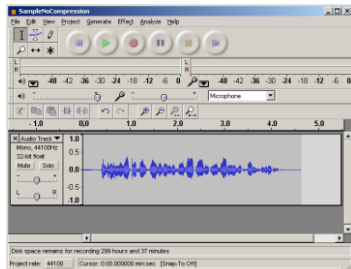


Online Media: Audio Recording with Audacity

James Falkofske



What is Audacity?

- Audacity is a free, open-source, sound recording and editing tool
- Allows multiple track recording from different sources
- Allows envelope (volume) and time-shift (move timing of sound) editing
- Built-in filters to affect sound quality and special effects

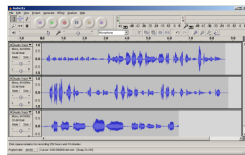
-Working with multiple sound sources

- Applications:

- Interviews
- Music recording
- Live events

- Methods

- USB Mixer and microphones
- Powered balanced microphones work best (48 volts sent to microphone to help "pre-amplify" sound)
- Multiple recordings "dubbed" together
- Musicians like to "fix it in the mix"



Download and Installation

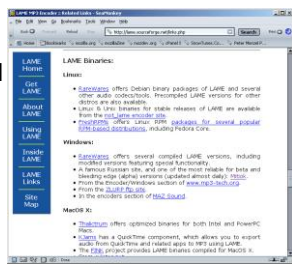
- <http://audacity.sourceforge.net/>
(download tab)

- Multi-Platform



LAME (MP3 Encoding Library)

- <http://lame.sourceforge.net/links.php>
- Scroll down to LAME Binaries
- Choose download site.



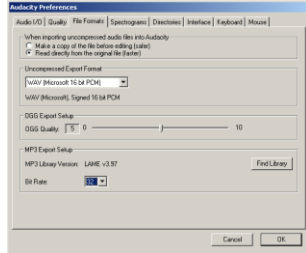
LAME Library Example: rarewares.org

- LAME non-Beta
- Download and unzip the package
- Locate (or copy) the file Lame_Enc.dll



Linking to the LAME_ENC.DLL

- EDIT > PREFERENCES > FILE FORMATS [Find Library]



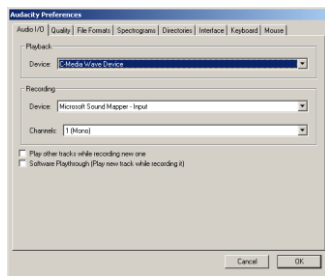
-Recording from a PC headset

- Benefits of USB Headsets
Most Windows machines have very poorly implemented Audio Cards for RECORDING. External sound card within USB headset reduces hum and noise on recording. USB headsets are portable to most devices and install automatically. Some include a built-in MUTE button on the headset
- Microphone Placement above Nose
keeps breath sounds at a minimum and provides optimum distance for low signal-to-background noise.

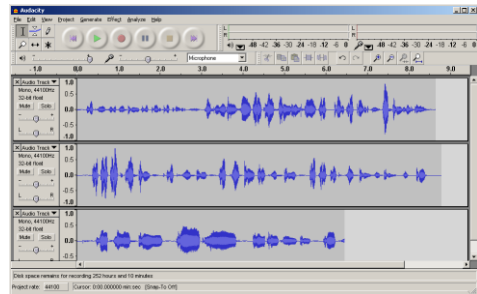


Set the Input and Output Devices

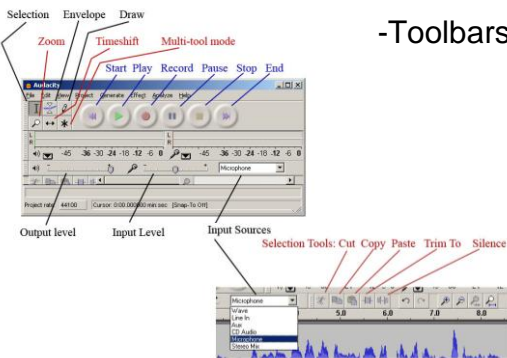
- Edit > Preferences > Audio I/O
- 1 (Mono) Channel for Narration



-The Audacity Interface



-Toolbars

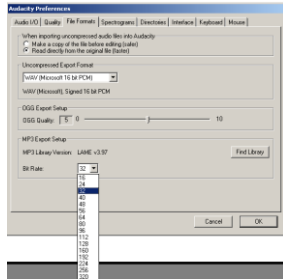


-Adding background sounds or theme music

- Record and edit narration tracks, to remove unwanted materials (ummmms, pauses, do-overs)
- Project > Import Audio (for background)
- Adjust Envelopes on background for Introduction (start loud, then decay), and End (start loud, then grow & out)

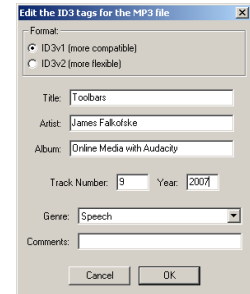
-Saving and compressing the files for online delivery

- Edit > Preferences
> File Formats
MP3 Export Setup
Bit Rate:
32 (voice only)
to 80 (music)
depending on
content type
- File >
Export as MP3



-MP3 Labeling

- Choose “More Compatible”
- Artist is You
- Title is Song
(or PPT Slide with Track Number
being Slide Number)
- Album is Presentation
- Genre has an option
for Speech
(best choice for lectures)



Raw vs. MP3 File Sizes

- Uncompressed 5-second segment:
4.2MB in 7 clips
- MP3 32 bit rate:
23kb (1/182 as large)

File Name	Size	Format
b00005.au	1,037 KB	AU audio file
b00006.au	465 KB	AU audio file
b00007.au	58 KB	AU audio file
b00008.au	730 KB	AU audio file
b00009.au	1,037 KB	AU audio file
b00010.au	8 KB	AU audio file
b00011.au	811 KB	AU audio file
b00012.au		

- Each 1MB
takes 4 min
to download
on 56kbs
dial-up
modem

File Name	Size	Format
Sample16.mp3	14 KB	MP3 audio file (mp3)
Sample24.mp3	18 KB	MP3 audio file (mp3)
Sample32.mp3	23 KB	MP3 audio file (mp3)
Sample48.mp3	32 KB	MP3 audio file (mp3)
Sample64.mp3	41 KB	MP3 audio file (mp3)
Sample96.mp3	59 KB	MP3 audio file (mp3)
Sample128.mp3	74 KB	MP3 audio file (mp3)

-Strategies for better recordings and more modular content

- Record one idea at a time
 - 1 to 4 minutes
 - One PPT slide at a time
 - Easier to replace small “chunks” of content
- Write out and practice a script
 - Be precise, concise, and accurate
 - Meets 508-accessibility transcript requirements
- Quiet room to minimize background
- Consistent level settings and microphone placement

-Strategies for Best Voice

- Talk while standing (diaphragm / airway)
- Vocal warm-up exercises (we-oh-we-oh)
- Unsweetened citrus drink to clear phlem
- Project (speak to the “cheap seats”)
- Excited!
- Smile