

Please!
Turn **OFF** cell phones
and paging devices



Working with ArcMap: Tips and Tricks

Artie Robinson

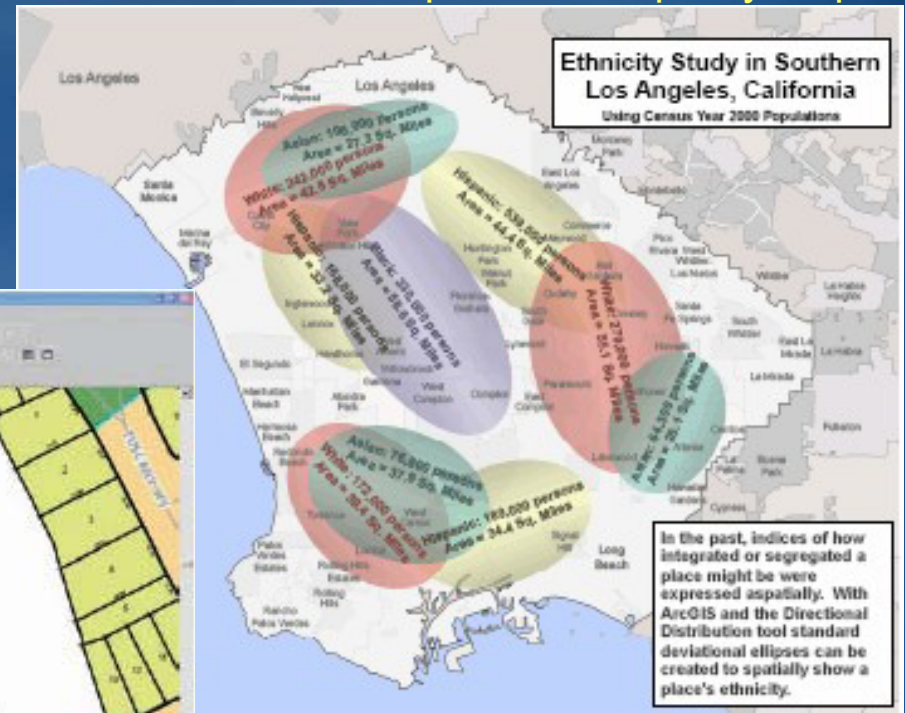
Session Objective

- **Create a more productive environment by showing**
 - **Out of the box tools you may not be aware of**
 - **New workflows**
 - **Configured environment**

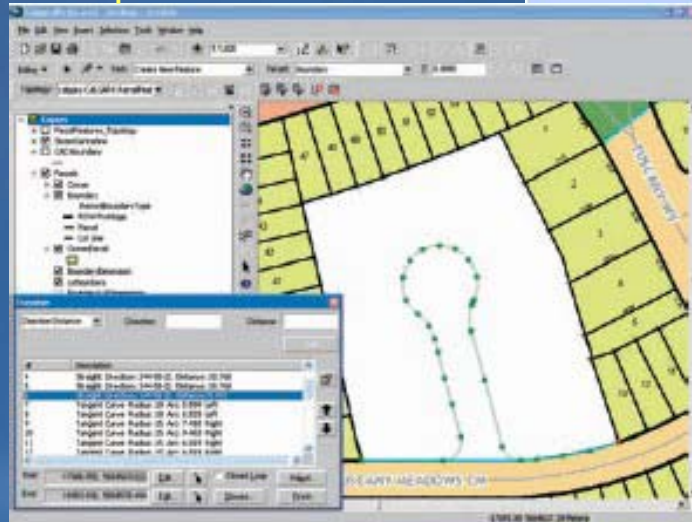
What is the value of ArcMap?

- Comprehensive map authoring application
- Used for all map based tasks
 - Mapping and editing
 - Query and analysis
 - Creating graphs, reports, and output

Create publication quality maps



Compile and Edit Data



Resource Center

- <http://resources.esri.com>

ArcGIS Resource Centers Customer Care | Support | Careers Login

Build Rich Internet Applications

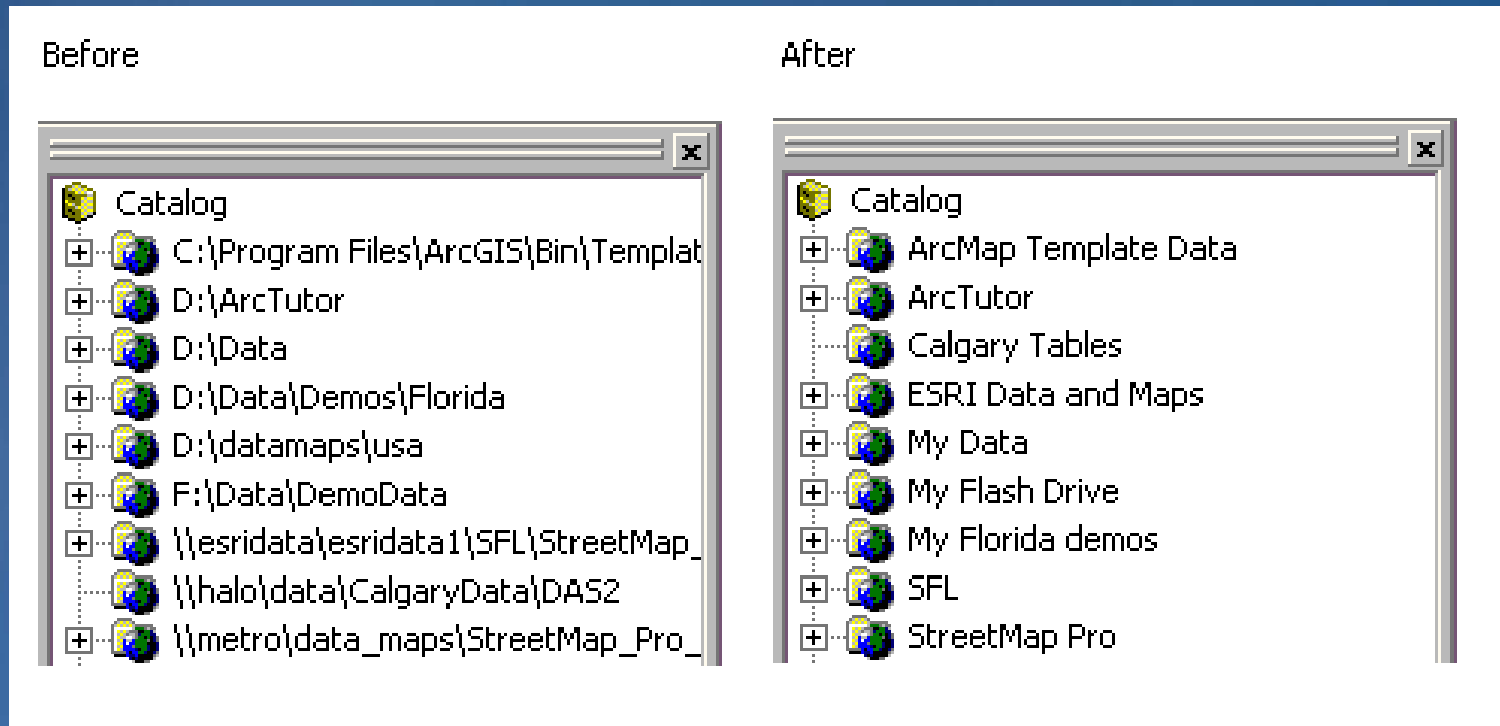
The new ArcGIS API for Flex allows you to create Rich Internet Applications with the power of ArcGIS Server. Learn More

Products	Functions	Industries	Solutions
<ul style="list-style-type: none">■ ArcGIS Desktop■ ArcGIS Server■ ArcGIS Engine■ ArcGIS Explorer■ ArcGIS Mobile■ ArcIMS	<ul style="list-style-type: none">■ ArcGIS Online■ Geoprocessing■ Geodatabase & ArcSDE■ Image Management■ CAD Integration■ Mapping & Visualization ↗	<ul style="list-style-type: none">■ Water Utilities	<ul style="list-style-type: none">■ Business Analyst Suite

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ArcCatalog Tips

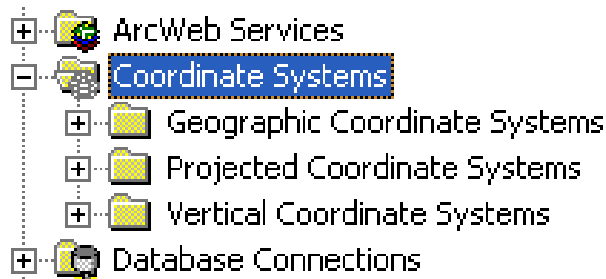
- Drag & Drop Data Connections
- Rename your data connections



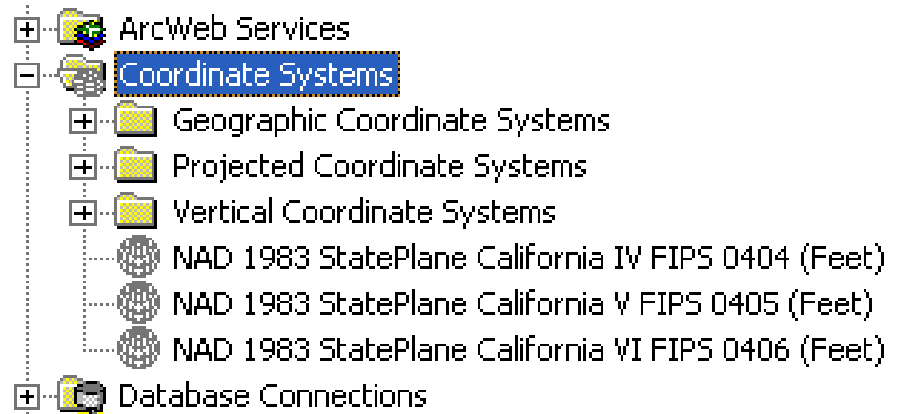
ArcCatalog Tips

- Organize Coordinate Systems

Before



After



ArcMap application properties

- Application level properties apply to all occurrences of ArcMap in the machine
- ArcMap > Tools menu > Options
- For Example:

Option	Setting
Make newly added layers visible by default	Off
Return to last used location when Add Data dialog first used	On
Rendering behaviour on window resize	No redraw

Saving layer properties

- Save layer properties for repeated use
- Data is not saved with properties

Open layer or group layer file directly from Windows Explorer (9.3)

Option	Description
Layer file (.lyr)	File storage for all layer property definitions (symbols, labels, definition queries, joins, etc...) Reference feature class for geometry/attributes
Group layer file	Collection of properties from selected layers

Working with layer properties

Use Scale Range to define layer visibility

Make only required features visible

Use scale range and classes for clarity

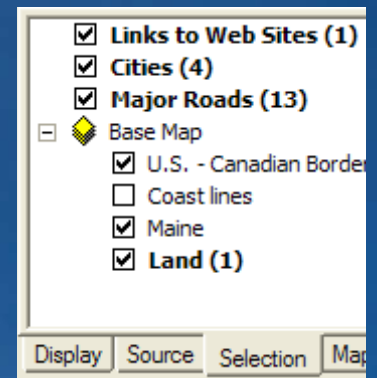
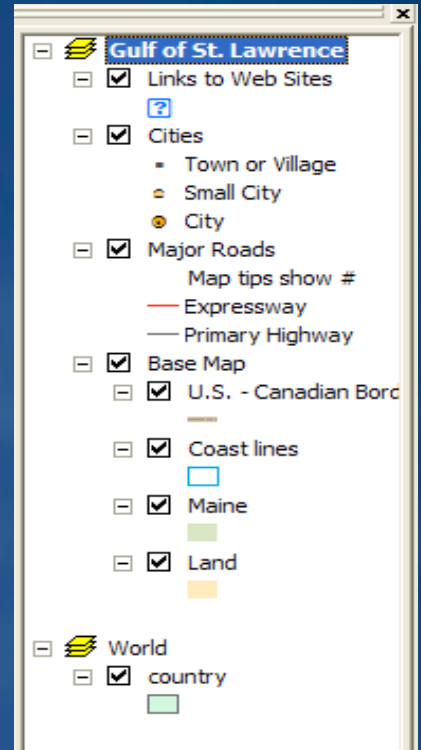
General | Source | Selection | Display | Symbology | Fields | Definition Query | Labels | Joins & Relates | HTML Popup

Use symbols appropriate to your data and map purpose

Make only required fields visible

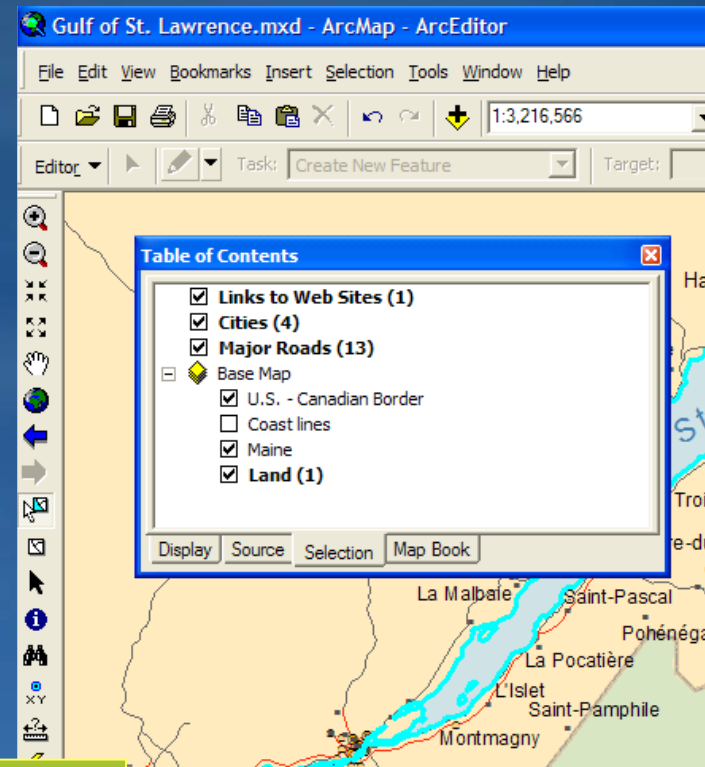
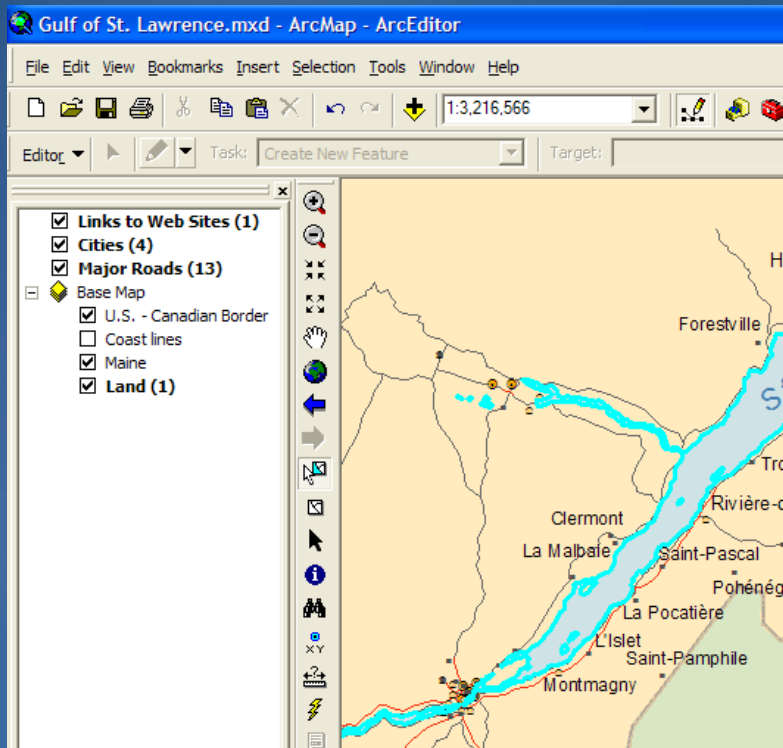
ArcMap: TOC Tips

- **CTRL-Click** a layer's checkbox – toggles visibility of all layers at the same level
- **ALT-Click** a layer inside a group layer – turns that layer on, all others in the group off
- **ALT-Click** a data frame – makes that data frame active
- **Selection tab** lets you choose selectable layers and see current selections



ArcMap: Docking Windows/Toolbars

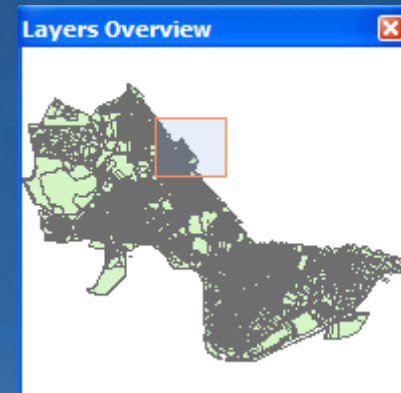
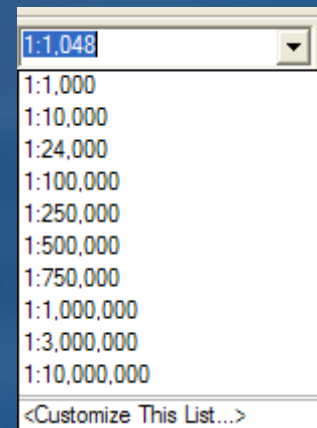
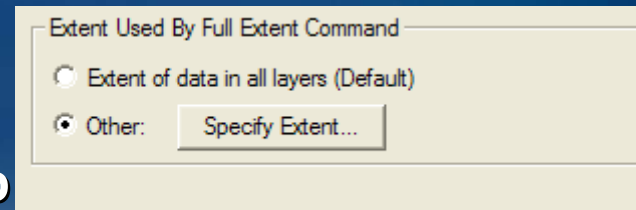
- Double-click or drag the top of a dockable window/toolbar to dock/undock



Hold down CTRL
key to move toolbars
without docking

Navigating the map display

- **Custom full extent**
 - Data Frame Properties > Data Frame tab
- **Scales in relative formats**
 - 1 in = 5 mi
 - One inch = 5 miles
- **Viewing windows**
 - Overview, Viewer, and Magnifier



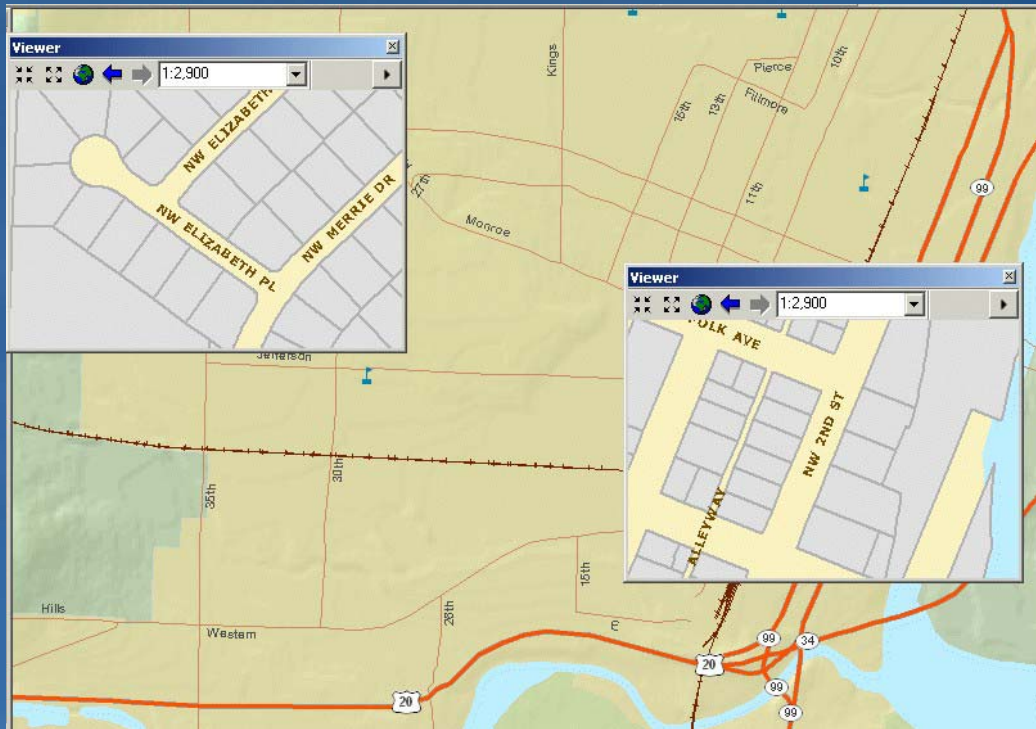
Less rendering
on the fly improves
ArcMap usability

Viewing windows

- Overview, Magnifier, and Viewer windows permit efficient navigation and detailed editing

Use Viewer windows to edit or measure disconnected locations

You can display different data frames in each viewer window



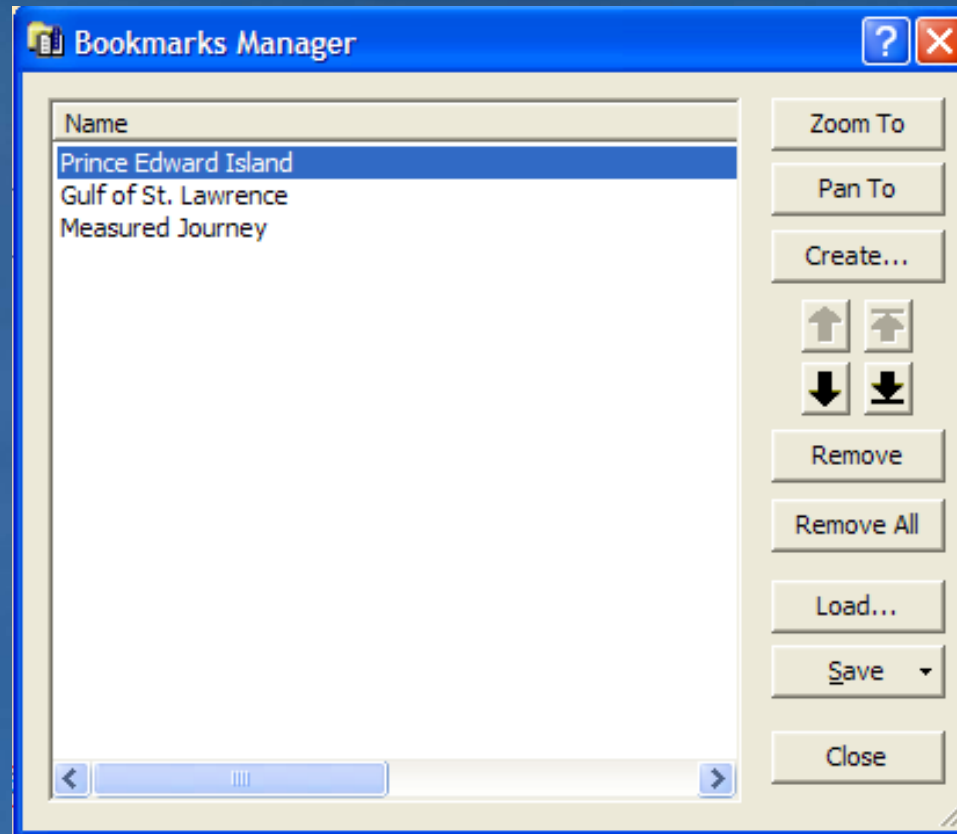
Bookmarks and My Places

- **Bookmarks**
 - Save/Load between data frames and maps (9.3)
- **My Places**
 - Create and use between map documents

	Bookmarks	My Places
Storage	Map document	External file
Access	Single map document	Any supporting application
Contents	Spatial extents	Locations, addresses, features, spatial extents
Define	Manually	Manually, address locator, local/service based data

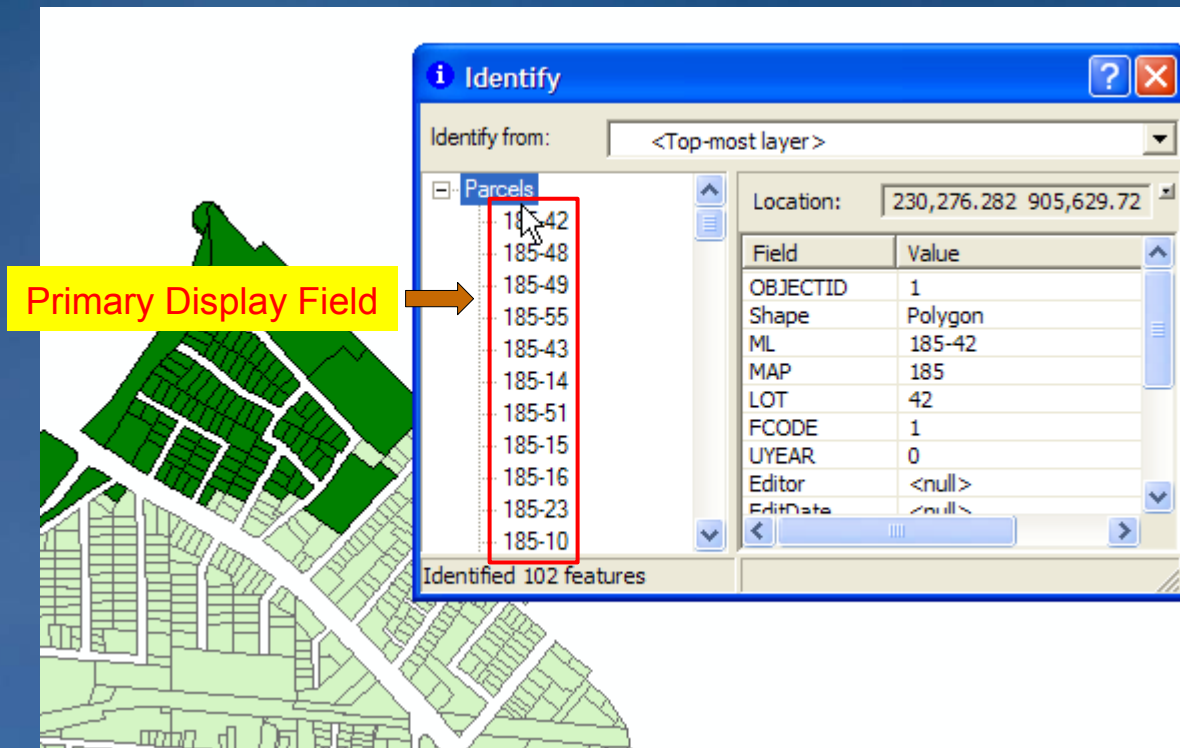
Enhanced bookmarks dialog

- **New Bookmark features (9.3):**
 - Reorder
 - Load
 - Save



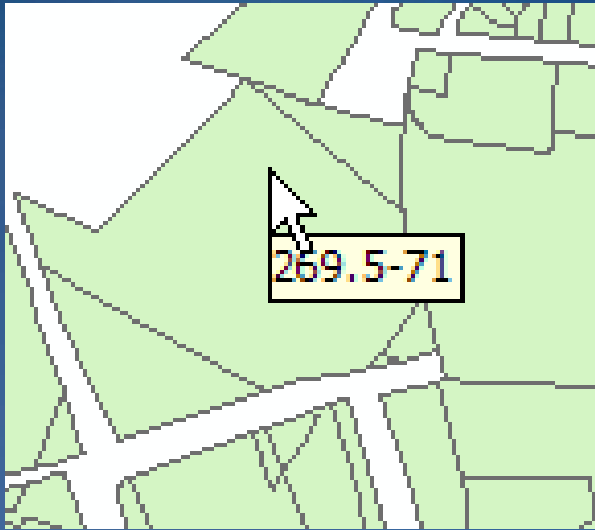
Identify Window

- Drag a box to identify multiple features



Speaking of Primary Display Field...

- **Map Tips also use primary display field**

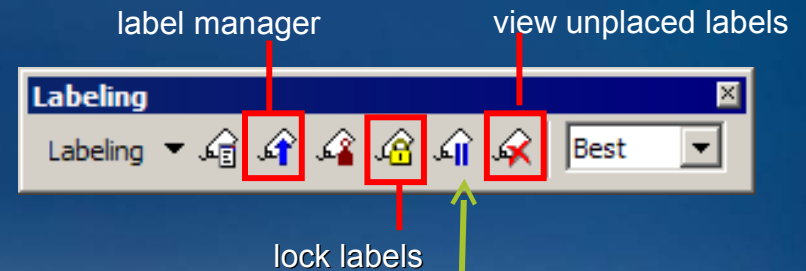


- **The primary display field found from:**
 - First string field with the text “name” in it. If not found then
 - First string field, then
 - First integer field, then
 - First field of any type

Adding text to your map

- **Labels**

- Property of the map layer
- Suggestions:
 - Use the Label Manager
 - Fewer label placement rules



Pause labeling to stop continuous re-draw



- Convert labels to annotation for better display performance and static placement

- **Annotation**

- Feature class within geodatabase or property of the map

Store in geodatabase not map document

Create multiple annotation feature classes for use within dynamic maps

Labeling...

- Label features within a feature class differently

The screenshot displays the ArcGIS Label Manager interface. The main window shows a tree view of label classes for 'Schools', 'Buildings', and 'Parcels', each with a 'Default' class checked. A secondary window is open for editing the 'Buildings' class, showing a list of fields: 'OBJECTID', 'FCODE', 'ROOFELEV', 'HIGHELEV', 'SRC_DATE', and 'BLOCK'. A third window, 'SQL Query', shows the query `SELECT * FROM Buildings WHERE "FCODE" = 10`, with the `"FCODE" = 10` portion circled in red. A fourth window, 'Label Expression', shows a list of fields including 'ROOFELEV', 'HIGHELEV', 'SRC_DATE', 'BLOCK', 'MAPID', 'CONCATEID', 'GROUNDHIGH', and 'GROINDROOF', with 'MAPID' selected. The 'Label Expression' window also has an 'Append' button and a 'Show Values...' button.

Labeling...

- Using an “advanced” labeling formula

Label Expression

Expression

Label Fields

Double-click to add a field into the expression

Show Type ▾

OBJECTID
FCODE
ROOFELEV
HIGHELEV
SRC_DATE
BLOCK
MAPID
CONCATFID

Append Show Values... Display coded value description

Expression

Write a function named FindLabel for the selected parser. Advanced
Add fields as parameters to the function.

```
Function FindLabel ([Shape_Area])  
if [shape_area] < 1000 then  
    FindLabel = "<CLR RED='255'" & [shape_area] & "</CLR>"  
else  
    FindLabel = "<CLR GREEN='255'" & [shape_area] & "</CLR>"  
end if  
End Function
```

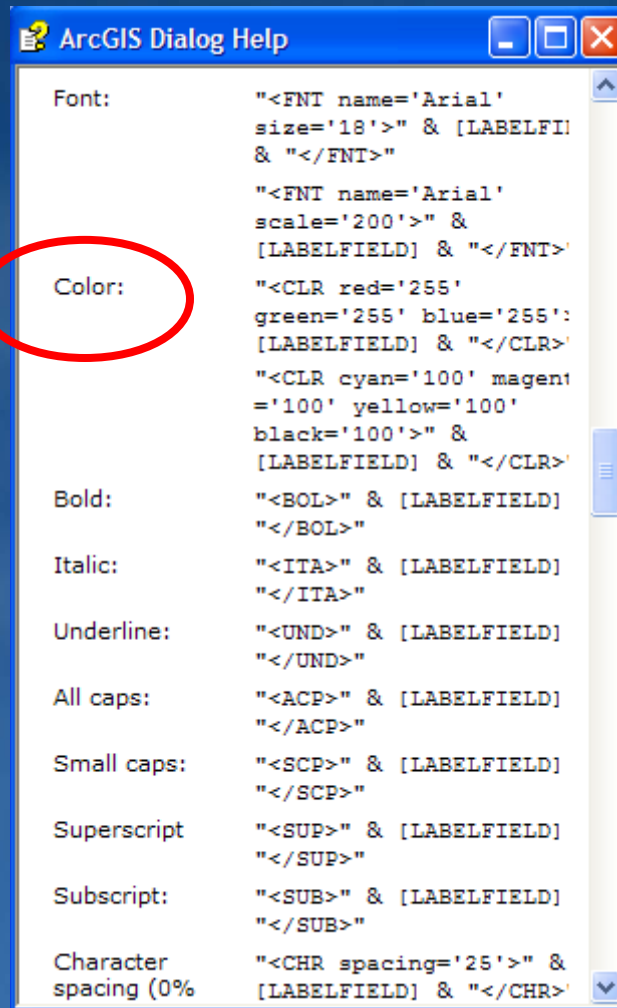
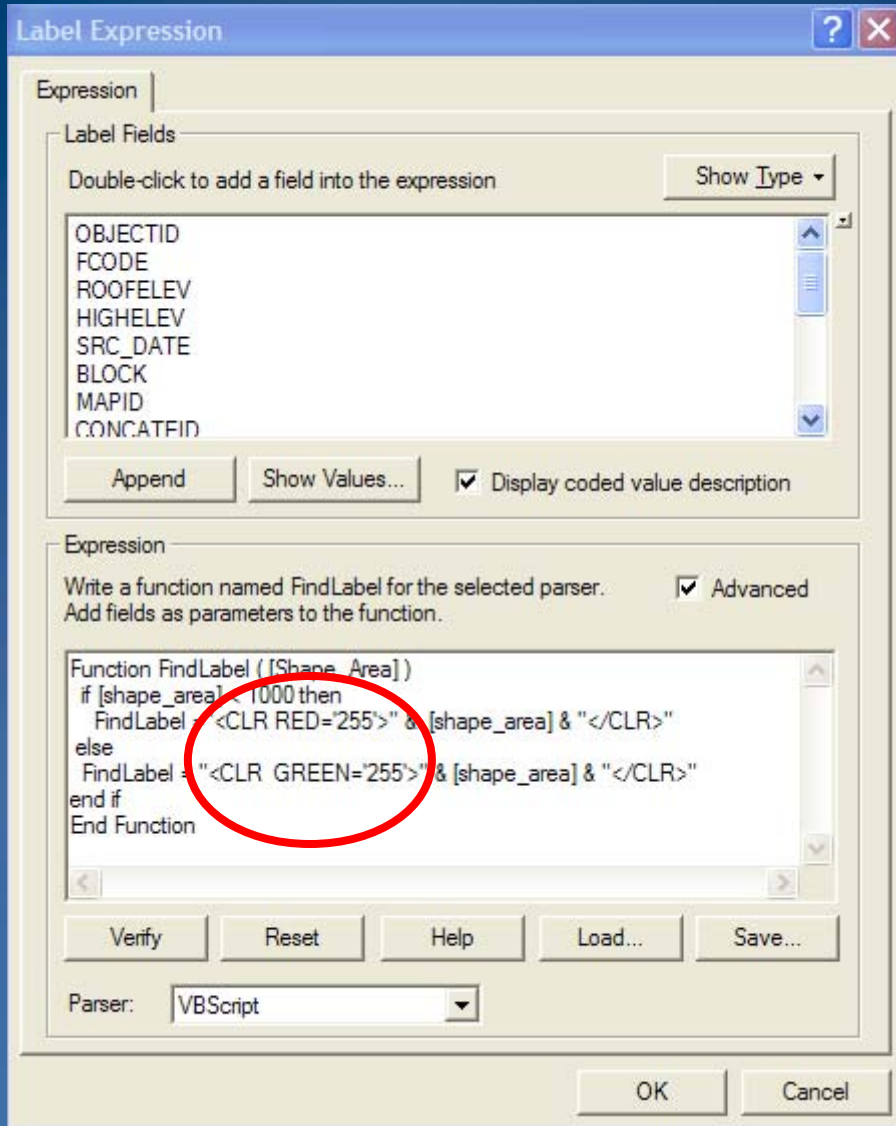
Verify Reset Help Load... Save...

Parser: VBScript ▾

OK Cancel

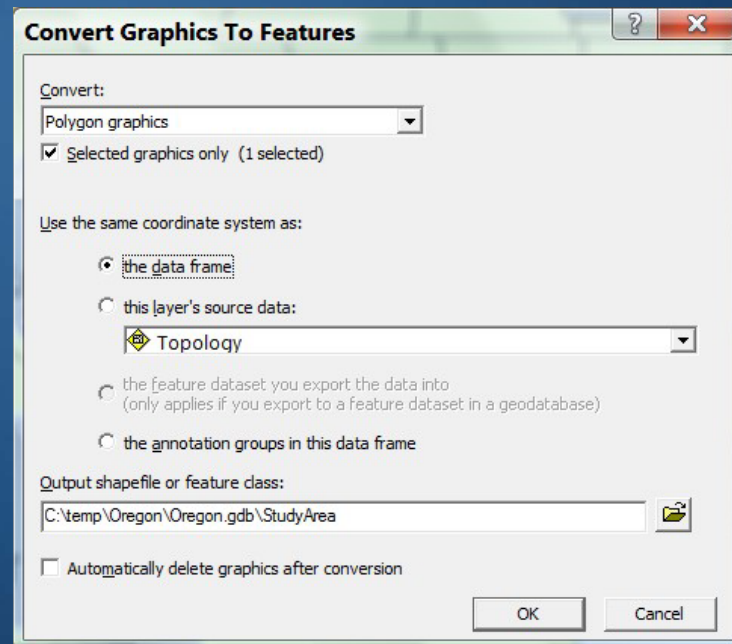
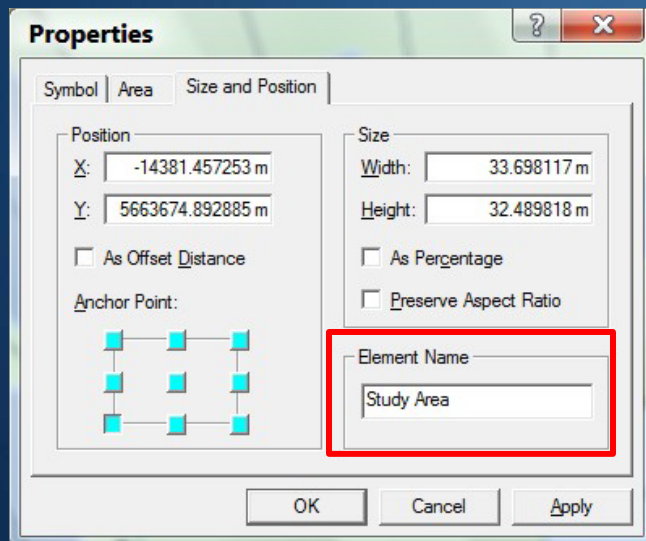
Labeling...

- Using text formatting



Converting graphics to features

- Draw a graphic or text with drawing tools
- Assign name property to graphic element
 - Name becomes feature attribute
- Convert to shapefile or geodatabase feature class



Using attribute tables

- **Discover data trends and patterns**

Tables	Fields	Records
Sorted Joined/Related Exported	Ordered Visibility Alias Added Calculated	Selected Sorted Navigated to

- **Work with tables for efficiency and data sharing**
 - Settings are persisted within map document

Advanced Sorting (9.3)
SHIFT+DBL click field

Toggle aliases (9.3)
CTRL+Rt-click / CTRL+SHIFT+N

Printing tables

- Print tables from table view
 - Choose Advanced Options for more control

The screenshot shows a software interface with a table view and a print dialog box. The table view is titled "Attributes of Streets" and contains the following data:

OBJECTID *	Shape *	TYPE	STPRE	STNAME	S
1	Polyline	60 S		162ND	S
2	Polyline	60 S		176TH	S
3	Polyline	60		PIONEERS	BL
4	Polyline	60		PIONEERS	BL
5	Polyline	60 S		190TH	S
6	Polyline	60 S		162ND	S
7	Polyline	60 S		162ND	S
8	Polyline	50		OLD CHENEY	RI
9	Polyline	60		PINE LAKE	RI
10	Polyline	60 S		176TH	S
11	Polyline	50		OLD CHENEY	RI
12	Polyline	60 S		190TH	S
13	Polyline	60 S		176TH	S
14	Polyline	60 S		162ND	S
15	Polyline	60 S		162ND	S

The print dialog box is titled "Print" and has two tabs: "General" and "Advanced Options". The "Advanced Options" tab is selected and contains the following settings:

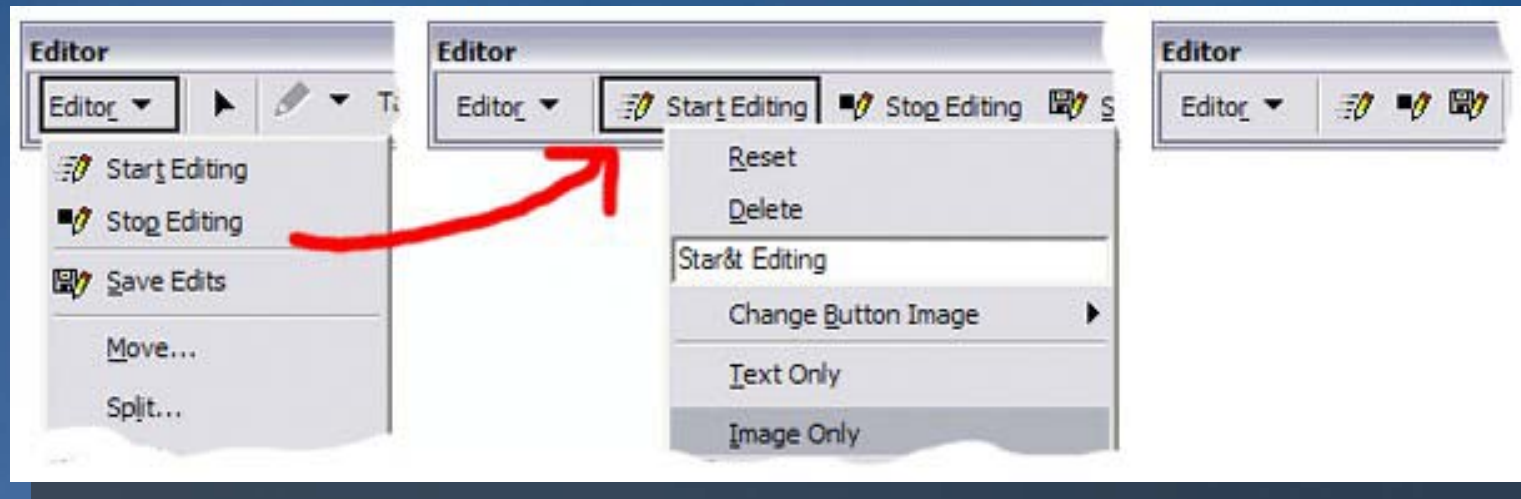
- Printing Range Options:
 - Print entire table
 - Print selected records
 - Print record range: from: 1 to: 251
- Printing Layout:
 - Show column headers on all pages (Font size: 8)
 - Print selected records in bold
 - Hide non-printable fields (e.g. Shape)
 - Show field ID in column headers
 - Use aliases of field names
- Page Header:
 - Print custom page header: Streets
 - Print current date
 - Print page numbers
- Preview: Streets, 8/22/2006, Page 1

Buttons: Print, Cancel, Apply

Record: 1 Show: All Selected Records (0 out of *2000 Selected) Options

Customizing your interface

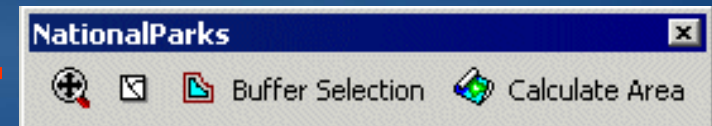
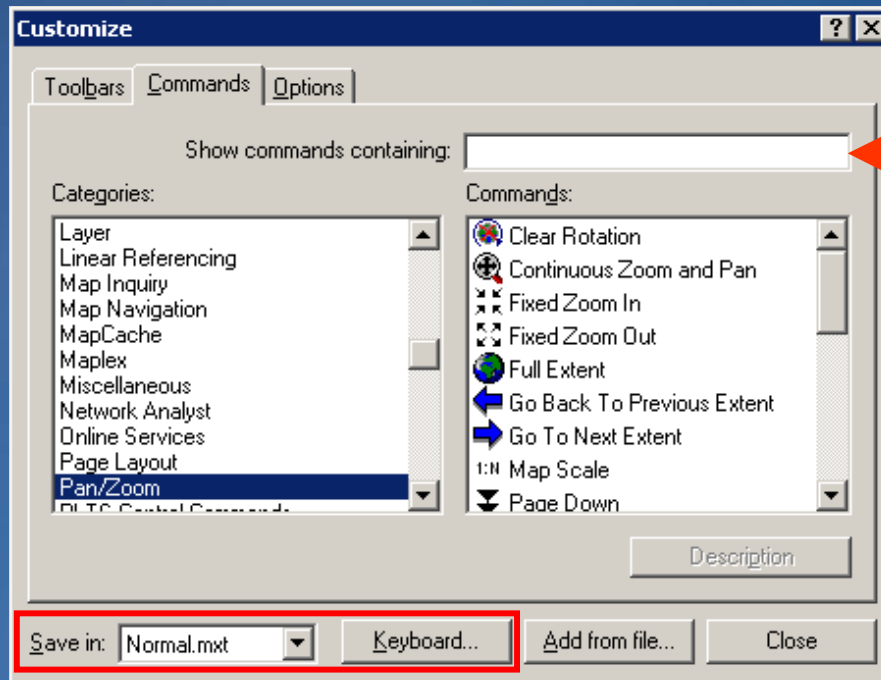
- **Customize toolbars and menus**
 - Make commonly used buttons and commands more accessible



- **View > Toolbars > Customize**
 - Toolbars, commands, hot keys

Customizing the ArcMap Interface

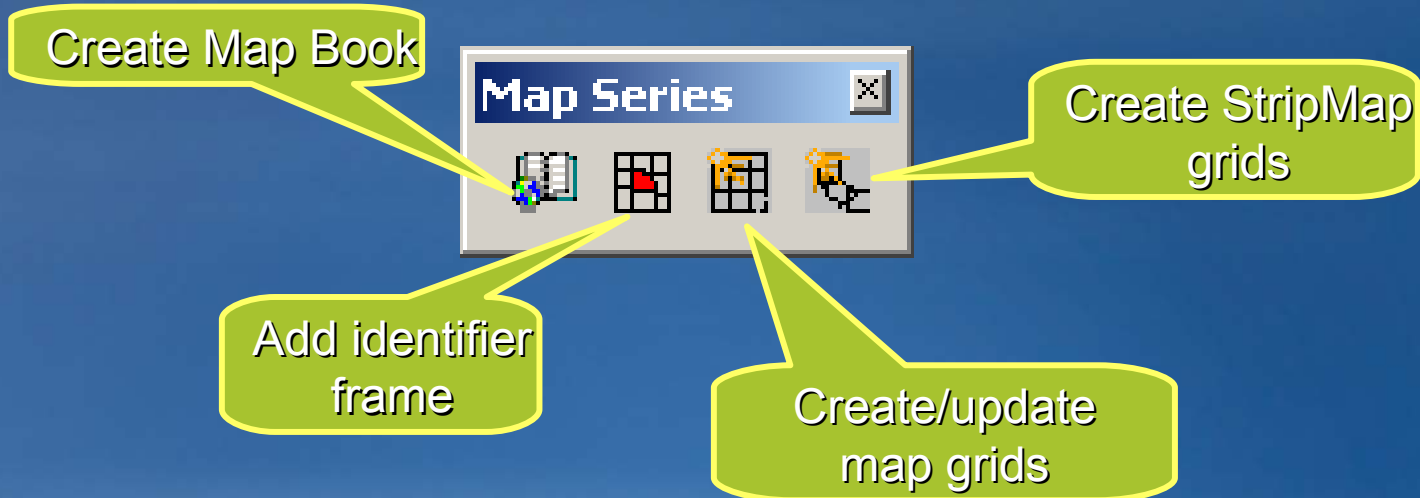
- Add tools and commands to current toolbars
 - E.g., Unselect features, Continuous pan and zoom
- Create personalized toolbars
- Save to map document or the normal.mxt



- Create custom Hot Keys

Creating a map book

- Script: **DS Map Book** (available on <http://edn.esri.com>)
- Page created in book based on each feature in a grid/index layer
- Use the Map Sheet Wizard to setup polygon index layer
 - User specifies index layer
 - Tools to create and modify index layer and book

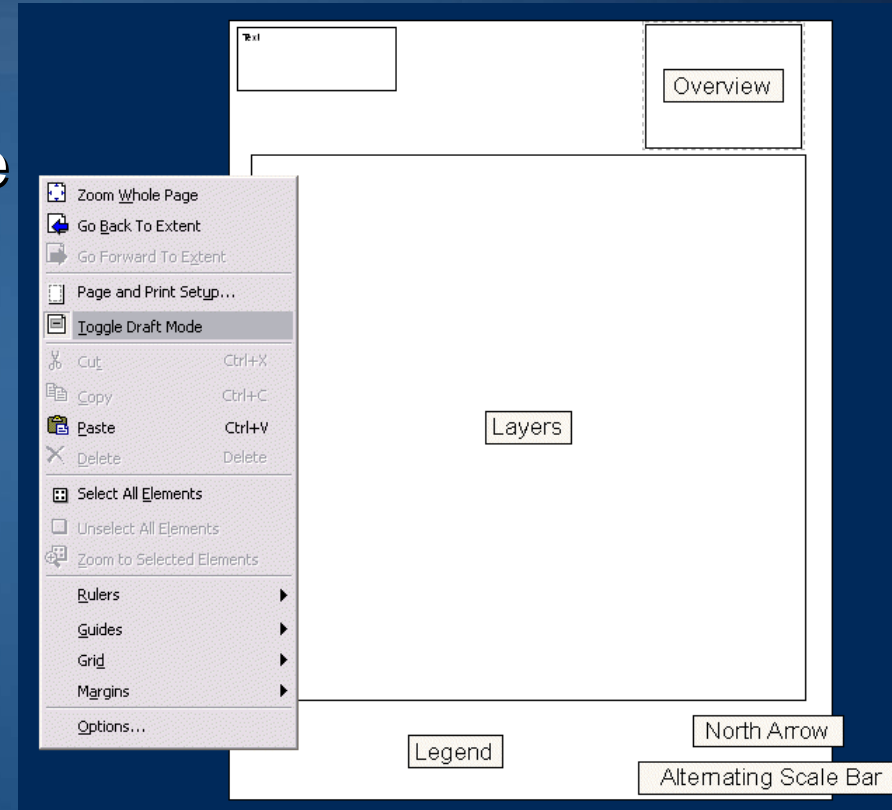


Page layout tools

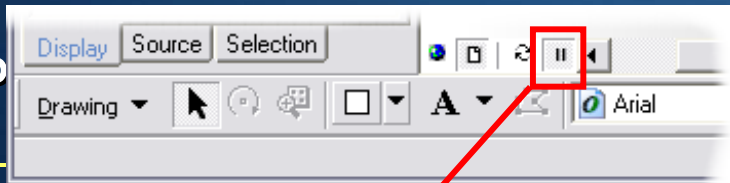
- Layout toolbar



- Draw layout items in Draft Mode
 - Faster page navigation
 - Can turn on for all items or just an individual element

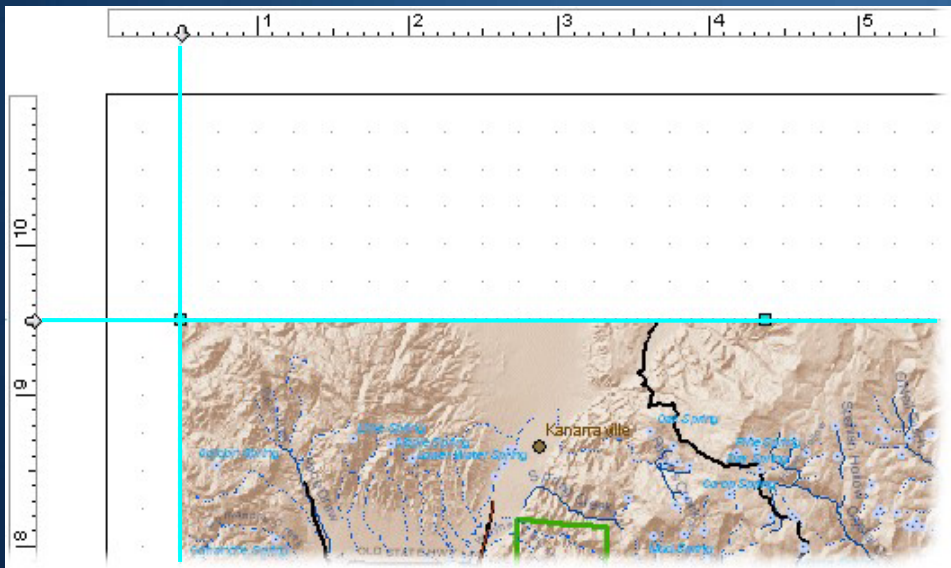


- Page Properties toolbar
 - Page Properties, Layer draw order, etc.

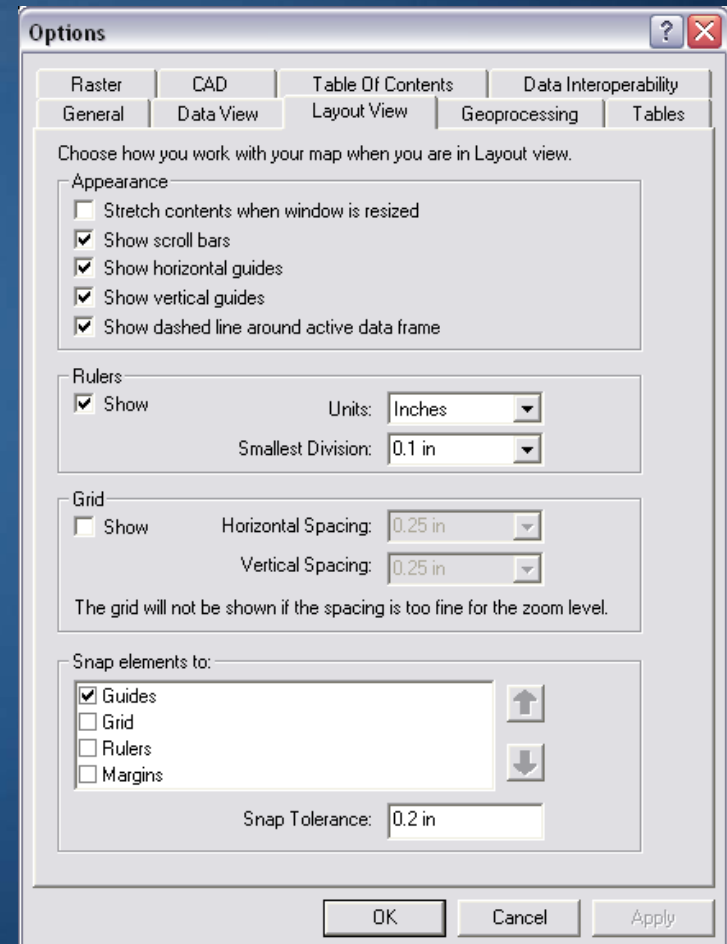


Page layout aids

- Rulers, guides, and grids
- Snap graphic elements to layout aids
- Settings for layout aids
 - Tools > Options > Layout View tab

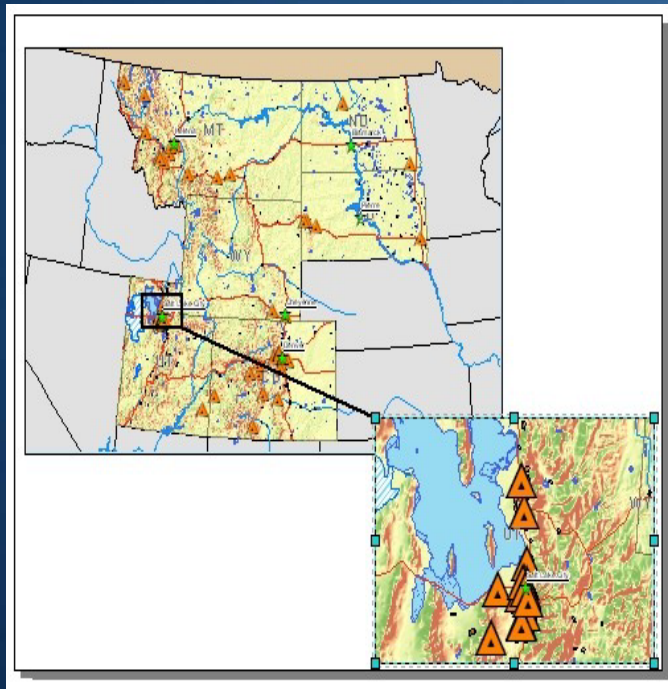


Rulers, guides, and grids turned on

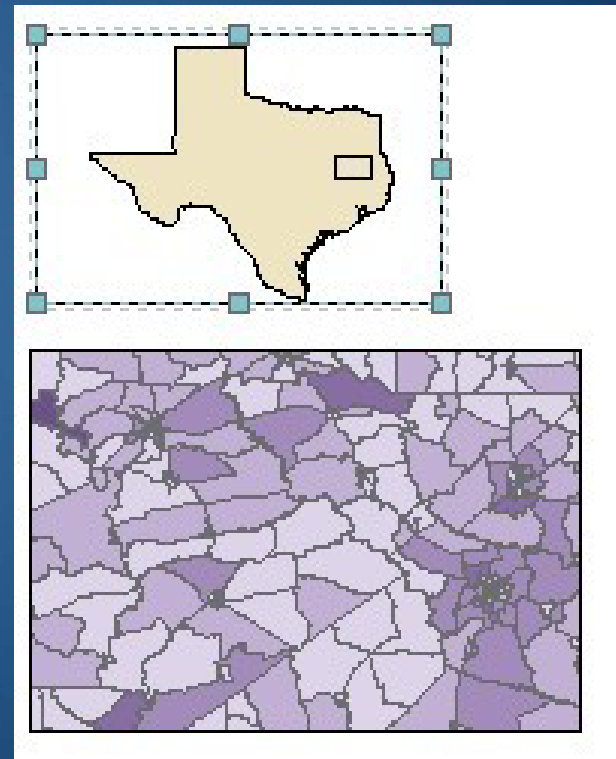


Extent rectangles

- Add an extent rectangle to a second data frame
- Shows position of one data frame relative to another
- Extent rectangles are dynamic



Inset



Reference

Exporting a map to PDF

- Support for PDF layers and embedded fonts
 - Turn layers on or off using the Adobe Acrobat layer controls
 - Embed georeferencing info
 - Embed attributes
 - Make sure to embed fonts in the PDF



Using layered PDFs

- **Embedded fonts**
 - Always have the correct symbology
- **Change visibility of layers**
- **Include attributes to support queries (9.3)**
 - Object Data tool in Adobe Acrobat Reader
- **Export map georeference information (9.3)**
 - Geospatial functionality depends on client
- **Use Desktop help to search “ Advanced PDF features”**

Resources

- **ArcGIS Desktop Resource Center**
 - <http://resources.esri.com/arcgisdesktop>
- **Most up to date versions of Help....**
 - <http://webhelp.esri.com>
- **ArcMap Tips and Tricks in the Help!**
 - http://webhelp.esri.com/arcgisdesktop/9.3/index.cfm?id=40&pid=31&topicname=Tips_and_tricks_within_ArcGIS
- **Live Training Seminars, Podcasts**

Thank You!!!

- Open for questions

