On basic sound editing with ProTools

Non-comprehensive notes on how to get up and running with the fundamentals of ProTools. Using TDM version 6.4.1 for these purposes in PT suites 3 & 4.

Online help

https://courses.utexas.edu
The 341 Blackboard site has a number of handouts for PT editing.
http://www.digidesign.com
is the place to be for support, manual downloads, quick FAQs.
http://rtf.utexas.edu/equipment/post/cmb1.html
Also look at the helpsheets online for UT RTF; RTF webpage, equipment, post, then find the suite in which you are working.

Starting a session

Open PT. Go to the File menu and create a new session. Name the session and choose 16 NOT 24 bit depth; 48kHz; last used; check enforce for Mac/PC compatibility; +12 gain.   Save the session on the local computer hard drive, but be sure to also save it to the classes folder too. Typically you would save to a firewire drive as well. PLEASE NOTE: ideally you will want to stick with the computer where you started; moving from computer to computer often introduces problems. If you do move, remember that you have to move your project session and your audio files.

Your session will open. It will be pretty blank, so you need to add some tracks for the sound to go on. Go to File, New Track. Tell it to create some number of new tracks. Make them audio tracks, not MIDI or otherwise. We're only dealing with regular old audio tracks here. Now you should see the tracks pop up. You can name them if you like, if that helps to organize.

Inputting audio through the board

First, set up the mixing board. Anything going into PT from another source (DAT, mini-DV, Nagra): up on ProTools input faders on the right side. Then also put up faders on the individual source. This is controlling the levels going into the computer. To hear anything as it comes out of PT: up on ProTools Left and Right out faders on the left side. Also up on Main faders for monitoring. This controls the levels coming out of the computer.

Then to the individual sources:

DAT
- There is a DAT player in each suite here.
- First make sure your tape is in RECORD-INHIBITED to prevent erasure, and then pop it in. Transport controls are self-explanatory.
- Under windows, go to show session setup; change to ch 1-2 input DIGITAL, not analog. You must change this back for editing.

- Remember to push faders up on DAT sources, both left and right channels.

Nagra
- 1/4" is at bottom of board.
- Get transfer kit from checkout to go from banana out to 1.4".
- One mono input from Nagra on right hand side of board.
- Choose ANALOG under session setup (see above under DAT).

Mini-DV
- The tech staff is putting in a mini-dv deck in those suites on a temporary basis so you can use the AUX inputs from XLR.
- Choose ANALOG from session startup (see above under DAT), even though it's digital audio, we are coming in from an XLR cable, not firewire native digital.
- NOTE: this method is not good practice, but we're doing this for efficiency's sake right now!! Typically you would input raw audio via firewire, edit in FCP or avid, then dump either raw audio out as an aiff data file or picture-locked audio out with handles as an omfi data file. That would preserve the digital part of the chain throughout.

Getting ready to record

In order to hear your playback, you'll need to activate the tracks to record. Choose one track and click on the REC button below the name. This switches the track from READING (playing) the track to RECORDING what's coming into it. You should be able to hear a level from your speakers now once you play your tape recorder, camera, or whatever device you're using for playback. You should also see the levels in the green LED-like column.

Make sure the levels are okay. You should have recorded tone; use this to calibrate and adjust through the various faders. Remember that you don't want levels too hot/distorted, not too low and noisy. This transferring step is yet another place to introduce noise or distortion.

Recording stereo pairs: if you have recorded onto DAT or mini-DV separate stereo tracks, where your two channels are different, you need to input them as stereo pairs: locked, connected tracks, but they maintain their separation. Make a new track (file/new track) and create 2 stereo tracks. This way your tracks remain separated in audio content yet locked together as a pair.

Hallelujah- Let's record

Now you should be ready to record. You need to bring up the transport window- go to windows/show transport, and a little control strip with play, stop, ff, rew, record, etc. should pop up (or you can use the controls at the top of the session window). Click the circle red RECORD button and click the triangle PLAY button. Now your track should start to move and create a red swath as it records sound. Play your tape player, camera, etc. and watch it draw the sound waveforms.

When you're finished, press STOP on your playback device and on the transport window. Your audio has come in as one huge segment. You'll eventually want to separate it into smaller segments and put different sounds on different tracks in order to edit more efficiently. See directions that follow.

Importing other audio sources

You can also get audio from CDs or other sound files into PT through the File menu, Import audio/track. Then it's just like any other method of importing things: choose it, add it, and see it appear in PT. Usually each file imports as a separate track. Sometimes audio files (especially from regular CDs) need to be converted to a file format that PT likes, so you'll need to use a sound application that does that, like iTunes, etc. See handouts on converting a CD to aiff and converting CD in simpletext.

You may also want to use some spot effects from the sound effects libraries. See handout on how to log on stock for that process.

An audio table of contents

On the right hand side of the session window, you'll see all the pieces of audio you've inputted into your session. You may want to name these more accurately for organizational purposes. You also should remember where to find what, as you can always retrieve the original input from this list when all else fails.

Track Properties

You already know that tracks can either RECORD or READ audio. In the same area under the track name, you can also choose to MUTE certain tracks if you don't want to hear them, or you can SOLO them, meaning hear only that track, muting everything else. You can also choose what size the track can be under the waveform arrow, but that's getting too fancy for our down and dirty usage. On to more important things…

Separating your audio on different tracks

Each different kind of sound (dialogue, music, effects) should reside on a different track. You may want to have one track per character, or one track per type of music.

After you have added tracks for each sound type you desire, you should first think about how to break down what you've inputted into these different tracks. Using the highlighting tool (third from left, with wavelength on it), highlight which part you want to break off. Then click on the hand tool and change it to SEPARATION (a hand with scissors). Now you can move that part you highlighted as a separate segment to another track. You can do this to your whole original track in order to organize it better.

Use the hand tool (without the scissors) to move sounds around after you've separated them. Select the particular segment, then grab the sound segment and move it to the new track. The slip mode is best for this task (more on slip/shuffle follows).

Playing audio

  Use the transport console to play through your tracks. The play, fast forward, stop, rewind buttons all move you through your timeline. The space bar actually works as both a play and stop button as well.

Zooming in and out on the timeline

  You may need to see more or less detail in the waveforms on your timeline. You can use the zoom tool (the magnifying glass-type button) to click on the timeline and zoom in and out. Alternately, you can click on the left and right arrow buttons in the upper left corner. These make the timeline bigger and smaller.

Selecting audio

  Essentially there are two methods of selecting audio. If you want to select the whole audio segment, not just part of it, use the hand tool. This selects the whole thing, and you can then move the entire segment around.

  Sometimes you only want to select part of a segment, for example, if you wanted to delete that part. In that case, use the highlighting (wavelength symbol) tool, which lets you highlight only a portion of the segment.

Shuffle and slip

  There are two basic modes of moving things around in PT. You select which one you want in the upper left hand corner. SHUFFLE locks segments to in-points, allowing you to move segments only to certain areas. SLIP allows you to move segments anywhere. You can see why slip is typically more useful. Use slip. And don't worry about grid and spot. They're basically un-useful too.

Showing parts of audio

  There are tools I've ignored so far: one is the parentheses-like tool (sorry I can't come up with a more clever name for it), between the highlighting tool and zoom- the one with the arrows. When you select it, you are able to show parts of a track, like extending it from the original track. For example, if you broke your original track into parts on different tracks, you could actually use this tool to show the entire original track, if you extended it out far enough.

  On the flip side, you can also use this tool to hide certain parts of a segment, too. It's one way to kind of delete parts of audio by not showing them.

Scrubber

  The last basic tool is the scrubber, the one with the speaker icon. Use this tool to drag across your audio segments and hear them play at the speed you're dragging. I'm not going to get into the pencil, because it's so rare that people use it for basic editing.

Timing

Under display, you can choose to time your sequence in beats or samples or in minutes and seconds. For our purposes, always choose minutes and seconds, so that you don't go over that time limit. You don't want to think you're using minutes and seconds and are actually using beats or samples.

Deleting audio

Want to get rid of the bad stuff? You can just not show it, by using the parentheses tool. Or you can use the highlighting tool, select the section you want to delete, and then press the delete key. Then it leaves a hole where you deleted and separates what is left into two different segments.

Setting levels

So you've moved things around, positioned everything just as you want it, but now you need to deal with the volumes of everything. You adjust levels track by track. Go to the waveform button near the track name, and click it to reveal a pop-up list. Choose VOLUME. The track will re-draw with the waveform underneath, and a level on top. This represents the volume of the track. Use the hand tool (without the scissors) to make little points on the line where you can pull down or up the levels. (Those points are called keyframes, by the way- an important concept in nonlinear editing.)

You can do manual fades with this keyframe function or you can have the computer do them…

Creating fades

Highlight the section you want to fade, and then go to Edit / Fades / Create Fades. Then you get to choose what kind of fade you want: whether you want the levels to cross at different amplitudes, represented by different patterns you can choose. Some transitions sound better with one kind of fade over the other.

Splitting stereo pairs into 2 mono

Sometimes it's important to be able to do this if you input two separate channels as a stereo pair (for example, if you recorded lav on L and boom on R), and you want to split them into two mono tracks so they can operate independently, adjust volume independently, etc.
- Click on the name of the track.
- File/split selected tracks
- Two new tracks are created, a mono L/R version of the stereo pair.
- You can now mute the stereo pair so that you still have a synch-locked version.

The Dreaded Undo

You may have noticed by now that PT does not have many levels of undo as you might be used to having in FCP or Avid. This means you should consider carefully what you're doing here, and decide pretty darn quickly if

what you just did isn't what you want. Of course, PT is a program where it's pretty easy to get something back, recreate what you did, so it's not as big a deal as it initially might seem. Remember that you can always get your original tracks/imports back from the audio list at the right-hand side of the timeline and drag them into the timeline for a fresh copy.

AudioSuite
        Under the AudioSuite menu, there are all sorts of little bells and whistles that you can put on your segments. I'm not going to describe them all, or any of them, for that matter, because if you want to experiment with what they do, then you'll figure it out easily on your own.

Other helpful shortcuts
* Nudge is m, <, >, and ?
* Toggle Mute/unmute segments- open apple M
* Control-select a segment makes it lock to its place in the timeline.

Backing up and moving your session
        It's good practive to use a data CD or DVD to back up your session file, and also back it up to the class server.
        If you have backed up or are moving your session from a CD or the server backup, you need to be sure to copy your session onto the desktop of the computer instead of working with the project directly from the disk or server. Accessing it from anything other than the desktop makes the project more unstable and open to problems. Copy the project into a folder on the computer you're using and open it from the local computer.

Outputting your session
        Once you're happy with your audio magnum opus, you'll want to get it out of that computer and onto something so that the whole world can listen to it and share your brilliance. This is where File, Bounce to disk comes in.
* Save your session before you bounce to disk.
* Bounce Source: A 1-2 Stereo.
* File type: aiff.
* Format: Mono if you want it all mixed together (unlikely since you chose what goes where); Stereo interleaved if you want certain tracks assigned L and R.
* Resolution: 16
* Sample rate: 44.1 (audio cds are 44.1)
* Convert during Bounce.
* This takes real time!!

        Make sure you're saving the bounced session to the desktop or internal HD of the computer- not directly to CD or server. After it creates the bounced file, then you bring it into another application to create an audio CD.
        You can then burn this file to a CD using whatever application you like- Toast, iTunes, etc- and then the world can celebrate you as an audio genius. Keep in mind that sound files are relatively small (compared to video/image

files), so you can usually easily email them to yourself or someone else in order to transport them.

If you are using Toast to burn your CD:

- open Toast and choose AUDIO. (If you choose data then you are just making a data CD and it is not playable in stereos, etc.)
- Drag your .aiff file into the area you see in Toast. You should see the icon of your file, its length, etc. in the window.
- Press the big record button.
- If you haven't already inserted a CD, then it will ask you to do so now.
- The next prompt will ask you to choose the writing speed. 1X is the safest way to go; your project is only a few minutes long so it shouldn't take much time.
- Write the disc (not the session).
- Wait for the CD to write; it will then tell you that the disc is ready.

Alternately, you can use iTunes to burn the CD as well.

- Click >File>New Playlist or click "apple N"
- Name your playlist as the CD name you choose; this is what your CD will be called.
- Check the Preferences go to >iTunes>Preferences>click CD burning tab and make sure the settings are set to Audio CD, not data CD. Maximum possible speed is fine, unless you encounter problems; then choose something slower, like 4x.
- Now drag your bounced track into the playlist area and choose burn CD. Insert your blank CD and choose burn CD again

Whichever way you get there, listen to your burned CD on a regular stereo so you can ensure that you did it correctly and it sounds good.