



# Technical Recommendations to Improving Docsoft:AV Transcription Results by Modifying Archived Multimedia Files

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## Introduction:

Docsoft:AV works best when the input multimedia files have the following general rules:

1. Clear recording of the speaker or speakers, with no overlapping
2. No background noise such as music, ambient noise, etc.

Steps may be taken to follow these rules (See “Audio Recording Best Practices”), but many times, the multimedia files are already recorded and archived before the acquisition of the appliance. The steps below may help in improving archives, if certain conditions apply. For safety purposes, remember to work on a COPY of the archive, not the original.

## Programs needed:

1. FFMPEG
2. Audacity

## Voice Isolation using FFMPEG:

A human voice, usually, is within the frequency range of 300 to 3400 Hertz (See [Wikipedia page](#) for reference). The easiest way, then, is to remove all other frequencies using FFMPEG, e.g., lower frequencies like humming or vibrations, to higher frequencies like music or microphone feedback.

1. Open a Command Prompt, and change directories to the location of the FFMPEG executable, e.g., by typing “cd C:\Program Files\FFMPEG
2. Type “ffmpeg.exe -i <input> -af highpass=f=300, lowpass=f=3400 <output>”, where:
  - a. -i is the flag for specifying input file
  - b. <input> is the full path of the archived file, e.g., “C:\Users\anthony\Music\archive1.mp4”

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- c. -af is the flag for specifying specific audio filters. In this case, it is the highpass and lowpass filters, as specified in the above command line
- d. <output> is the location and name that you want for the new file that, hopefully, will contain just the voice from the archive, e.g., "C:\Users\anthony\Music\voice.mp4"

### **IF the archive has background music:**

1. Open Audacity, and import the copy of the file. You will see blue lines across the middle panel, representing the audio waves in the multimedia file.
2. On the top left part of the middle panel, beside the name of the file, click on the dropdown arrow and select "Split Stereo To Mono".
3. Listen to both tracks. If they're the same, meaning both voice and music can still be heard on both, then skip this section. If the vocals were successfully isolated into one track, then remove the Music track.
4. Click on File → Export
5. Change the name, and change the type to "WAV signed 16 bit PCM" if needed.
6. Send the new WAVE file to Docsoft:AV.

### **Noise removal using Audacity:**

1. Open Audacity and import the copy of the file. As with the above steps, you will see the track with the blue lines. Double-click on this track to select it.
2. Click Edit → Copy to copy the track.
3. Click Tracks → Add New → Stereo Track. Double-click to select it.
4. Click on Edit → Paste to paste the original track into the new stereo track.
5. Click on Effect → Vocal Remover to isolate the "noise" on the stereo track.
6. Click on Effect → Noise Removal → Get Noise Profile to get the correct settings for removing the noise settings
7. Double-click on the original track, then click on Click on Effect → Noise Removal → OK.
8. Click on File → Export
9. Change the name, and change the type to "WAV signed 16 bit PCM" if needed.
10. Send the new WAVE file to Docsoft:AV.

#### **Additional Sources:**

To add filters using FFmpeg: <http://ffmpeg.org/ffmpeg-filters.html#Filtering-Introduction>

To isolate voice using Audacity:

[http://manual.audacityteam.org/man/tutorial\\_vocal\\_removal\\_and\\_isolation.html](http://manual.audacityteam.org/man/tutorial_vocal_removal_and_isolation.html)

**Disclaimer:** The above steps are personal recommendations of the author, NOT official steps performed by Docsoft, Inc. Proceed at your own risk.

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