

FA/DATT 1939 3.0 Section A - Introduction to Interactive Digital Media - F 2017 Week 10 – Introduction to Sound Editing with Audacity

Basic Sound Size Considerations:

Factors determining how large a sound file will be:

1. length
2. number of tracks (usually mono vs. stereo, for our purposes)
3. sample rate (and bit rate)
4. sound format/compression

Sound formats used for HTML5-loaded sound:

.mp3 – takes up less memory, but mp3 format/compression is a bit lossy so quality not as exceptionally good.

.ogg – experiment and find out!

.wav – holds lots of data, so good quality, but takes up a lot of memory. The .wav format can have various kinds of compression (we don't get into dealing with compression on .wav files and do not encourage it in this course).

The A2 has a 1.5 MB limit for individual sound files.

1. Several seconds of sound take up so much less memory than a minute of sound - can you use a shorter sound and/or a looped sound instead of a long sound of two minutes?
2. Consider saving your sounds as .mp3s, which (due to the compression settings built into the format) are usually noticeably smaller than .wav files of the same length. For Audacity, you need to download an additional bit of software to enable it to actually save .mp3 sounds!

Download the Week 10 sample sounds from Moodle, use the sample sounds to try out some things in Audacity:

Try the following things in Audacity:

- Importing sound
- Opening an .aup file
- Selecting the parts of the sound you want (shift+click to extend a selection)
- Zooming in and out on a sound
- Copying and pasting sound (in the same track or into a new file/window)
- Pasting multiple tracks into an audacity window to mix different sounds
- Selecting (dragging) across multiple tracks
- Noting the length of sound, number of tracks (mono or stereo), and quality of sound/sample rate (16000 or 32000 or 441000, etc.) and possibly bit rate (16, 24, 32)
- Trying selections from the Effects menu
- Saving Audacity projects (.aup files and accompanying folders)
- After saving your Audacity project with all its individual, editable tracks (useful as a file format to use while working on and editing your sound), select across all tracks, then choose *Tracks > Mix and Render* to mix multiple tracks down to a stereo mix.
 - Do not save this mix overtop of your .aup project. *File > Export* your mix to .wav or .mp3 or .ogg
- Exporting sounds into appropriate formats for A2, like .ogg or .wav or .mp3

Basic Sound Editing using Audacity - a free cross-platform sound editor

- To create short sampled sounds (under 10 seconds, for example, or under 20), you can import an .mp3 or .m4a or other file into a new Audacity file, select the part of the sound you want, copy and paste it into another sound, downsample it (if you wish), and File > Export as WAV to get a sound to use in your A2.

1. Run Audacity.
If an Audacity project window does not open by default, choose File > New.
 2. To work with an already existing sound, choose File > Import and select an .mp3 or other some other sound (possibly in formats like .wav, .aiff, .m4a, .au, but *not* .midi).
The file should open in Audacity, but you may have to be patient if the sound is very large (more than a few MB) or long (more than a few minutes).
 3. Do not choose File > Open if you want to edit an existing sound, as Audacity may not allow it to be edited.
Use File > Import instead.
 4. At the top middle of the Audacity project window are 6 tools (in 2 rows of 3). The tool at the top left of this group is the Selection tool, which looks like a text-selection kind of cursor. Choose to use this tool.
 5. Along the top of the project window, to the left of the 6 tools mentioned above, are the sound playback (and recording) controls.
You will also notice that there is a second row of controls below the 6 tools and the controls just mentioned.
 6. You can press the green play button to start playing your sound, or, if your sound is long, you may need to zoom in on parts of the sound to find the part you want to excerpt.
-To zoom in on the sound, look at the second row of controls below the recording controls and 6 controls. Go more towards the right to find the magnifying glass. The one with the + sign inside it zooms in on the sound, and the one with the - sign inside it zooms back out. Keep clicking the magnifying glass that does what you need.
-Remember, as you zoom in, you will need to scroll back and forth along the sound to find different locations in the sound that you might want. Look at the time indications above the sound's waveform to help guide you.
 7. When you find a part of your sound that you want to test, drag the Selection tool (your mouse which looks like a text selection icon) over the entire part of the sound you want to hear. It will highlight. If the sound is in stereo, both tracks should highlight. You can then Play the selection.
 8. To keep the same selection within the sound, but add a bit or take away a bit at one end, hold down Shift while dragging at one end of the selection with your mouse.
To play the selection as a loop, hold down Shift when you press Play to play the sound.
 9. To take the selection and save it as its own sound:
 1. Edit > Copy
 2. File > New (a new Audacity window/project should open)
 3. Edit > Paste (the copied excerpt should paste into the new window)
 10. To save the sound as a WAV (which should play in Audacity and online) do this:
 1. File > Export as WAV...
 2. choose a name for the file which ends with .wav and save it onto the hard drive of your computer (it's safer to avoid saving directly to a USB drive).
 3. You should now have a sound sample you can play in HTML5.
 11. You can now quit Audacity. You do not need to save changes, assuming your .wav exported properly. If it didn't, you will have to repeat all the steps above if you quit Audacity now, and if you don't save the excerpt window in Audacity.
- (Windows in Audacity are always Audacity projects, and they normally save in Audacity project file format, --creating an .aup format file-- which is not necessarily readable by other audio programs).
12. Remember to note the sound name and artist (and year and album, if possible that you took the excerpt from -- which should also be Creative Commons Liscensed) in order to give credit on your A2's statement.html page.

From the online resources for Audacity:

A list of various kinds of help, documentation, and tutorials for Audacity:

<http://www.audacityteam.org/help/>

[Audacity 2.1.3 Manual: Contents](#)

Scroll down to see the helpful "Reference: Guide to the Project Window" diagram.

File Formats that Audacity can use:

http://manual.audacityteam.org/o/man/faq_opening_and_saving_files.html#foreign

Under [Tutorials](#) Section:

Editing an Existing File:

http://manual.audacityteam.org/o/man/tutorial_editing_an_existing_file.html

Your First Recording:

http://manual.audacityteam.org/o/man/tutorial_your_first_recording.html

These 5 Tutorials are useful, but you probably don't need 1.2 and 1.3

Other Reference that may be of particular interest:

Audacity Setup and Configuration

http://manual.audacityteam.org/o/man/audacity_setup_and_configuration.html

Playing and Recording

http://manual.audacityteam.org/o/man/playing_and_recording.html

Audio Tracks

http://manual.audacityteam.org/o/man/audio_tracks.html

The Editing an Audio File section (found on the Audacity site's [Tutorials](#) main page)