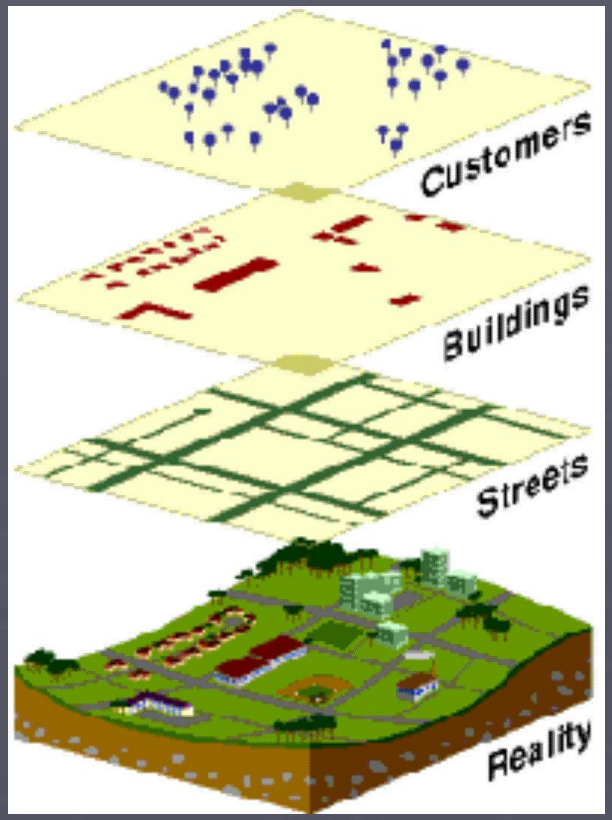
Understanding GIS Layers

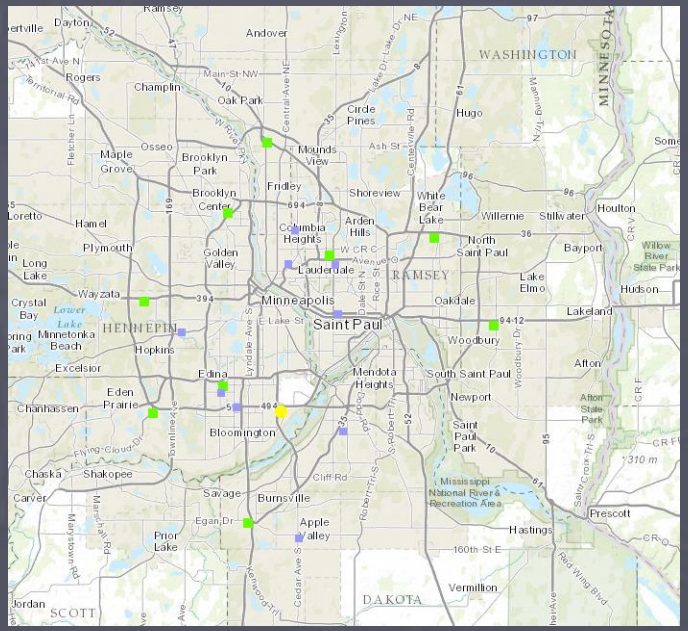
Layers

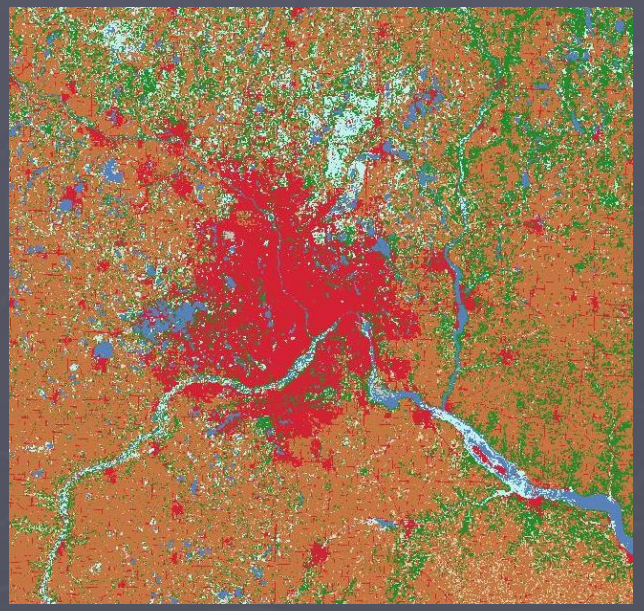
- Core use of GIS
  - Takes real world data and displays it as either vector or raster representations
  - Ways of representing real world situations
- Used to find relationships
  - Layers laid on top of each other to find patterns and relationships



Vector and Raster Layers

- Vector Layers use lines, dots, and polygons to represent geographic data
- Raster data uses series of colors on gridded squares to represent data





Geospatial Relationships

- Looking at how data and information is connected and related to each other
  - How patterns exist across time and space

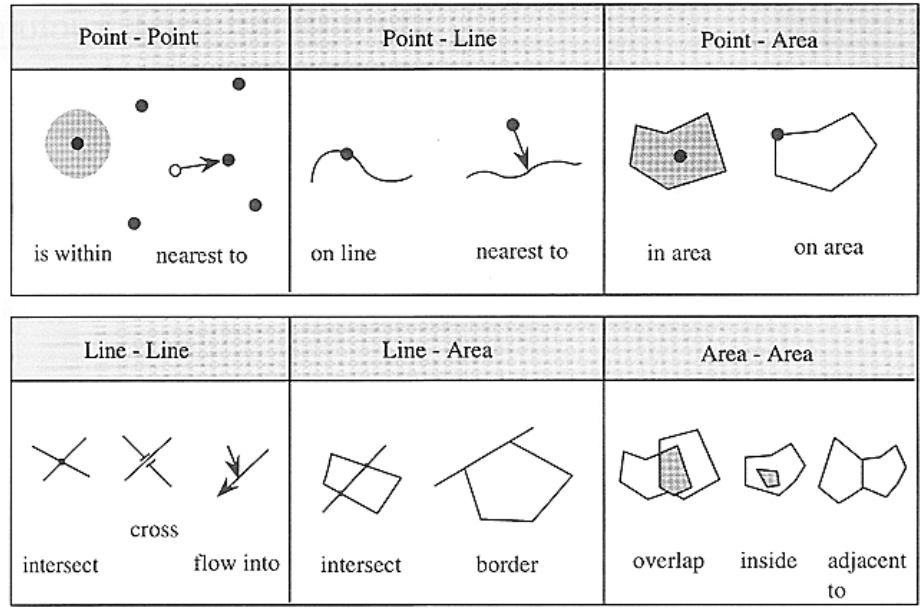


Figure 2.4 Topological Relationships Between Spatial Objects

Layer Formats

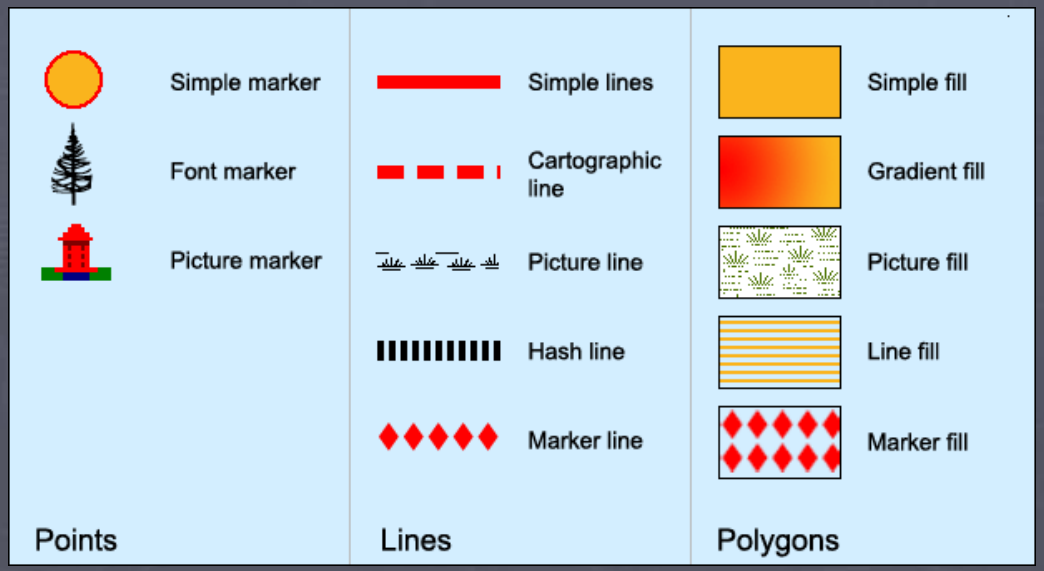
- Layers are entered in as data and uploaded into GIS programs
  - Shapefile
    - Zipped format with many files
  - Comma-Separated value file
    - Can be made with excel
  - GPS Exchange
    - Uses GPS coordinates to plot routes, waypoints, and tracks

Rules of GIS Layers

- Pre-plan and make sure you know what you want your map to show
- Don’t make it too “busy”
- Choose a good basemap that will work well with your data

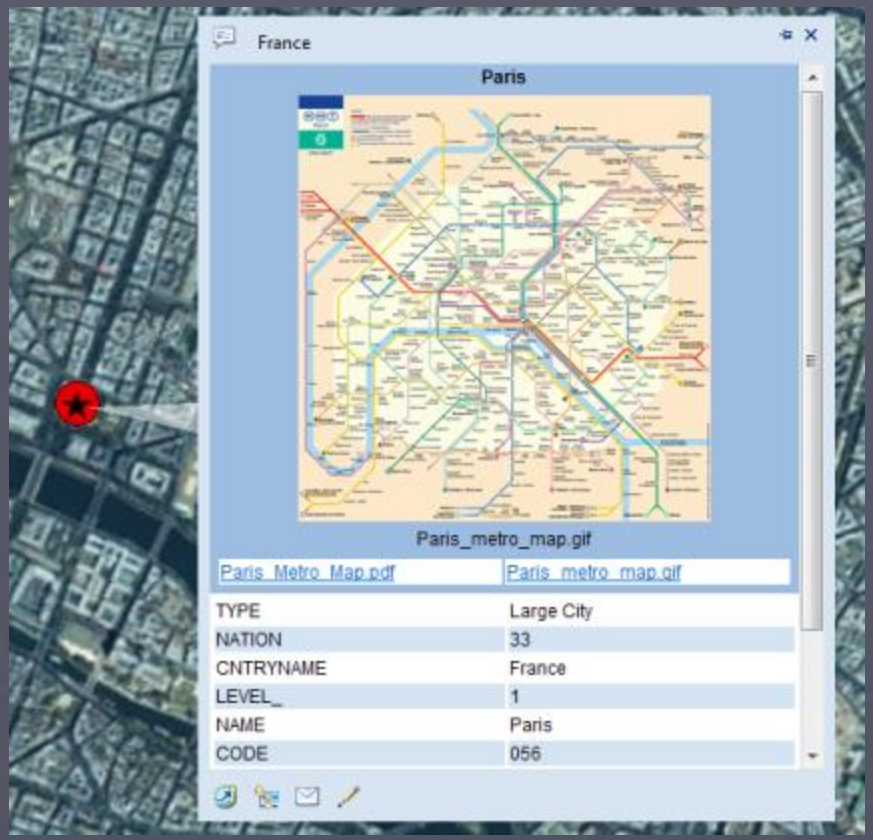
Rules of Symbology

- Symbology uses size, shape, or color to display information
  - Be careful to make sure symbology correctly and easily shows your data



Pop-Ups

- Data can be formatted to display pop-ups when clicked on
  - Can include pictures, links, statistics, etc…
  - Can be turned off if wanted



Sources