

**Topic: Digitizing in ArcGIS**  
**Objective: Tips & Tricks for Digitizing**

**Introduction:** ArcGIS 8.x and 9.x have vastly improved digitizing capabilities vs ArcView 3.3. This document describes the common digitizing tools and explains where to find them and how to use them.

**Toolbars:** There are two toolbars useful for digitizing in ArcMap, the Editor toolbar and the Advanced Editor toolbar. Most of the basic tools are in the Editor toolbar, so that is all that is covered here. Read the help documentation for information on the Advanced Toolbar.

To add a toolbar. Go to **View → Toolbars** and check the “Editor” toolbar

**General Sequence:** In most digitizing applications, you will:

- 1) Add the layer to digitize into to ArcMap
- 2) Start editing on the layer
- 3) Set the snapping tolerance and other options
- 4) Create or modify features
- 5) Save your edits
- 6) Exit from the editing sessions

2) *Start editing*

To start editing, click on the “**Editor Menu**” dropdown list and select “**Start Editing**”

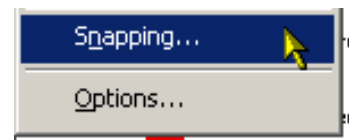


If data in the data frame come from different directories, you will be given the choice of which directory to have as the “workspace.” If you receive a warning message that the data are in different coordinate systems, select “OK” – this is usually not a problem.

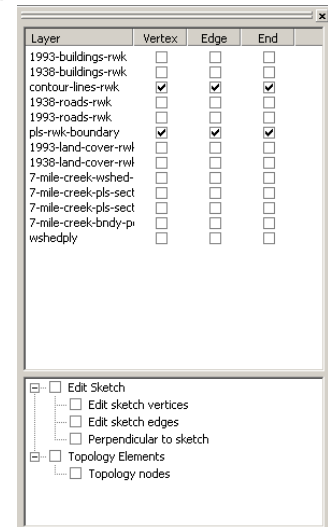
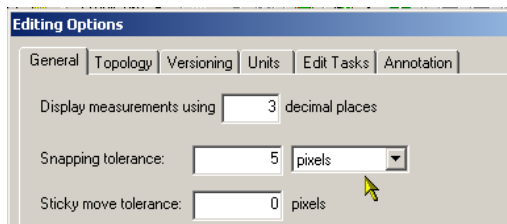
3) *Set the snapping tolerance and other options*

For the editing session, you can set the snapping layers as well as the snapping tolerance. Both are found in the Editor dropdown list.

The “**Snapping**” Option lets you select which layer to snap to. A window appears with all of the vector layers open in the data frame. Select what layers, and what type of features (Vertex, edge, node) you want to snap to. In most applications, check all three. When you are done, you can close the window.



The “**Options**” Editing Options list shows many additional settings. The most common of these is the **Snapping Tolerance**, which is defined as the distance within which all new nodes or vertices will be snapped.



These settings only need to be set once for the session. However, if you add new data layers, you might want to change the snapping settings.

4) Create or modify features

There are many options for editing on the toolbar:

Use the edit tool to select features or modify individual vertices

The Target Layer is the layer you edit into. Be careful that this is set correctly!

To edit the attributes of individual features, select them then type in the values in the attribute window

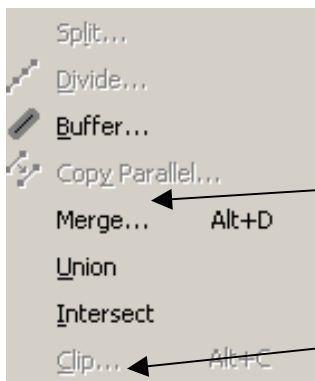
This drop down list shows all of the selection options. The **sketch tool** (upper left) is used to create new nodes & vertices. The **trace tool** (lower right) is useful for shared boundaries along polygons. The other tools are very specialized.

This drop down list shows all of the editing options. The most common are **Create New Feature** and **Modify Existing Feature**

To cut a line segment in half or draw a line to split a polygon, use the "split too"

Autocomplete is a 3<sup>rd</sup> widely used tool. Once it is selected, you can simply click anywhere inside an existing polygon, then click any desired vertices outside of that polygon, and finally, double-click inside any existing polygon. The polygon will be generated to snap all edge vertices inside the new area.

Other useful tools are found in the **Editor Dropdown list**



This is one option among many to create buffers.

If you select two neighboring features (polygons or lines), you can easily merge them with the **Merge Tool**.

If you want to cut a hole in the middle of a polygon, draw a second polygon where you want the hole, then use the **Clip Tool** to clip the 2<sup>nd</sup> polygon out of the first. Finally, delete the new polygon, and you have a hole.

Four other random tips:

- 1) To copy a feature from one data layer to another, select the feature in the first layer, go to the Edit menu → Copy, select the new data layer as the Target Layer on the Editor Toolbar, then go to the Edit menu → Paste.
- 2) To add a new field to or delete an existing field in the attribute table, you cannot be in an editing session (you have to stop editing first).
- 3) Sometimes it is easier to first digitize a super polygon, and then break it down using the clip tool.
- 4) To make a layer transparent so you can see what is underneath it, go to the layer properties (either double click the layer name or right click on the layer name → Properties). Select the "Display" tab, and set the transparency to 50%.