Chapter 7: Sound Editing

Digital Audio Production [IT3038PA]
Nitec in Digital Audio & Video Production
Learning Objectives

By the end of the chapter, students should be able to:

- Describe the various audio editing techniques.
- Demonstrate the various editing techniques to enhance the sound quality of a soundtrack.
Today’s content:

Today we will be talking about three topics:

- 7.1. Editing Tools in the DAW
- 7.2. Edit Modes in the DAW
- 7.3. Cross-fades
What tools in *Pro Tools* can you guys remember?
7.1. Editing Tools in the DAW

In Pro Tools, seven tools that we will learn about:

- Zoomer Tool
- Trim Tool
- Selector Tool
- Grabber Tool
- Smart Tool
- Scrubber Tool
- Pencil Tool
7.1.1. Zoomer Tool

- Used to **zoom in and out** around a particular area within a track.

- Offers two modes:

  - **Normal Zoom mode**: the Zoomer tool remains selected after zooming.

  - **Single Zoom mode**: the previously selected Edit tool is automatically reselected after zooming.
7.1.2. Trim Tool

- With the Trim tool, you can quickly shorten or expand a region.
  - This is a *nondestructive* tool and does not actually modify the original audio or MIDI data (when working on regions).

- To return to the length of the original region, drag it from the Region List, or resize the edited region with the Trim tool to its original length.
A convenient tool for **matching** an audio region **to the length** of another region, a tempo grid, a video scene or to practically any other reference point you want.
7.1.3. Selector Tool

The Selector Tool is used to:

- place the edit cursor in a track or Timebase ruler
- make Timeline selections
- edit selections on tracks
7.1.4. Grabber Tool

Use the Grabber tool to **select**, **move**, **separate** and **arrange** clips on tracks.

**→ Time Grabber**
Selects an **entire** region on a track with a single click.

**→ Separation Grabber**
*Cuts and pastes* an Edit selection from one location to another by clicking and dragging.

**→ Object Grabber**
Lets you select **multiple**, noncontiguous regions.
7.1.5. Smart Tool

- With the Smart Tool, you can instantly access the **Selector**, **Grabber** and **Trim** tools.

- You can also perform **fades** and **crossfades**.

- *The position of the cursor in relation to a region, note or automation playlist determines how the Smart Tool functions.*
The Scrubber tool lets you scrub up to two tracks of audio in Edit Window.

*Scrubbing is a technique that originated in tape editing.*

By scrubbing back and forth in Pro Tools, you can listen to the audio.
7.1.7. Pencil Tool

The Pencil tool lets you draw:

- audio waveforms (at the sample level)
- tempo changes
- MIDI data
- automation

For example, you can draw over a waveform to repair a ‘pop’ sound.
What edit modes in *Pro Tools* can you guys remember?
7.2. Edit modes in the DAW

There are four main edit modes we were introduced to in Chapter 4:

- Shuffle
- Spot
- Slip
- Grid
7.2.1. Shuffle Mode

- You can move, trim, cut or paste clips freely within a track or to other tracks, but their movement is constrained by other regions.
  - automatically snap to each other
  - can “shuffle” their order
  - cannot separate them from each other
  - cannot make them overlap
  - Adding a clip or change a clip’s start or end point automatically moves subsequent regions as necessary
7.2.2. Spot Mode

- Used to place clips at **specific locations**.

- In Spot Mode, you can:
  - Specify a frame location (or based on other time formats)
  - Capture an incoming Time Code address
  - Use a clip’s time stamps as reference points for spotting

- Useful when performing post production tasks with video frame locations.

- **When Spot Mode is enabled, Pro Tools asks you to specify a destination location when a clip is dragged onto a track.**
7.2.3. Slip Mode

- Clips can be moved freely within a track or to other tracks.

- Can place a region so there is space between it and other regions in a track.

- Can overlap or completely cover another clip.

- Use when you want the Trim, Selector, Grabber and Pencil tools to work without any restrictions to placement in time.
7.2.4. Grid Modes

- Clips and MIDI notes that are moved, trimmed or inserted “snap” to the currently selected Grid value or to precise increments on a user-definable time grid.

7.2.4.1. Absolute Grid

In this mode, moving any clip snaps the clip start to Grid boundaries. If a clip’s start point falls between beats and the Grid is set to ¼ notes, dragging the clip will snap its start time to the nearest ¼ note (the current absolute Grid value).

7.2.4.2. Relative Grid

In this mode, clips can be moved by Grid units. If a clip’s start point falls between beats and the Grid is set to ¼ notes, dragging the clip will be constrained to ¼ notes, preserving the clip relative position to the nearest beat.
7.3. Cross-fades

7.3.1. What are cross-fades?

- Cross-fading is the process of fading between two clips of audio to prevent pops, clicks or sudden changes in sound.

- Cross-fades have many applications, from smoothing transitions between regions to creating special audio effects.
7.3.2. How to create a cross-fade?

- Use the selector tool to select across the end point of the first clip and the start point of the second.
- The Length of the selections determines the length of the cross-fade.

→ Pro Tools Fade & Cross-fade Shortcut:
7.3.3. Different Cross-fades

■ 7.3.3.1. Standard Cross-fade
  ■ creates a cross-fade on both sides of the splice point
  ■ affects the volume of region 1 and region 2.

■ 7.3.3.2. Pre Cross-fade
  ■ creates a cross-fade before the splice point.
  ■ maintain the volume of the very beginning of region 2

■ 7.3.3.3. Post Cross-fade
  ■ creates a cross-fade after the splice point.
  ■ maintain the amplitude of region 1 until its very end.
7.3.4. Cross-fade Curve Combinations

- **7.3.4.1. Linear Cross-fade**
  - A good general purpose cross-fade with a smooth, even transition between clip 1 and clip 2.

- **7.3.4.2. Equal Power Cross-fade**
  - A good general purpose cross-fade useful in cases where a linear cross-fade seems to create a noticeable drop in volume across the splice point.

- **7.3.4.3. Overlap Fade**
  - This combination of curves keeps both clips at full amplitude throughout the cross-fade: clip 2 “jumps in” at the beginning and clip 1 “jumps out” at the end.