

GIS Lab #2: ArcMap Basics

Objectives:

- Add different datasets as layers to data frames
- Alter legends for layers for changing the way layers are displayed

Overview

Adding layers to map displays

1. Start ArcMap
2. Save the Map Document
3. Add feature layers to the data frame (**forst/pls_corner point , boundary, Roads, Streams**)
4. Delete feature layers from the data frame (Add **soils** right-click > **Remove**) try **CTRL-Z** for **undo**
5. Open a layer attribute table (**Right-click** the layer name > **Open Attribute Table**)
6. Rename the data frame (right-click the data frame name> **Properties> General** tab, alter the control for **Name**)
7. Add an image layer to the data frame (**forest\ortho_91.bil** and the **ortho_96.bil**)
8. Add a CAD layer to a data frame (**archive\e-10a.dxf\polyline**), where is the CAD drawing?? It is **absolutely essential** that you know the projection and coordinate system parameters for any and all data you use in a GIS.
9. Add an event layer to a data frame (add **stand_label.txt**, right-click > **Open** the table should have X and Y fields.(right-click > **Display XY Data**).
10. Save the map document

Legend Editing

1. Open a map document
2. Change the symbol color and legend type
 1. Open the **stands** layer properties, and select the **Symbology** tab.
 2. Select **Show: Categories > Unique values**.
 3. For the **Value Field** select **UNIT_NAME** (this is the unique name for each forest stand).
 4. Click **Add All Values** to populate the dialog.
 5. Select a different **Color Scheme** if you like.
 6. Click **OK**.
3. Classify values using natural breaks
 1. Open the Layer Properties to the **Symbology** tab.
 2. **Show: Quantities > Graduated colors**.
 3. **Fields > Value: AGE_2003**.

4. Alter the **Color Ramp** to select a green monochromatic color ramp.
5. Click **OK**.
4. Change the classification type, the number of classes, and labels
 1. Open the layer properties.
 2. For **Classification > Classes**: select **3**. The ranges will be automatically set by the Jenks algorithm. In order to change the class breaks, enter the values for the upper bound for each class.
 3. For the first class, enter **60**.
 4. For the second class, enter **100**.
 5. The third class will automatically obtain its highest value from the data source.
 6. Alter the Labels as **young, mature, and old**.
5. Create a dot density map
 1. Open the layer properties.
 2. Select **Quantities > Dot density**.
 3. In Field Selection double-click **STANDS#**.
 4. Drag the Dot Value slider to about 30. This means a single dot will represent a value of 30 stands. more stands# = more dots.
 5. Click **OK**.
6. Display values with chart symbols
 1. Open the layer properties
 2. Show: **Charts > bar/column**. Select **stands# and AGE_ 2003**
 3. The colors are set at random by the current color scheme.
7. Use graduated symbols to display points
 1. Open the layer properties for the layer **Pls_corner**
 2. **Show: Quantities > Graduated symbols**.
 3. **Select Max_PDOP for Fields > Value**.
8. Adding and deleting classes
 1. To add classes, simply specify a different number of classes in the classification scheme. To delete a class, right-click the class in the Layer Properties > Symbology dialog and select Remove Class(es).
9. Sorting values and labels
 1. Right click on any class and choose **reverse sorting**
10. Flipping symbols
 1. Right click on any class and choose **flip symbols**
11. Defining theme subsets
 1. **Layer Properties > Definition Query > Query Builder**
12. Setting scale thresholds
 1. **Layer Properties > General > check Don't show layer when zoomed > set the minimum and maximum scales**
13. Labeling theme features
 1. Dynamic Labeling: In the Table of Contents, right-click the layer and click "Label Features"
 2. Interactive Labeling:
 1. Access the "Label" button in the Draw toolbar.

2. To access the Label button, click the black triangle on the Text button, and click on the Label icon
 3. Put the pointer over a feature, and click
14. Change point marker
 1. In the Table of Contents, click the point symbol > choose a symbol
15. Scaling symbols
 1. Open data frame properties
 2. **General > reference scale**
16. Rotating symbols
 1. If a field exists within a point layer's attribute table describing the angle of the feature, this can be used to rotate each marker by that value.
17. Save the map document