Editing Functionality

- Create and edit topologically correct maps
  - Create new features
  - Combine and split features
  - Edit shared geometry
  - Add and delete vertices
  - Snap to other features
Editing Functionality

- Attribute aware editing
- Error recovery
- Digitizer support
Point Shapefiles

- **Create point features**
  - Point tool
Line Shapefiles

- **Create line features**
  - Line tool
  - Line split tool
Line Shapefiles

- **Merging lines**
  - **Union Features**

![Diagram showing the merging of two line segments to create a single part shape and two multipart shapes.](image-url)
Line Shapefiles

- Reshape features with vertex editing
  - Add, Delete and Move vertices
  - ArcView can discover shared geometry
Line Vertex Editing

- Reshape one feature
- Reshape a segment common to two lines
- Move a vertex common to a number of lines
Polygon Shapefiles

- Create Polygon features
  - Polygon tool
  - Circle tool
  - Rectangle tool
Polygon Shapefiles

- Autocomplete tool
  - No need to double digitize common boundaries
Polygon Shapefiles

- Split features
  - Polygon Split tool
Polygon Shapefiles

- Merging polygons
  - Union features
Polygon Shapefiles

- Creating doughnut polygons
  - Combine features
Polygon Shapefiles

- Removing area of overlap
  - Subtract features
Polygon Shapefiles

- Obtaining intersection
  - Intersect features
Polygon Vertex Editing

- Reshape one feature

- Reshape common boundary
Polygon Vertex Editing

- Edit a vertex common to more than one polygon
Shape Properties Dialog

- Dialog that allows to view and edit vertices of a feature
  - Add or move a vertex by typing in coordinates
  - Delete a group of vertices
DEMO...
Snapping

- General snapping
  - Feature-to-feature
  - Applied as soon as the new feature has been added
Snapping

- Interactive Snapping
  - Applied on a per point basis while digitizing
  - More control over how features get snapped
Snapping

- Interactive snapping rules available on popup menu
  - Snap to Vertex
  - Snap to Boundary
  - Snap to Intersection
  - Snap to Endpoint
Snapping

- **Snap tolerance cursor**
  - Circle around cursor represents the snap tolerance
  - Can be turned on/off
Snapping

• Snap to another theme in the View
  - Interactive snapping only
  - Turn snapping on for the other theme and set a snap tolerance
  - Make the other theme active
DEMO...
Attribute Aware Editing

- Single fields
  - Union Update Rules
    - Blank
    - Copy
    - Add
    - Proportion
    - Average
    - Shape Area
    - Shape Perimeter
    - Shape Length
Attribute Aware Editing

- Single fields
  - Split Update Rules
    - Blank
    - Copy
    - Proportion
    - Shape Area
    - Shape Perimeter
    - Shape Length
Attribute Aware Editing

- Range Type Fields
  - Address
  - Range
Recovering From Errors

- Multilevel Undo / Redo
- Delete Last Point while digitizing
- Save or discard edits
- Save Edits As
Digitizer Support

- Separate Extension (Windows only)
- Uses Wintab compliant digitizer drivers
  - Supplied by hardware vendors
  - Must be installed and configured prior to digitizing process
  - Always install latest drivers
Digitizer Support

- Configuring buttons on digitizer puck
  - Left mouse click action
  - Left double click action
  - Middle double click action (optional)
  - Right mouse click action (optional)
Digitizer Support

• Load the Digitizer extension
• Enter data from paper maps
  – Preparing view to be digitized into
    • Set a map projection (same as paper map)
      – Coordinates will be converted to DD
      – Can display results in any projection
Digitizer Support

• Enter data from paper maps (cont’d)
  – Register a paper map
    • Control points (Tics)
      – manually
      – tic file
    • RMS value
  – Add and edit geographic features the same way as you would with the mouse
Digitizer Support

- **Digitizing tablet modes**
  - Absolute (digitizing)
    - Puck movement reflected on screen
    - Screen cursor locked to display area
    - No access to ArcView’s user interface controls
  - Relative (mouse)
    - Puck behaves like a mouse
    - Screen cursor position independent from tablet surface
    - ArcView’s interface controls available

- Can be toggled (F2)
Digitizer Support

• Data collection
  – Point mode
    • Click for each vertex in the feature
  – Stream mode
    • Click for the first vertex and then trace the rest of the feature
    • Stream mode tolerance
      – Specify at what interval vertices are collected
Digitizer Support

- **Accessing popup menu choices**
  - Assign popup menu choices to puck
    - WinTab manager
    - Right mouse click button previously configured
    - Temporarily maps popup menu choices to buttons sequentially from 0 or 1
  - Be aware of customized popup menus