

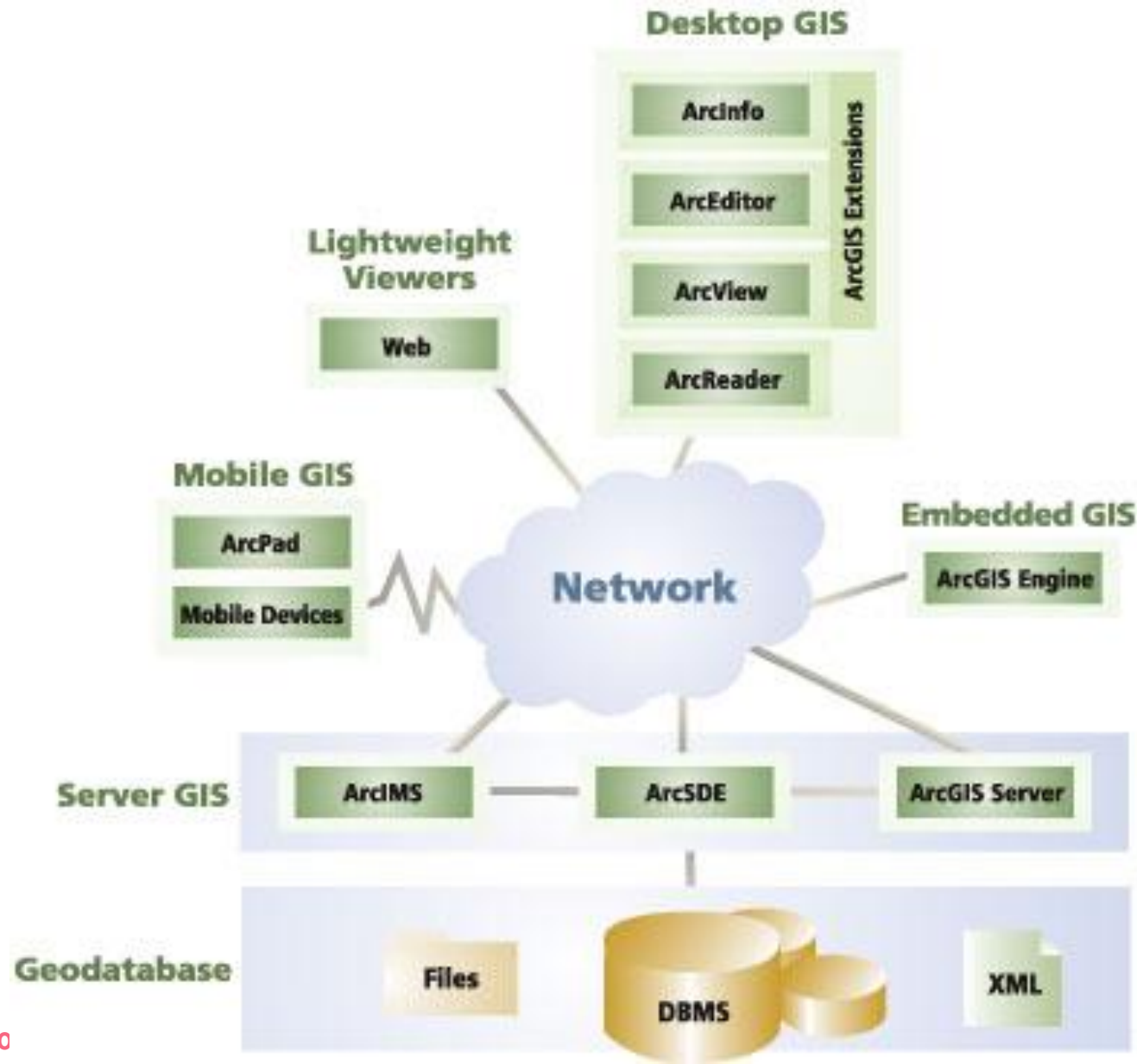
INTRODUCTION TO ARCGIS

Version 10.*

topics of the week

- ❑ **Overview of ArcGIS**
- ❑ **Using ArcCatalog**

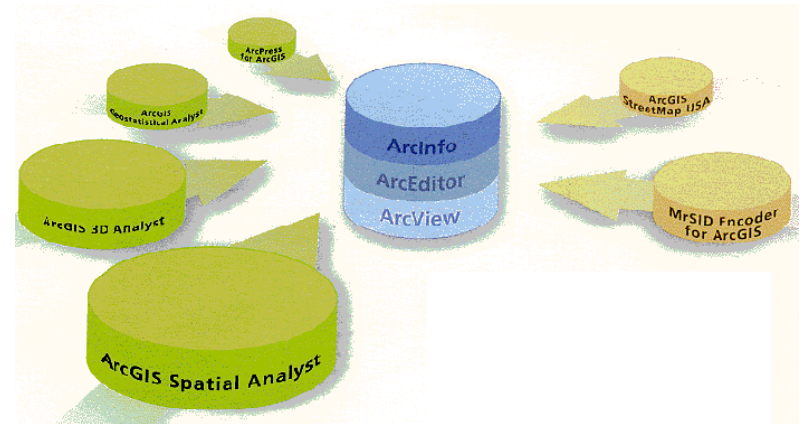
Overview of ArcGIS



Desktop ArcGIS Overview

□ Scalable desktop applications

- ArcView
- ArcEditor
- ArcInfo
- ArcGIS extensions



- All support data creation, management, analysis, storage
- All can work with the same data formats
- All share a common interface / same look and feel
- The higher the functionality, the higher the buying price

Desktop ArcGIS Functionality

ArcView

- ArcMap
- ArcCatalog
- ArcToolbox

ArcEditor = ArcView +

- Editing, coverage and ArcSDE Geodatabase
- Create and edit features with behavior
 - Geometric networks
 - Feature linked annotation
 - Subtypes
 - Relationship classes

ArcInfo = ArcEditor +

- Advanced ArcToolbox
- Advanced Geoprocessing
- Workstation ArcInfo:

Arc, ArcEdit, ArcPlot, Grid, TIN

Use ArcView if you need to...

- ❑ **Create, edit personal geodatabases and shapefiles**
- ❑ **Create high quality maps, graphs, and reports**
- ❑ **Perform advanced geographic query and analysis**
- ❑ **Perform network tracing analysis**
- ❑ **Create, apply attribute domains**
- ❑ **Create, edit simple annotation**
- ❑ **Geocode addresses**

Use ArcEditor if you need to ...

- ❑ **Create, edit and manage coverages and ArcSDE geodatabases**
- ❑ **Create, edit subtypes and relationship classes**
- ❑ **Build the geodatabase from CASE diagrams**
- ❑ **Create, edit geometric networks**
- ❑ **Create and edit feature-linked annotation**
- ❑ **Create and edit custom features**

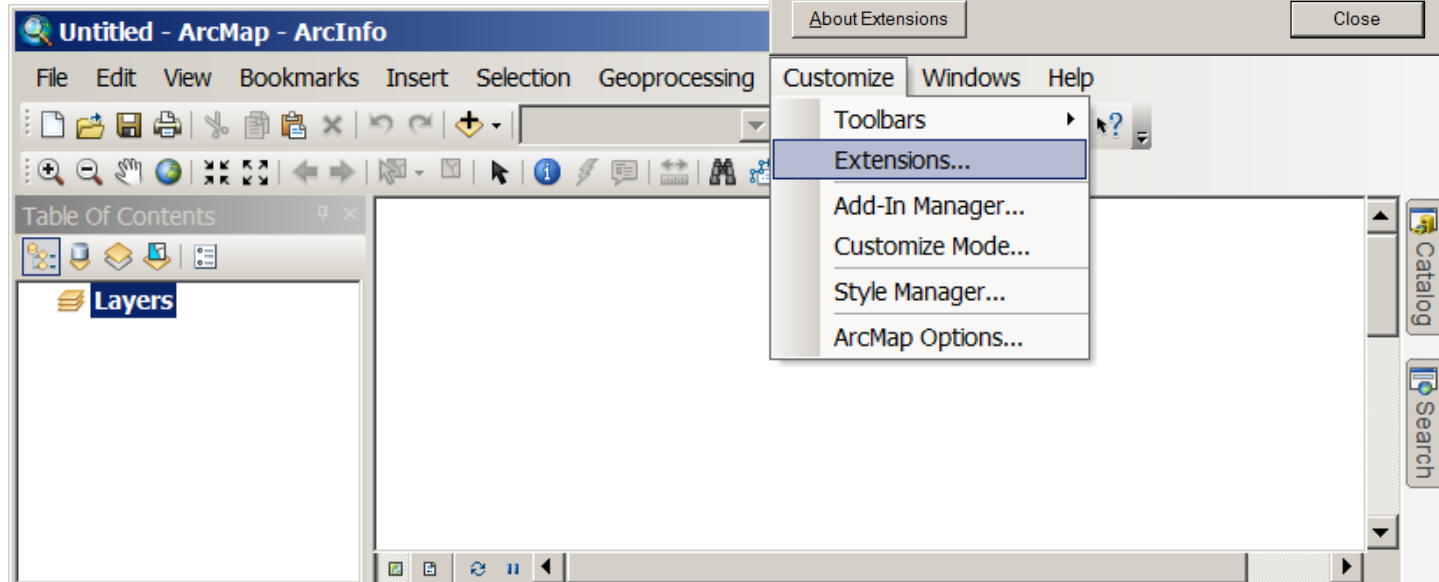
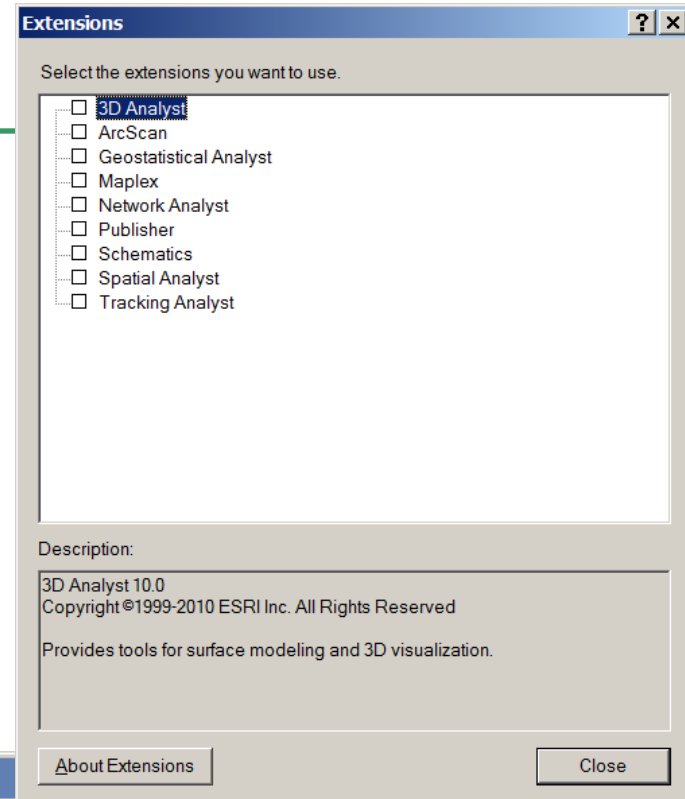
Use ArcInfo if you need to...

- ❑ **Create, edit, and analyze coverages using ArcInfo Workstation**
- ❑ **Run AML programs from ArcToolbox**
- ❑ **Convert from multiple GIS data formats into coverage format**
- ❑ **Use Geoprocessing Server to perform ArcToolbox operations on a designated computer**

ArcGIS extensions

Applications that plug into existing

- ❑ Spatial Analyst
- ❑ 3D Analyst
- ❑ Geostatistical Analyst
- ❑ Others
- ❑ Create your own

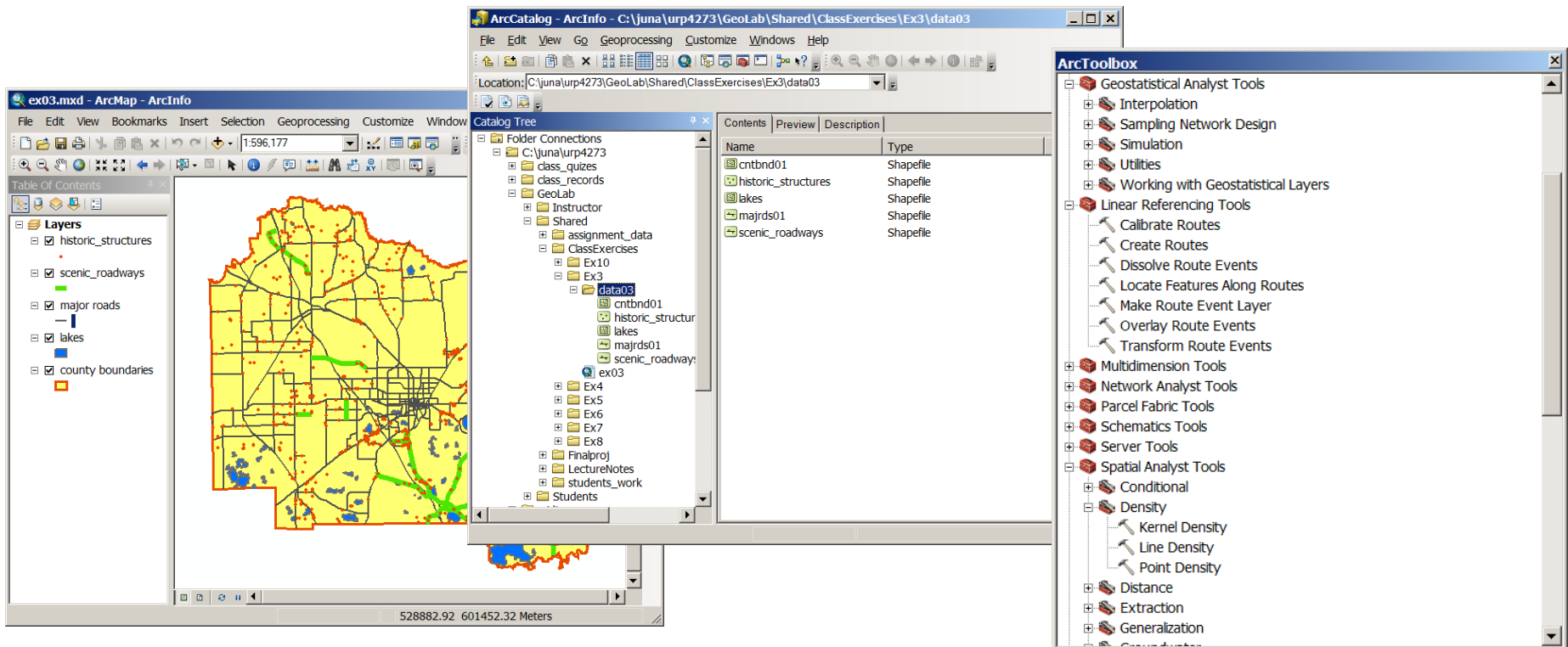


Manipulates the extensions

186.813 987.179 Unknown Units

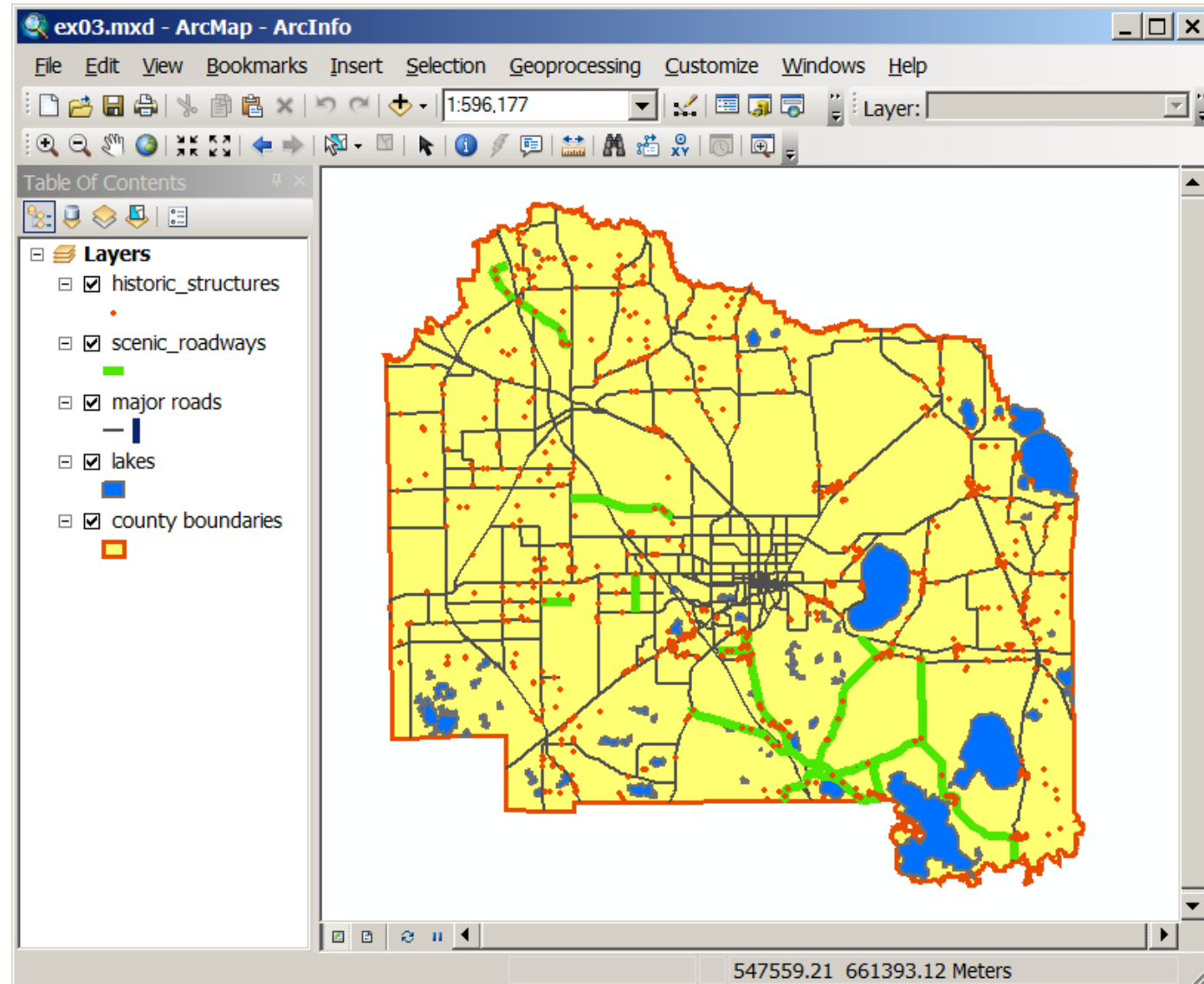
Integration of the three applications

- ❑ All share common applications
- ❑ ArcCatalog, ArcMap, ArcToolbox
- ❑ Each is single or multiuser (what's the difference?)



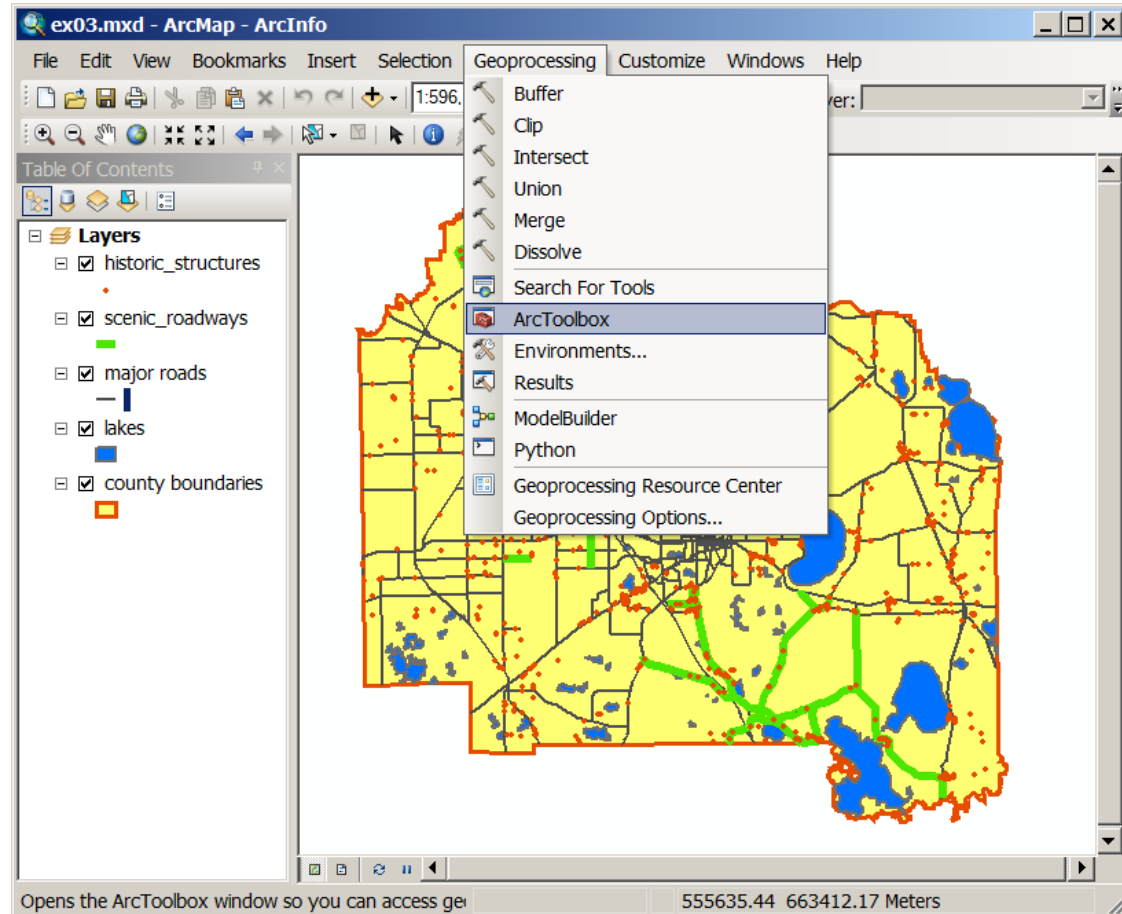
ArcMap

- ❑ Visualize
- ❑ Create
- ❑ Solve
- ❑ Present
- ❑ Develop
- ❑ Edit
- ❑ Query
- ❑ Analyze
- ❑ Chart
- ❑ Report



ArcToolbox

- Geoprocessing
- Data management
- Analysis
- Conversion
- Two versions of ArcToolbox
 - For ArcInfo ~150 tools
 - For ArcView ~20 tools

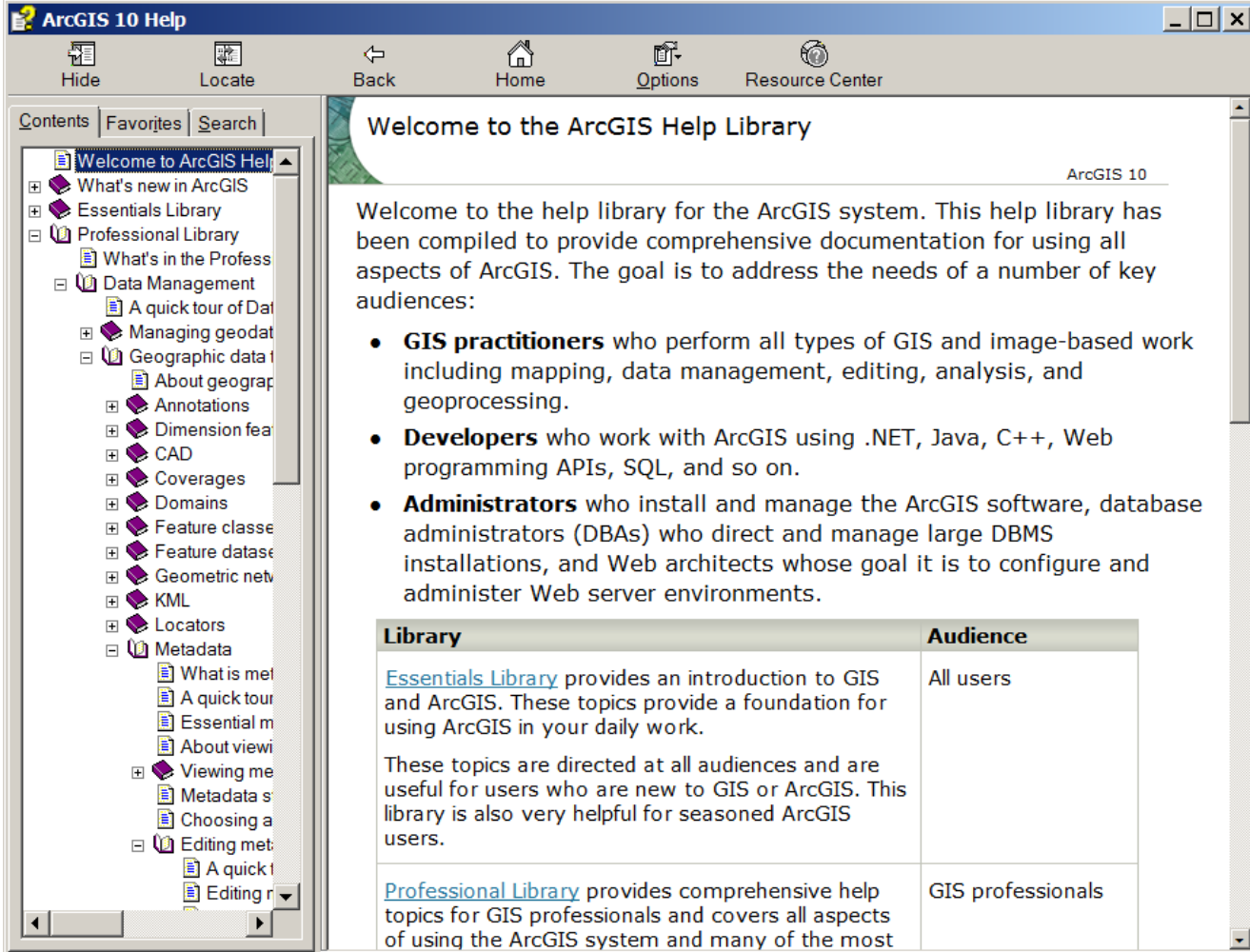


Opens the ArcToolbox window so you can access ge

555635.44 663412.17 Meters

When you need help

- ❑ Contents tab
- ❑ Index tab
- ❑ Search tab
- ❑ Other
 - ❑ What's this?
 - ❑ Tool tips



The screenshot shows the ArcGIS 10 Help window. The title bar reads "ArcGIS 10 Help". The menu bar includes "Hide", "Locate", "Back", "Home", "Options", and "Resource Center". The "Contents" tab is active, showing a tree view of help topics. The "Welcome to the ArcGIS Help Library" page is displayed, featuring a welcome message and a list of target audiences.

Welcome to the ArcGIS Help Library

ArcGIS 10

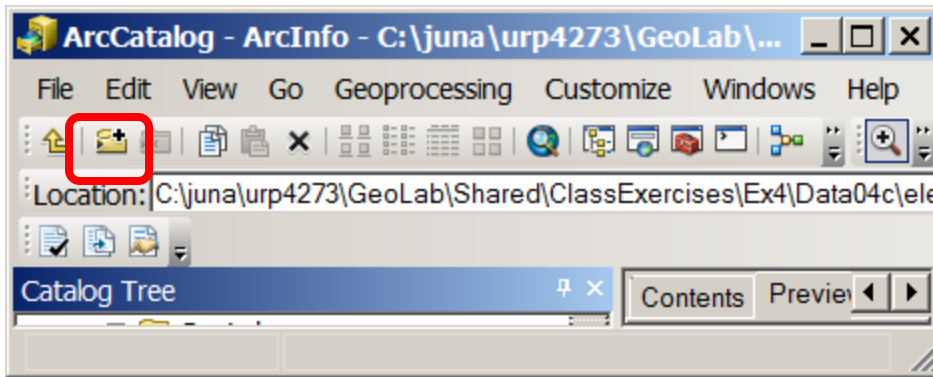
Welcome to the help library for the ArcGIS system. This help library has been compiled to provide comprehensive documentation for using all aspects of ArcGIS. The goal is to address the needs of a number of key audiences:

- **GIS practitioners** who perform all types of GIS and image-based work including mapping, data management, editing, analysis, and geoprocessing.
- **Developers** who work with ArcGIS using .NET, Java, C++, Web programming APIs, SQL, and so on.
- **Administrators** who install and manage the ArcGIS software, database administrators (DBAs) who direct and manage large DBMS installations, and Web architects whose goal it is to configure and administer Web server environments.

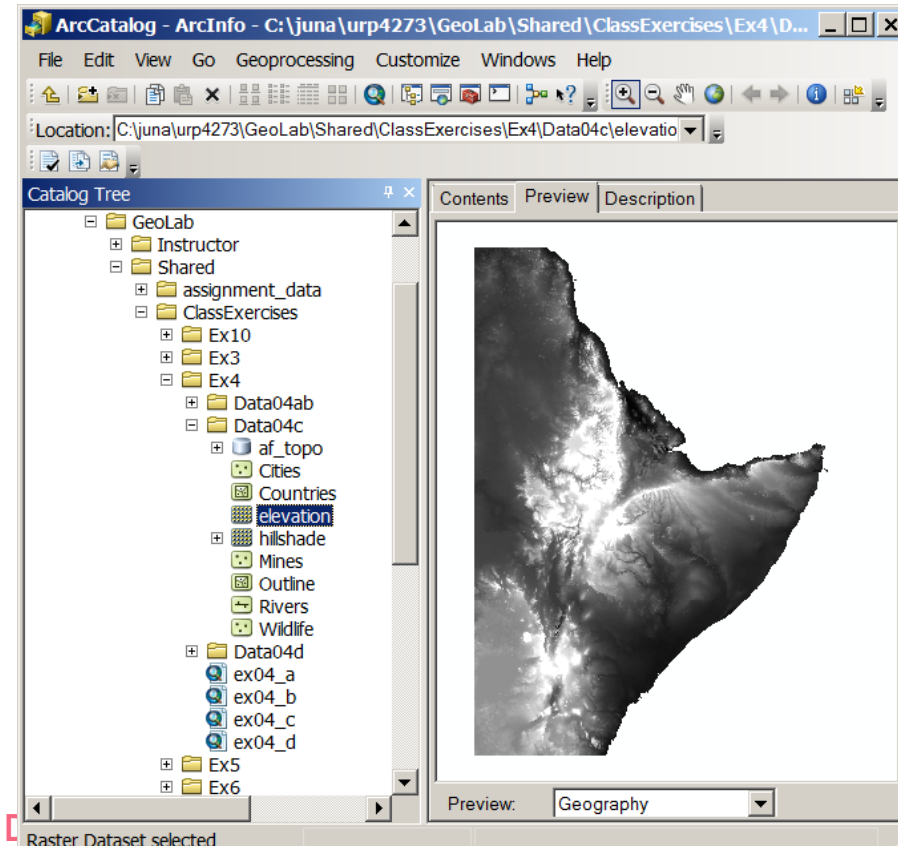
Library	Audience
Essentials Library provides an introduction to GIS and ArcGIS. These topics provide a foundation for using ArcGIS in your daily work. These topics are directed at all audiences and are useful for users who are new to GIS or ArcGIS. This library is also very helpful for seasoned ArcGIS users.	All users
Professional Library provides comprehensive help topics for GIS professionals and covers all aspects of using the ArcGIS system and many of the most	GIS professionals

Using ArcCatalog

- ❑ Provides a way to explore your data
- ❑ Can define or modify table and feature class definitions
- ❑ Can manage data: copy, rename, delete, convert



Connect to Folder



Catalog tree

Creating folder connections

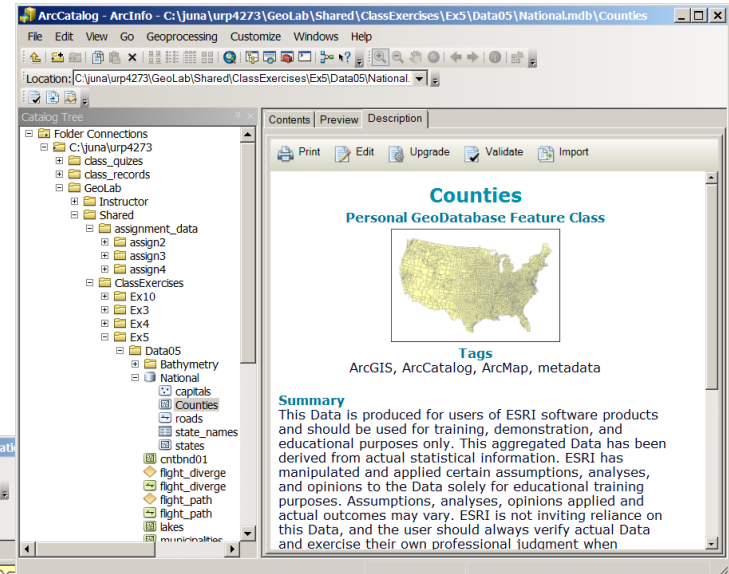
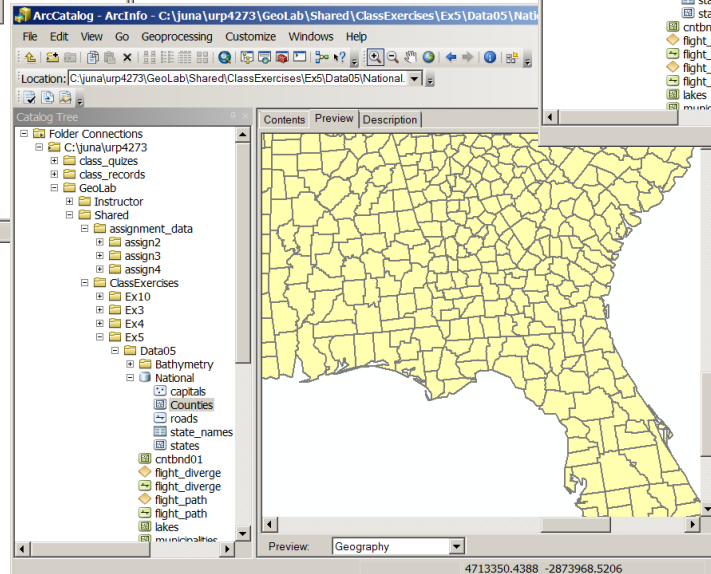
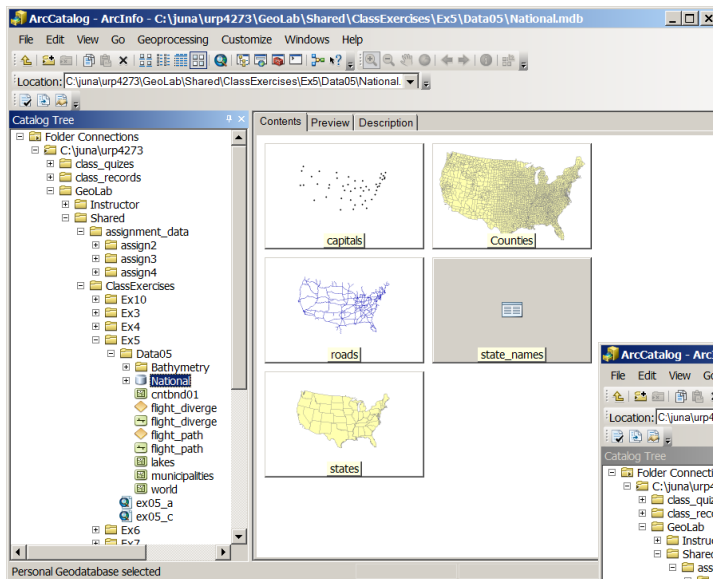
- ❑ **MUST** connect to folders in the network



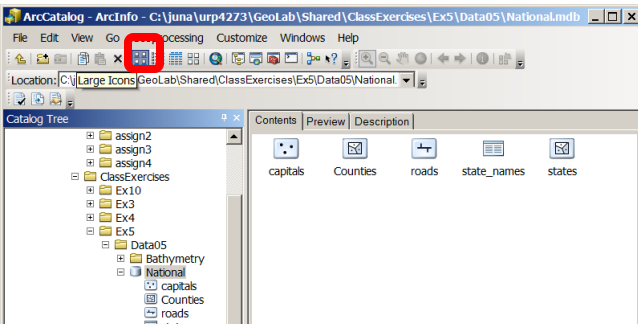
- ❑ **Connections can be saved but can disconnect from folders at any time**
- ❑ **Can create a catalog of connections by connecting to several different folders in different locations (local or remote)**

Three tabs for three ways to view the data

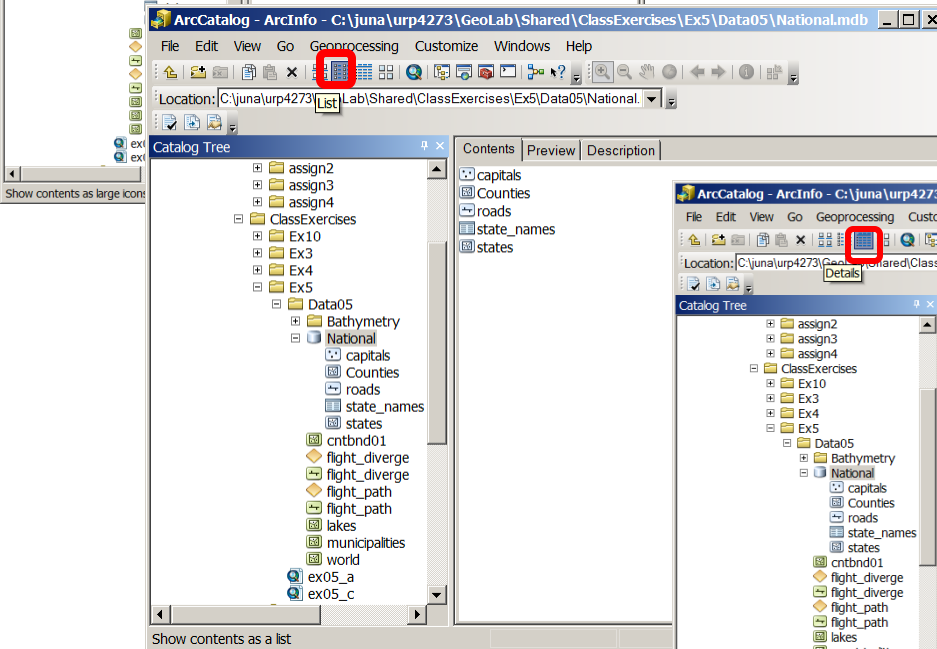
- Contents; Preview (Geography & Attributes); Description
- Can view data and .mxd projects



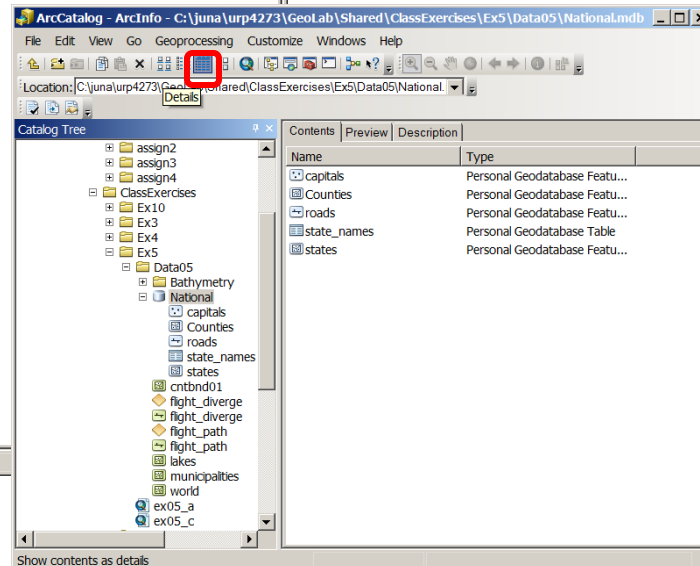
The Contents tab – window's ways to view files



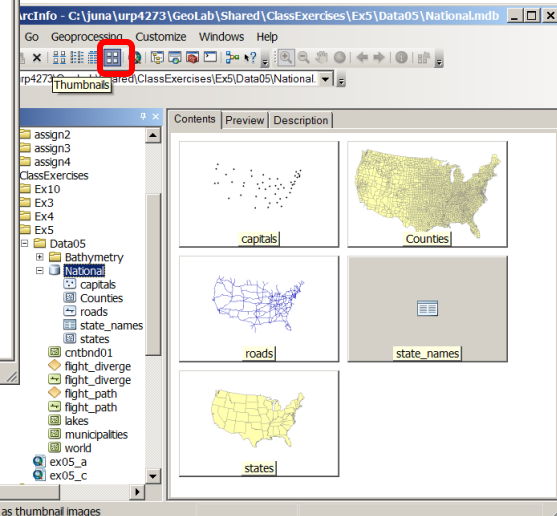
Large icons



List



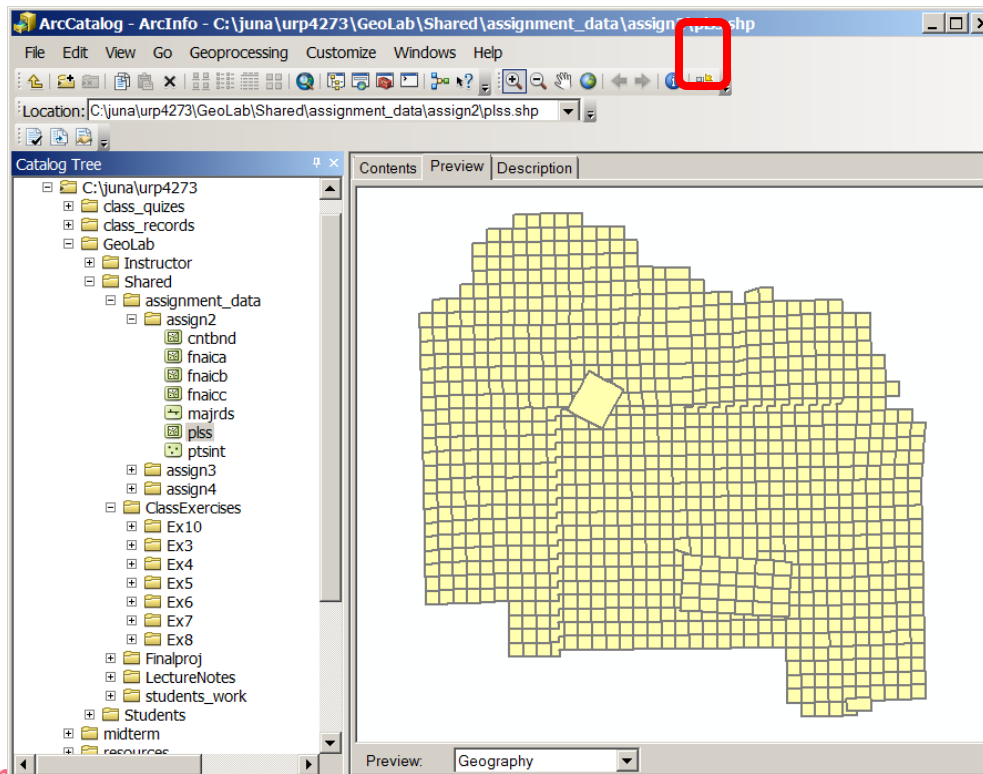
Details



Thumbnails

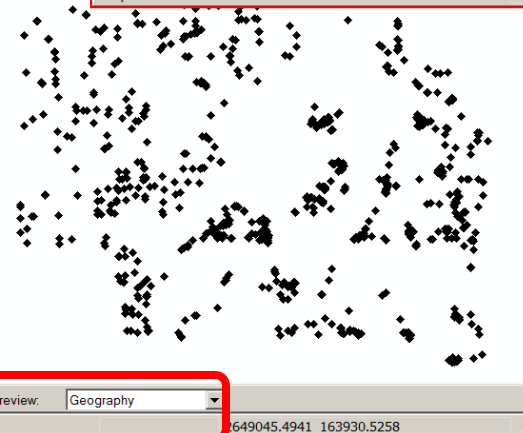
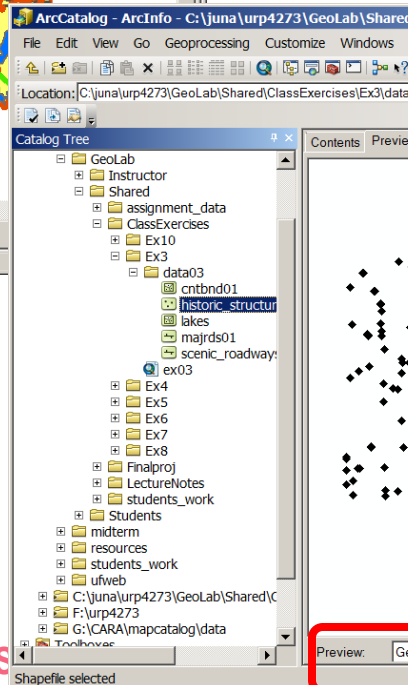
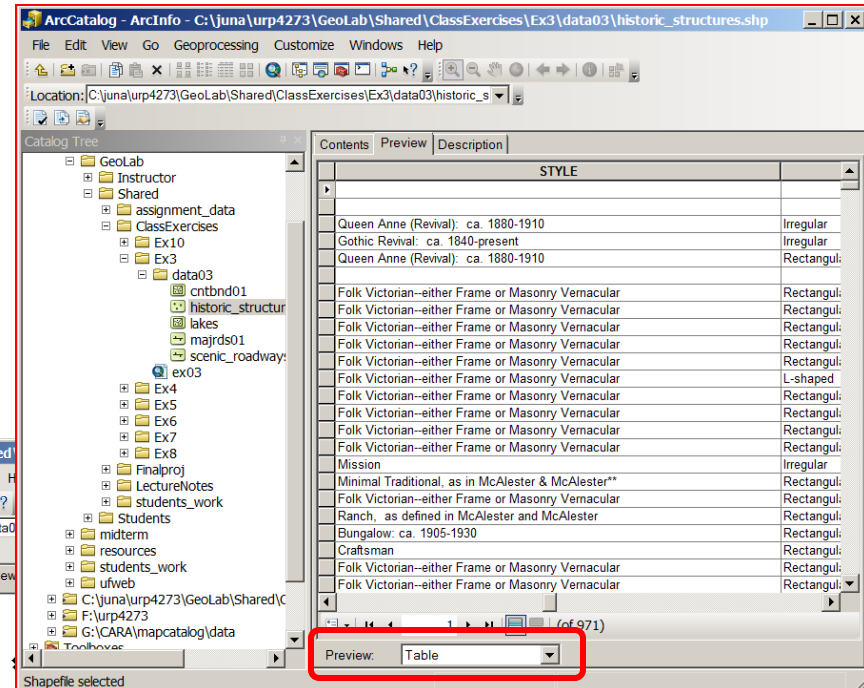
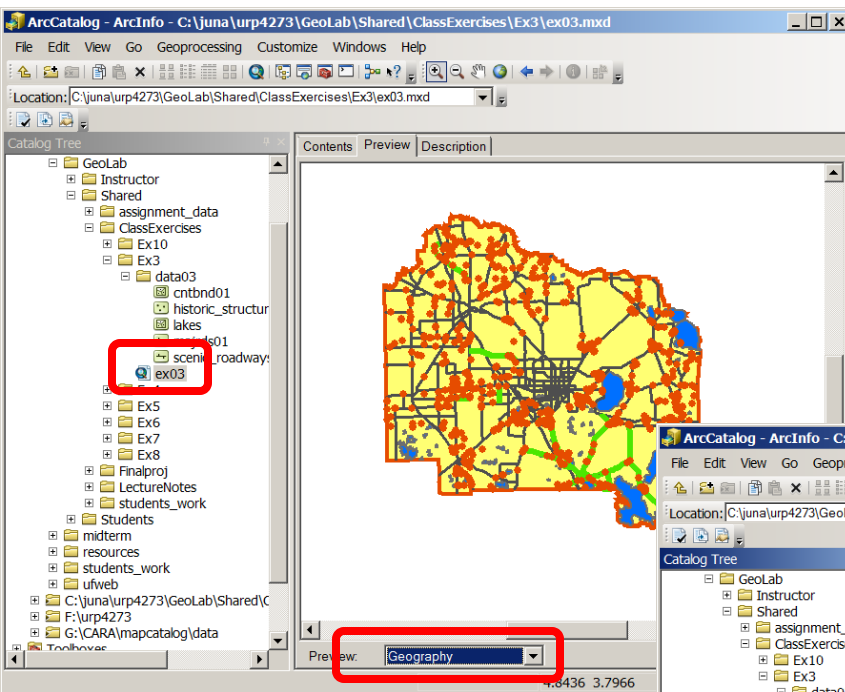
Creating thumbnail images

- ❑ Both maps (.mxd) and data can have thumbnails
- ❑ A thumbnail is a snapshot of the source file at one point in time
- ❑ A thumbnail is an image, therefore it needs to be updated
- ❑ When an (.mxd) is saved, a thumbnail is generated automatically



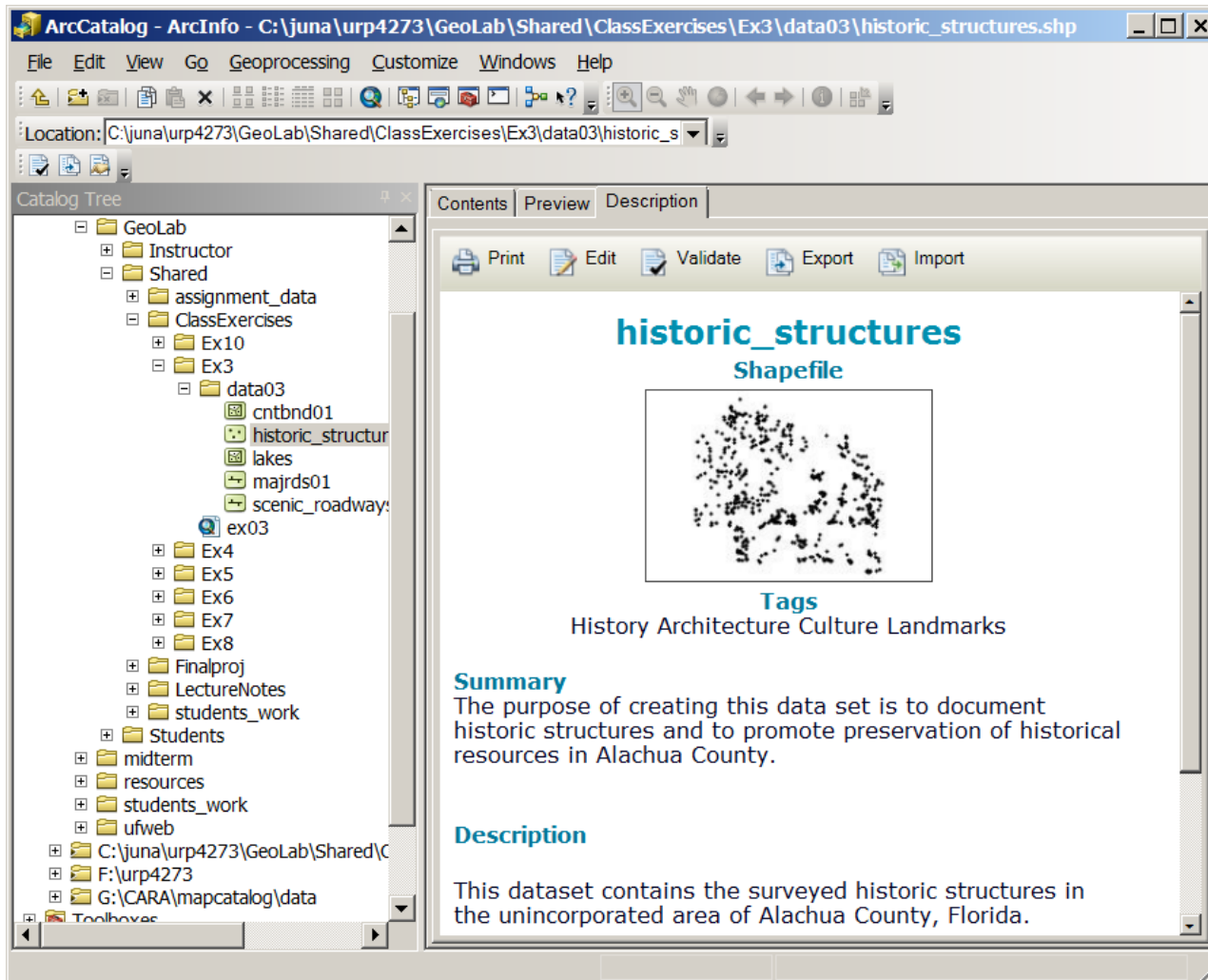
The Preview tab

- Can preview a map or geography and attributes for data sources



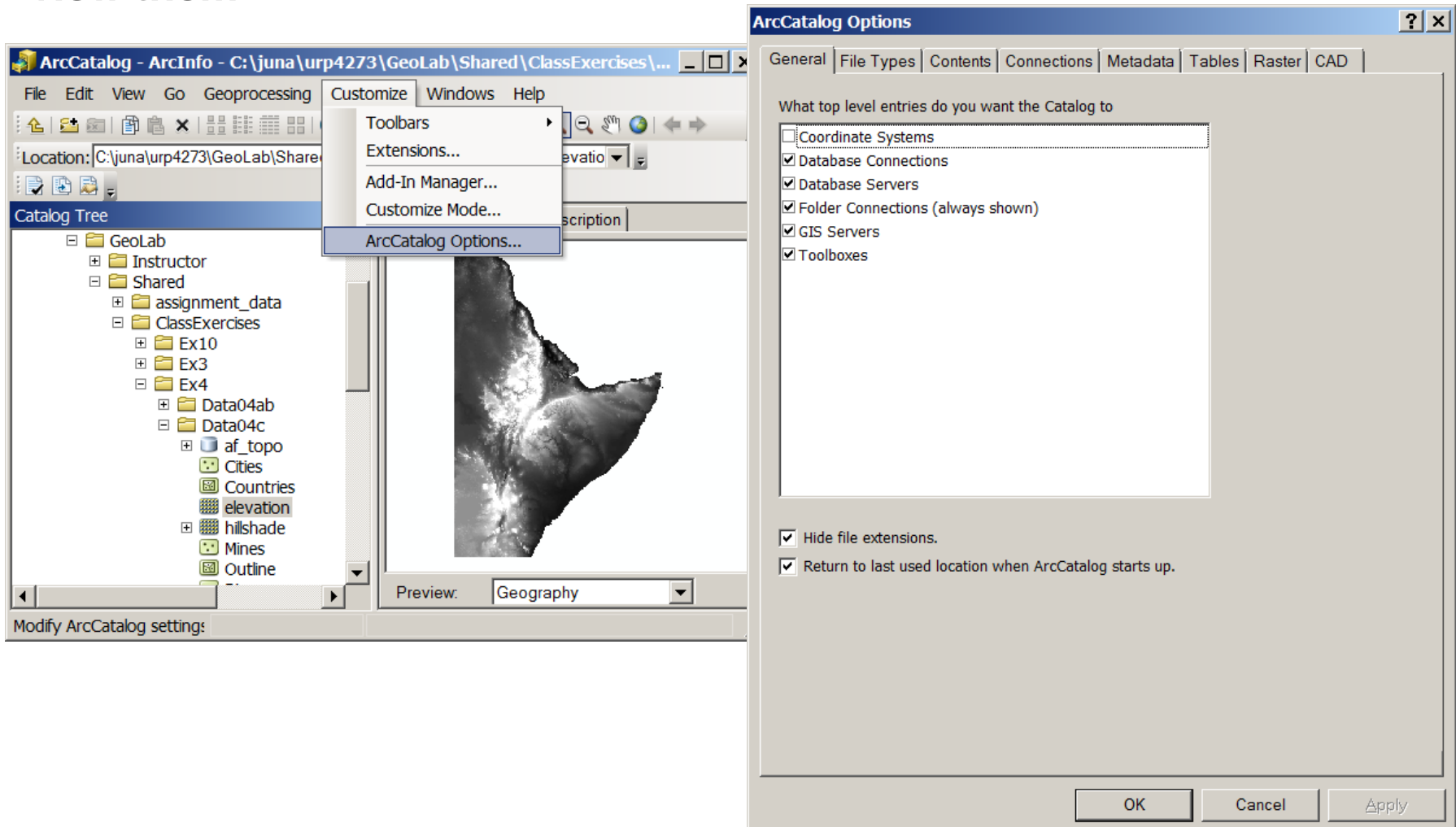
The Description tab

- Displays metadata



Setting viewable data types

- ❑ In ArcCatalog you can filter out certain file types so that you don't view them



Data on the net – Internet GIS

- ❑ **GIS services or Geoservices are automated geographic information services that are published and accessed over the Web.**
- ❑ **Types of Geoservices i.e. Internet GIS**
 - ❑ **Map Services (Live data layers) – most common**
 - ❑ **Image Services (Integrated Images from many sources)**
 - ❑ **Geoprocessing Services (Layer with functionality such as with a tools interface)**
 - ❑ **Search Services (searchable content in GIS files/folders)**

Connecting to GIS Services

- ❑ ArcGIS and ArcIMS services (two types based on publishing technology)
- ❑ In ArcCatalog: GIS Servers: double click over service type and enter URL of service (web address to the service)
- ❑ In ArcMap: File>Add Data>Look in>GIS Servers

The image shows two overlapping dialog boxes from ArcGIS software. The background dialog is 'ArcCatalog - ArcInfo - GIS Servers'. It has a menu bar (File, Edit, View, Go, Geoprocessing, Customize, Windows, Help) and a toolbar. The 'Location' field is set to 'GIS Servers'. The 'Catalog Tree' on the left shows a hierarchy: Folder Connections, Toolboxes, Database Servers, Database Connections, and GIS Servers. Under 'GIS Servers', there are five options: Add ArcGIS Server, Add ArcIMS Server, Add WCS Server, and Add WMS Server. The 'Add ArcIMS Server' option is selected. The foreground dialog is 'Add ArcIMS Server'. It has a title bar with a question mark and a close button. The 'URL of server:' field contains 'http://www.geographynetwork.com'. Below this, there are two radio buttons: 'All services' (selected) and 'Just the following service(s)'. A 'Get List' button is below the radio buttons. The dialog is partially obscured by another dialog box titled 'General'. This 'General' dialog has a title bar with a question mark and a close button. It contains the text 'Choose the type of ArcGIS Server connection'. There are two radio buttons: 'Internet' (selected) and 'Local'. The 'Internet' section has a 'Server URL:' field with 'http://services.arcgisonline.com/ArcGIS/services' and 'http://www.myserver.com/arcgis/services' below it. The 'Local' section has a 'Host Name:' field. Below these are 'Authentication (Optional)' fields for 'User Name:' and 'Password:', both with empty text boxes. A 'Save Username/Password' checkbox is checked. At the bottom of the 'General' dialog are three buttons: '< Back', 'Finish', and 'Cancel'. The 'Add ArcIMS Server' dialog has 'OK' and 'Cancel' buttons at the bottom right.

Connecting to ArcGIS online

- ❑ ArcGIS online offers many ways to connect to either user created data or ESRI's data.
- ❑ Accessibility from Add Data drop menu (prior to clicking)

