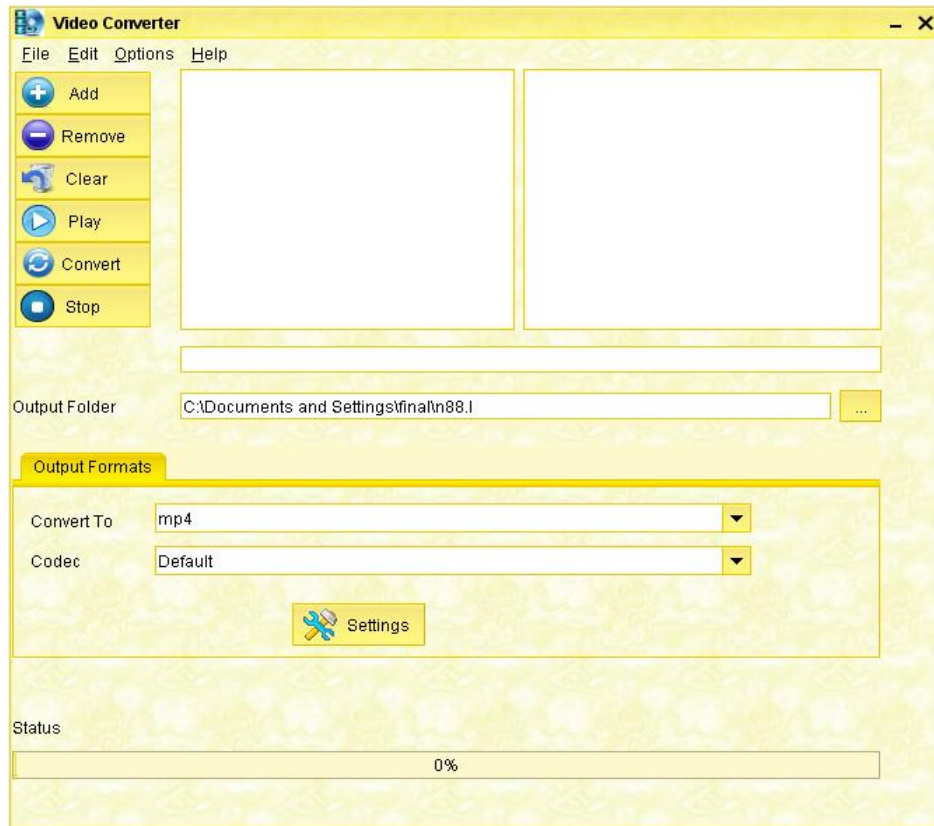## (Video Converter using ffmpeg)

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INTRODUCTION

Multimedia Transcoding is the direct digital-to-digital data conversion of one encoding to another. This is usually done in cases where a target device (or workflow) does not support the format or has limited storage capacity that mandates a reduced file size ,or to convert incompatible or obsolete data to a better-supported or modern format.

Video converter is a Multimedia Data (Audio/Video/Image) Transcoding Tool. It is a graphical user interface for command line video converter FFmpeg.It runs FFmpeg which means it will convert any video file ffmpeg will convert .It is compatible with both windows and Linux.

FFmpeg is a complete ,cross-platform solution to record ,convert and steam audio and video. It is a separate project.Complete FFMpeg documentation is available at http://www.ffmpeg.org

- ➢ **Add Button**: It is used to add the files to the input List.
- ➢ **Remove Button**:It is used to remove the selected file from input/output List.
- ➢ **Clear Button**: It is used to clear the entire input/output List.
- ➢ **Play Button**: It is used to play the selected input/output file from List.

  While Playing the following keys are available:

  Q and ESC – quit.

  F – toggles Fullscreen.

  P and SPACE – Pause.

  A – cycle audio channel.

  V – cycle video channel.

  T – cycle subtitles.

  W- Show audio waves.

  Left/Right – Seek backward/forward 10 seconds.

  Up/Down - Seek backward/forward 1 minute.

  Page up/Page down- seek backward/forward 10 minutes

  Mouse click-seek to percentage of file corresponding to fraction of width.
- ➢ **Convert Button:** It is used to convert the input files to different formats and codecs.
  - • It runs the FFmpeg on files in the List
  - • Different formats can be selected from **Convert To** option in **Output Formats** tab.
  - • Different Codecs can be selected from **Codec** option.
- ➢ **Stop Button**: It is used to stop the conversion of selected file . Conversion of next input file from List will start subsequently.

Output Folder: The default output folder is the current working directory . The user can choose any destination folder by browsing using (…) button.

Output Formats:

- **Convert To**: It is used to select the different output formats from the listed values.
- **Codec:** It is used to select the different codec from the listed values.

Settings Button: Additional options can be selected by using settings button.

- ➢ **Video:**
    - **Video Bit rate:** It is used to select different bitrates from listed values.
    - **Video Frame Rate:** It is used to select different frame rates from listed values.
    - **Resolution:** It is used to set the different resolutions for videos.
    - **Aspect Ratio:** It is used to set the aspect ratio for video.
- ➢ **Audio:**
    - **Audio Bit rate:** It is used to select different bitrates from listed values.
    - **Sample Rate:** It is used to select different frame rates from listed values.
    - **Audio Channels:** It is used to set number of audio channels to either one or two. By default it is 2.
- ➢ **Time:** It is used to split video/Audio files by specifying **Start time** and **Duration.**
- ➢ **FFmpeg:** It is used to specify any additional commands that we want to convert video.

Status: It shows the progress of video/audio which is being converted.

File Menu:

- **Add:** It is used to add the files to the List.
- **Exit:** It is used to exit from the program.

Edit Menu:

- **Presets:** It is used to open the preset editor.
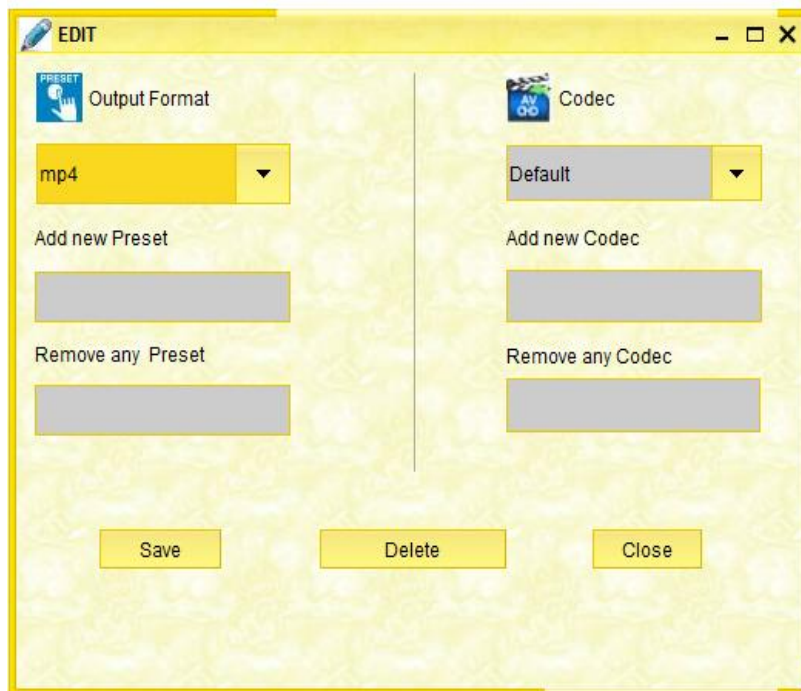- **Themes:** It is used to change the LookAndFeel of GUI.

Options Menu:

- **Additional Options:** It is used to show the additional options tab same as settings button.
- **Start Converting:** It is used to start the conversion process.
- **Stop Converting All:** It is used to stop the converting process of all the files in the List.

Help Menu:

- **Documentation:** It is used to shows the documentation of this project.
- **FFmpeg Website:** It is used to browse the FFmpeg website.
- **About:** It shows additional information .

EDIT (Format and Codec):

- ➤ **Add new preset :** A new format can be added by typing in textfield .

- ➤ **Add new Codec:** A new codec can be added by typing in textfield.

- ➤ **Remove any preset:** It is used to delete a format from the List of output formats**.**

- ➤ **Remove any Codec:** It is used to delete a codec from the List of codecs.

- ➤ **Save Button:** It is used to add the preset and/or codec in json file**.**

- ➤ **Delete Button:** It is used to delete the preset and/or codec from json file**.**

- ➤ **Close Button:** It is used to close the editor window . The changes made are reflected in **Convert to** and **Codec option** of video converter

<u>Steps to install ffmpeg in ubuntu</u> (version 11.10 and above)
1:download ffmpeg from following link-http://ffmpeg.org/releases/ffmpeg-0.7.12.tar.bz2
extract the file

2:Go to terminal:-
change the current working directory to the place where ffmpeg is installed

sudo apt-get remove ffmpeg
sudo apt-get install yasm
sudo apt-get install libmp3lame-dev
sudo apt-get install libfaac-dev
sudo apt-get install libtheora-dev
sudo apt-get install libvorbis-dev
sudo apt-get install libvpx-dev
sudo apt-get install libxvidcore-dev
sudo apt-get install libxvidcore-dev
sudo apt-get install libopencore-amrnb-dev
sudo apt-get install libopencore-amrwb-dev
sudo apt-get install liba52-dev
sudo apt-get install libx264-dev
apt-get update
apt-get install libx264-dev x264
./configure --enable-gpl --enable-version3 --enable-nonfree --enable-postproc --enable-libfaac --enable-libmp3lame --enable-libopencore-amrnb --enable-libopencore-amrwb --enable-libtheora --enable-libvorbis --enable-libvpx --enable-libx264 --enable-libxvid --enable-x11grab

make

make install

Further Reading

For more in depth information on the FFmpeg command line refer http://www.ffmpeg.org/documentation.html . It contains the entire list of options and formats the can be set using FFmpeg. Googling for FFmpeg and the format will give you some examples.

Thanks to all the users