



GIS

The Geographic Approach for the Nation



ESRI Federal User Conference

Washington, D.C. • February 17-19, 2010



What's Coming in ArcGIS 10 Desktop

David Watkins

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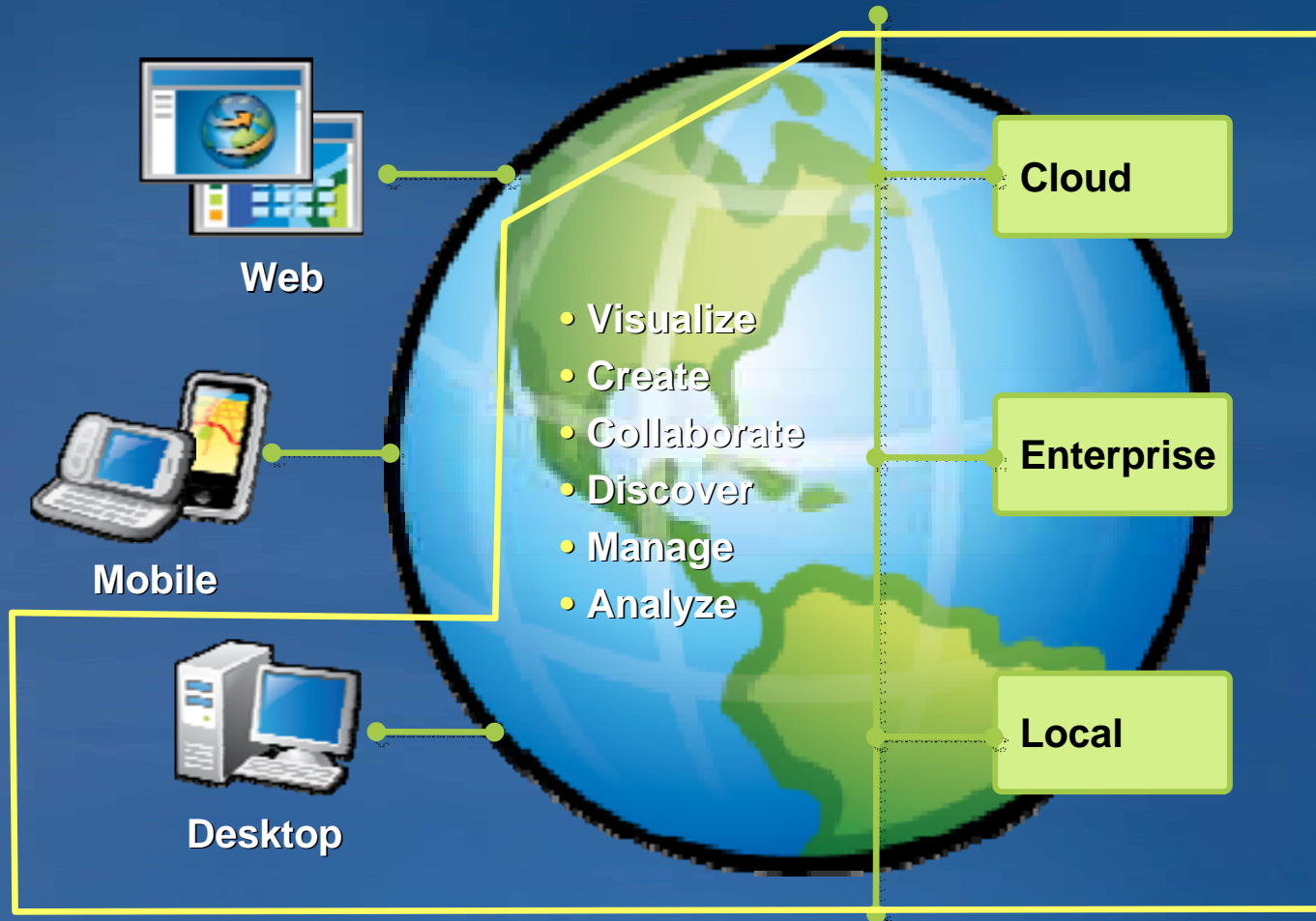
Charmel Menzel

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ArcGIS 10

A Simple & Pervasive System for Using Maps & Geographic Information

Easier, More Powerful & Everywhere



Making GIS Available to Everyone

ArcGIS Desktop

Server

Online

Mobile

Explorer

Imagery

Templates

The Keystone of ArcGIS

SDK's

Geo Database



The Keystone

ArcGIS
Desktop

10

Get your work done faster

Save time on map production

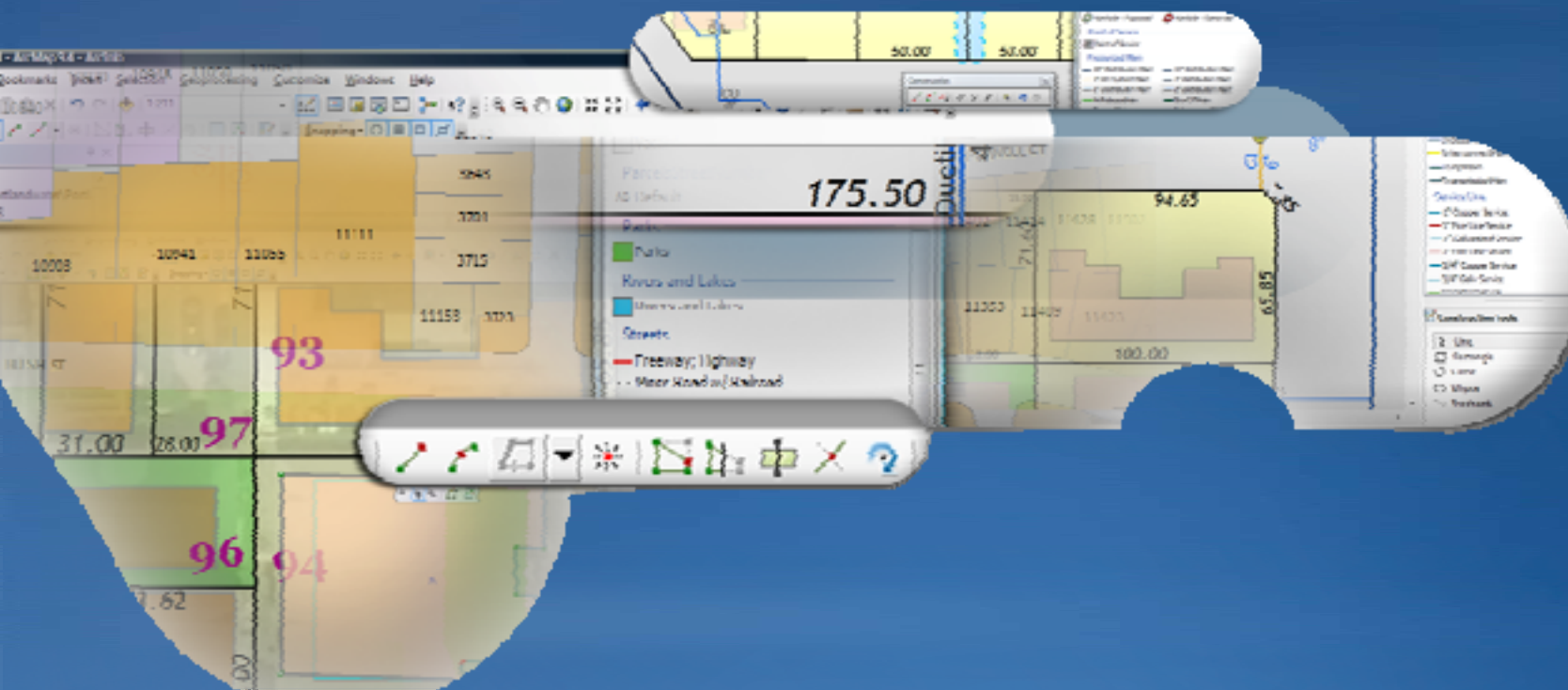
Easier to manage and create data

Better Analysis and Modeling

New ways to share

Greater Efficiency & Productivity Demonstration

Charmel Menzel



ArcGIS 10 Schedule

- Beta 1 Available October 2009
- Beta 2 January 2010
(Jan 28th for beta download)
- Pre-Release March 2010
- Final Release June/July 2010

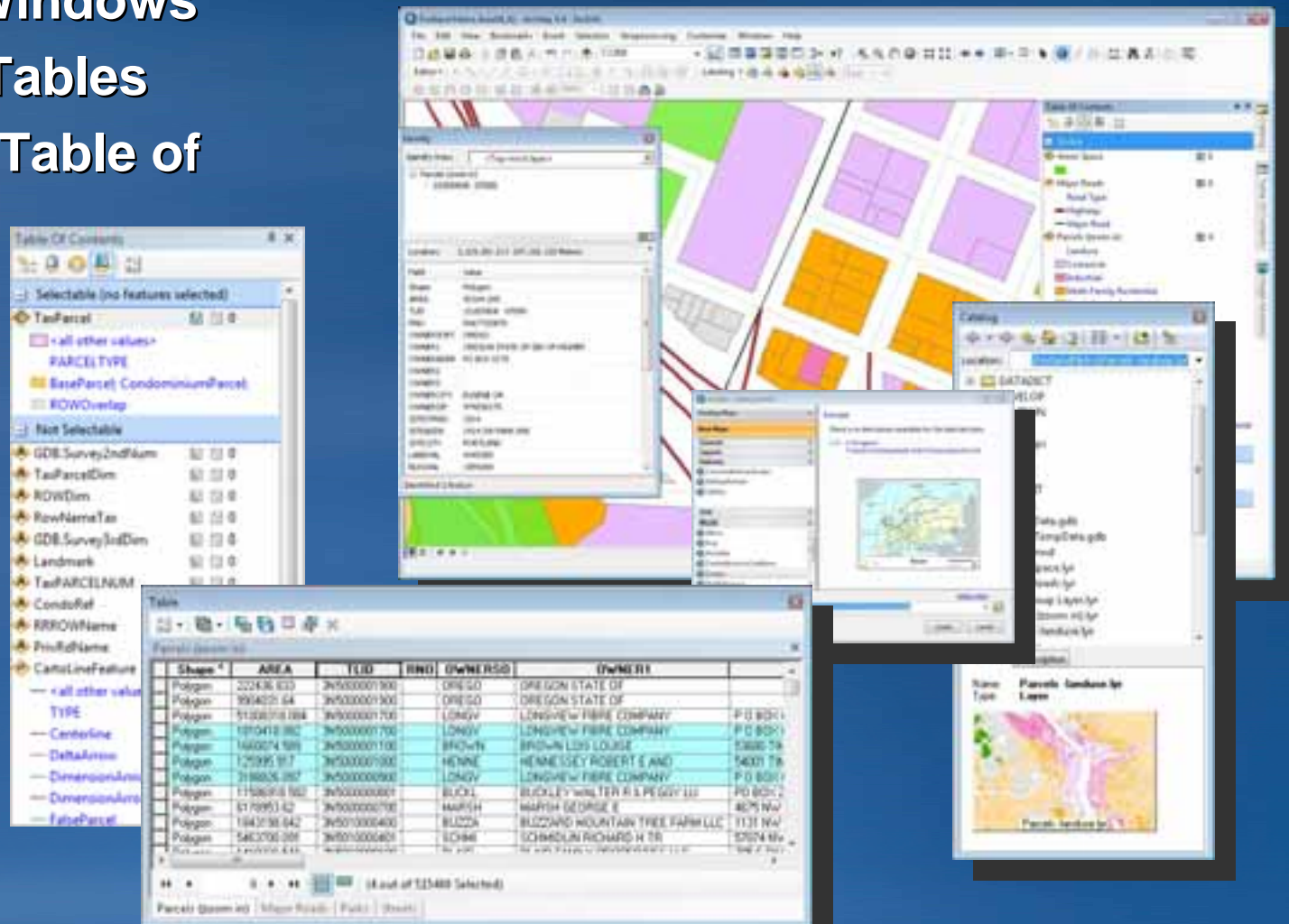
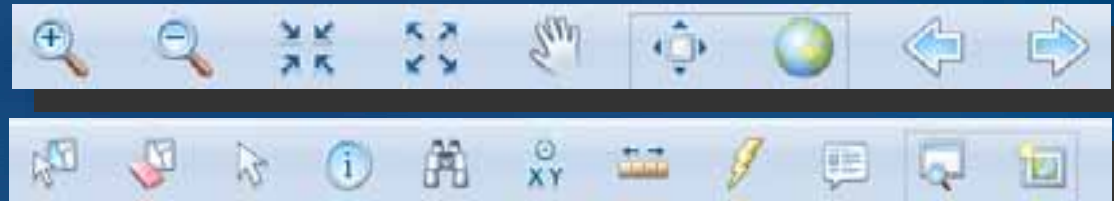


Major Release for Professional GIS

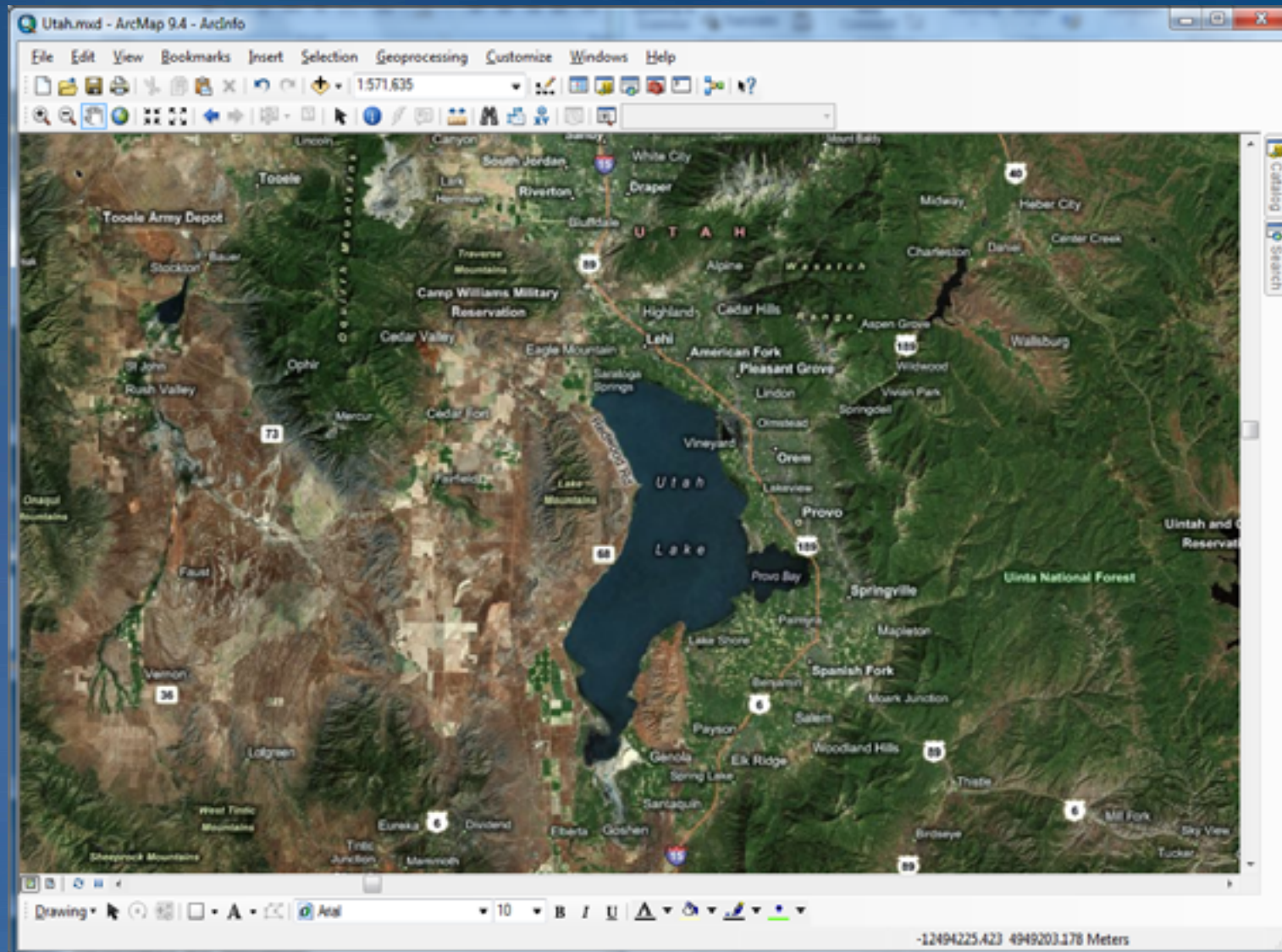
- **Get your work done faster**
- Save time on map production
- Simple and streamlined editing
- Better analysis and modeling
- Visualization and 3D
- New ways to share
- Easy customization and deployment
- ArcGIS community

Updated User Interface

- Quick access to common commands
- Dynamic Windows
- Dockable Tables
- Enhanced Table of Contents



Being more productive



It's all about the Map

Get Started Immediately with Ready-to-Use Maps

Demographic & Thematic

Streets



Topographic



Map Center Rob Elkins Sign Out

Maps Groups Messages
Featured My Search

1 2 Next

World Shaded Relief

Owner esri
Summary
This map portrays surface elevation as shaded relief. It is intended for use as a basemap layer to add shaded relief to other maps.

Details Add

World Street Map

Owner esri
Summary
This map service presents highway-level data for the world and street-level data for North America, Europe, Southern Africa, several...

Details Add

World Imagery

Owner esri
Summary
This detailed imagery map presents satellite imagery for the world and high-resolution imagery for the United States, Great Britain, ...

Details Add

USA Topographic Maps

Owner esri
Summary
This map service presents land cover imagery for the world and detailed topographic maps for the United States at multiple scales.

Details Add

World Physical Map

Owner esri
Summary
This map service presents the Natural Earth physical map for the world.

Details Add

DeLorme World Basemap

Owner esri
Summary
DeLorme's topographic basemap is a seamless global data set that portrays transportation, hydrography, jurisdiction...

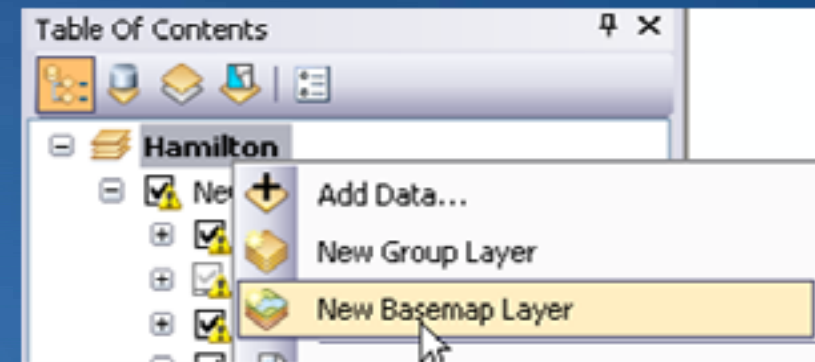
Details Add

Imagery



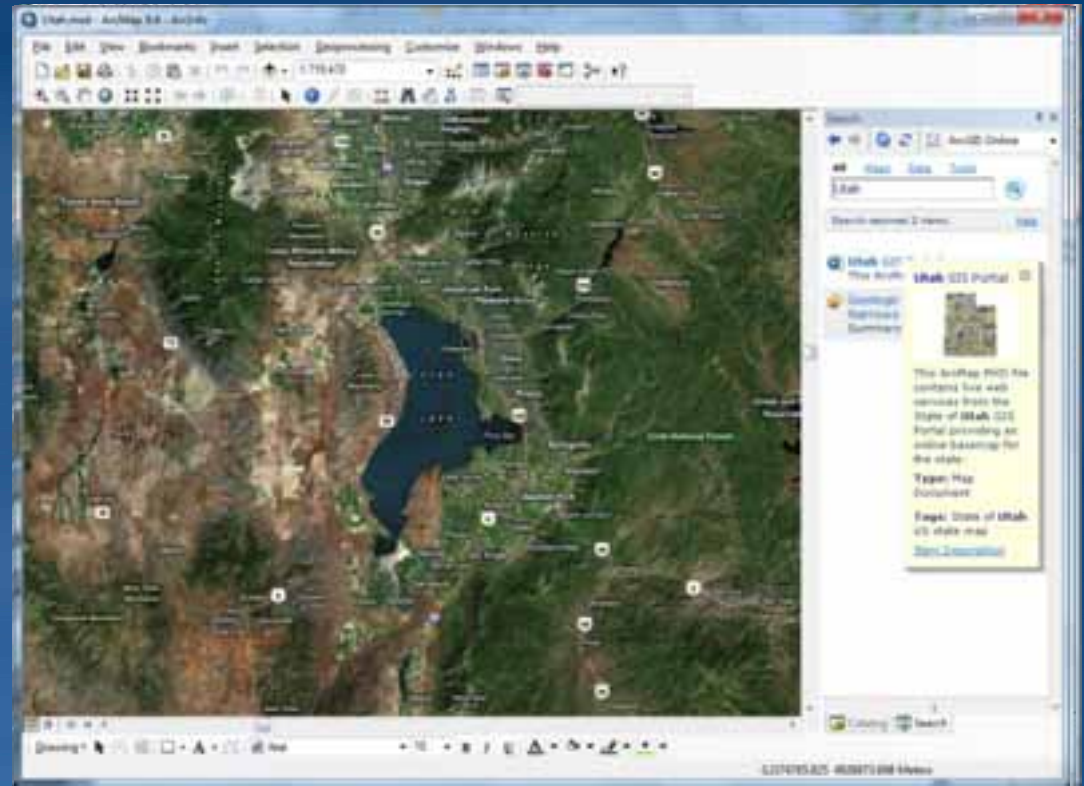
Better Display

- **Fast Display**
 - New group layer called Basemap
 - Draws continuously during navigation
 - Uses high performance drawing engine
- **Easy to create**
 - Drag and drop or copy and paste
 - A data frame can have more than one basemap
 - At any position in the table of contents



Quick Access and Search

- **Catalog in ArcMap**
 - Data Management
 - Project Organization
- **Search**
 - Data, Layers, Maps
 - Quick Preview
 - Drag and Drop results



Local, Enterprise and Online Search

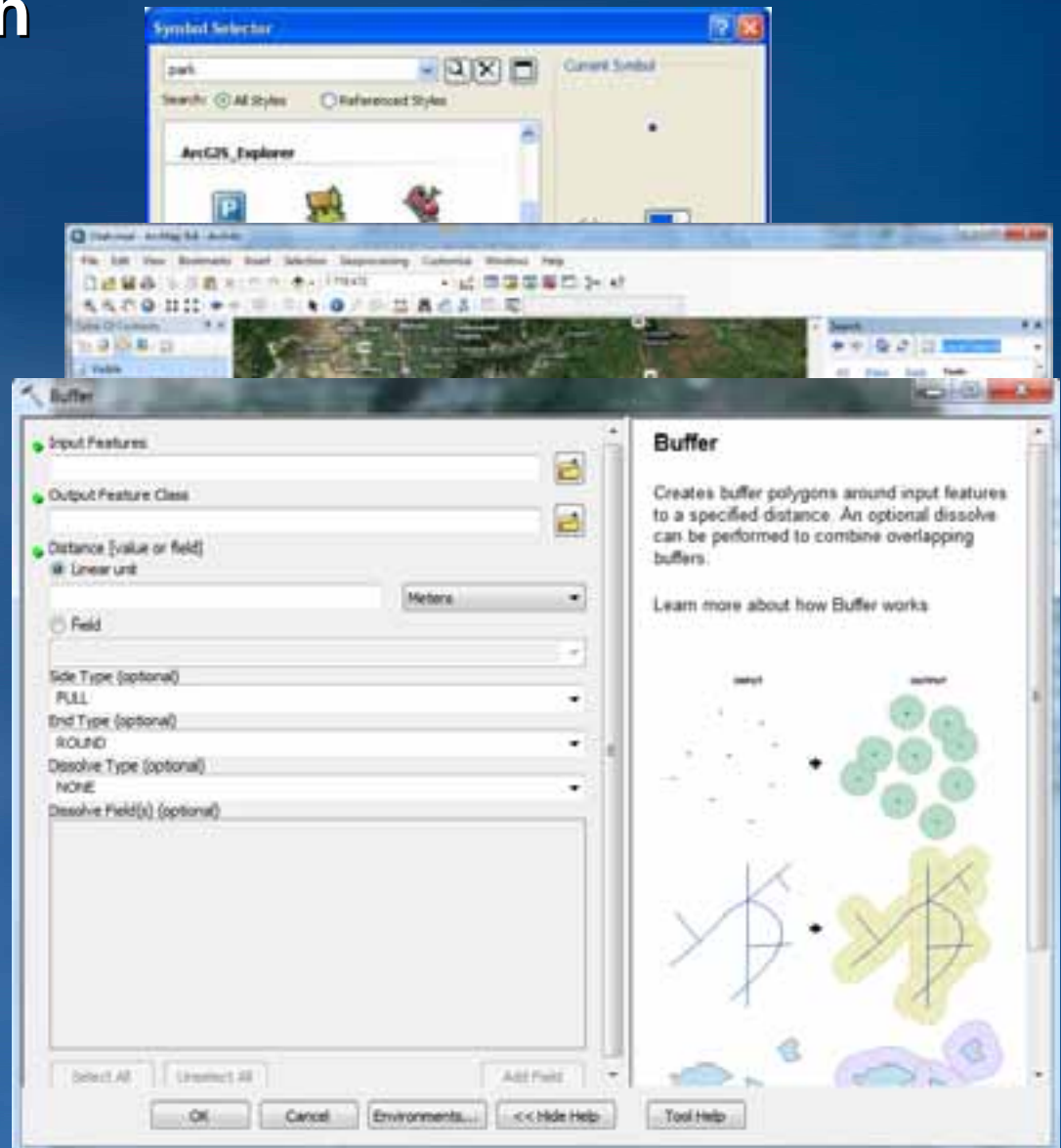
Quick and Easy Search

- **Find Symbols**

- Filters
- Symbol names and tags
- Common search strings

- **Find Tools**

- Auto complete
- Preview Tool
- Execute

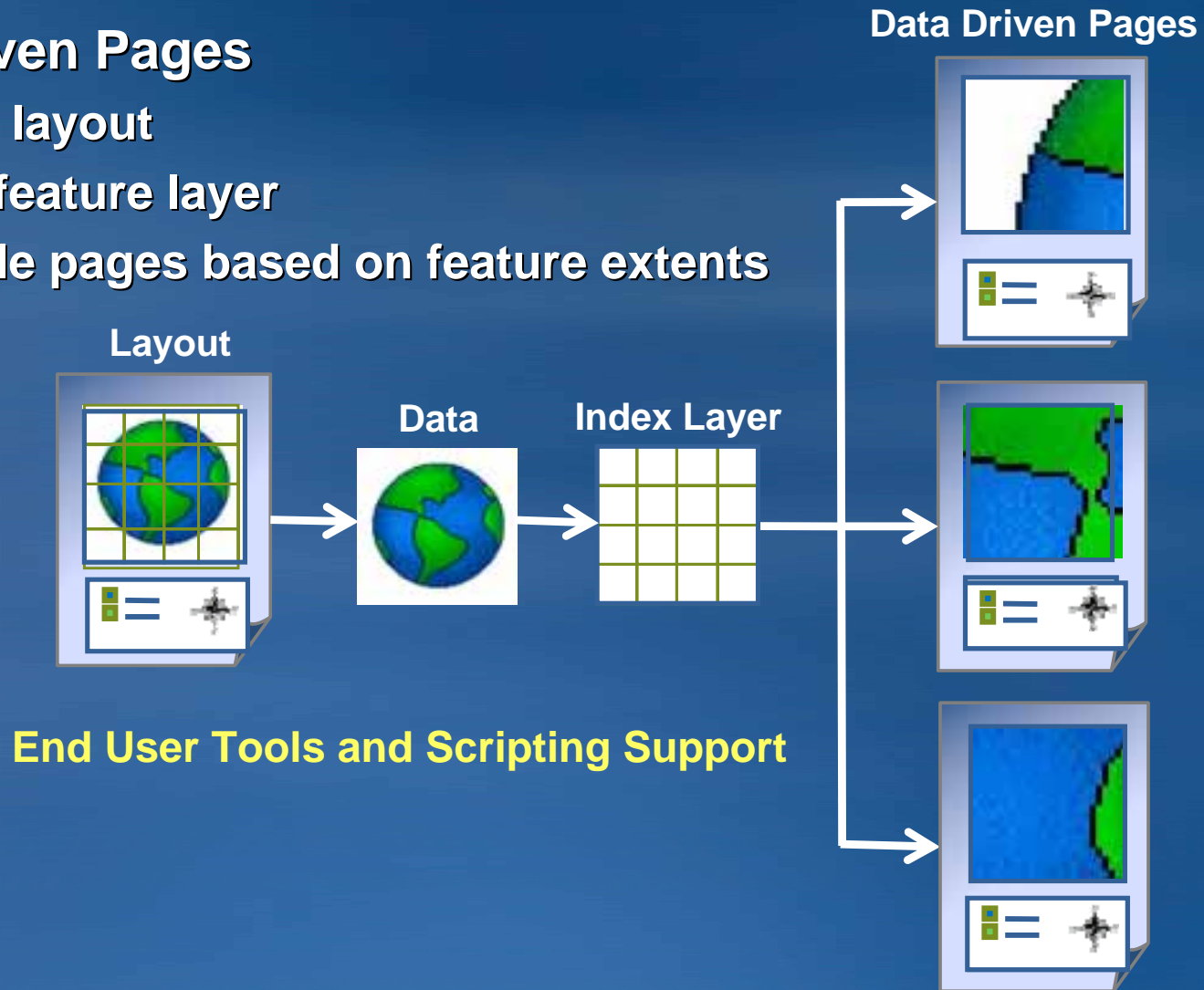


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- Simple and streamlined editing
- Better analysis and modeling
- Visualization and 3D
- New ways to share
- Easy customization and deployment
- ArcGIS community

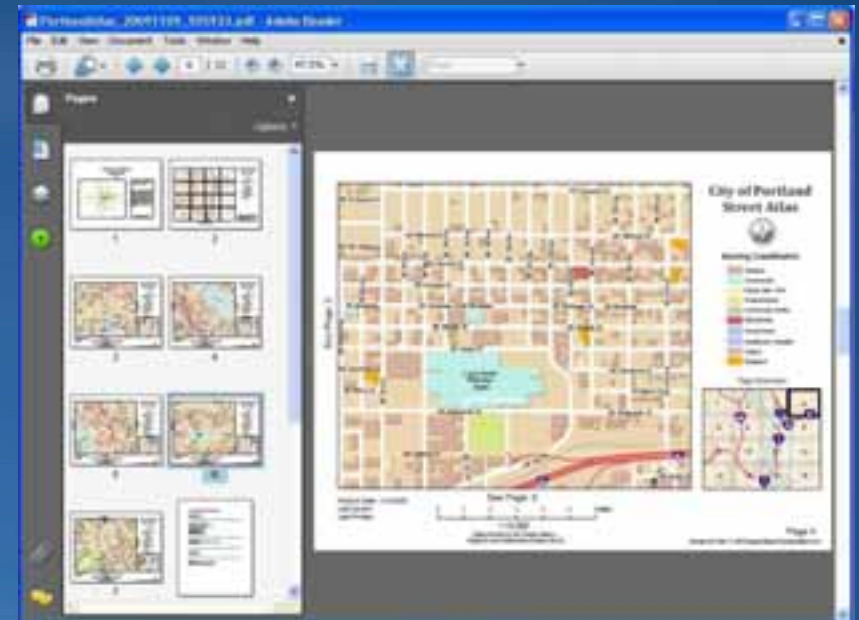
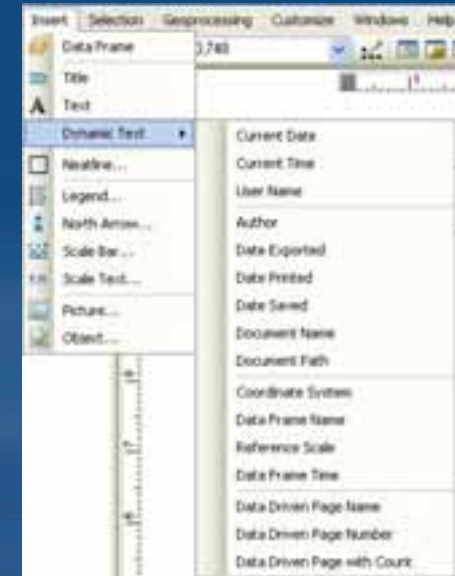
Create Map Books and Atlases

- Part of ArcGIS
- Data Driven Pages
 - Single layout
 - Index feature layer
 - Multiple pages based on feature extents



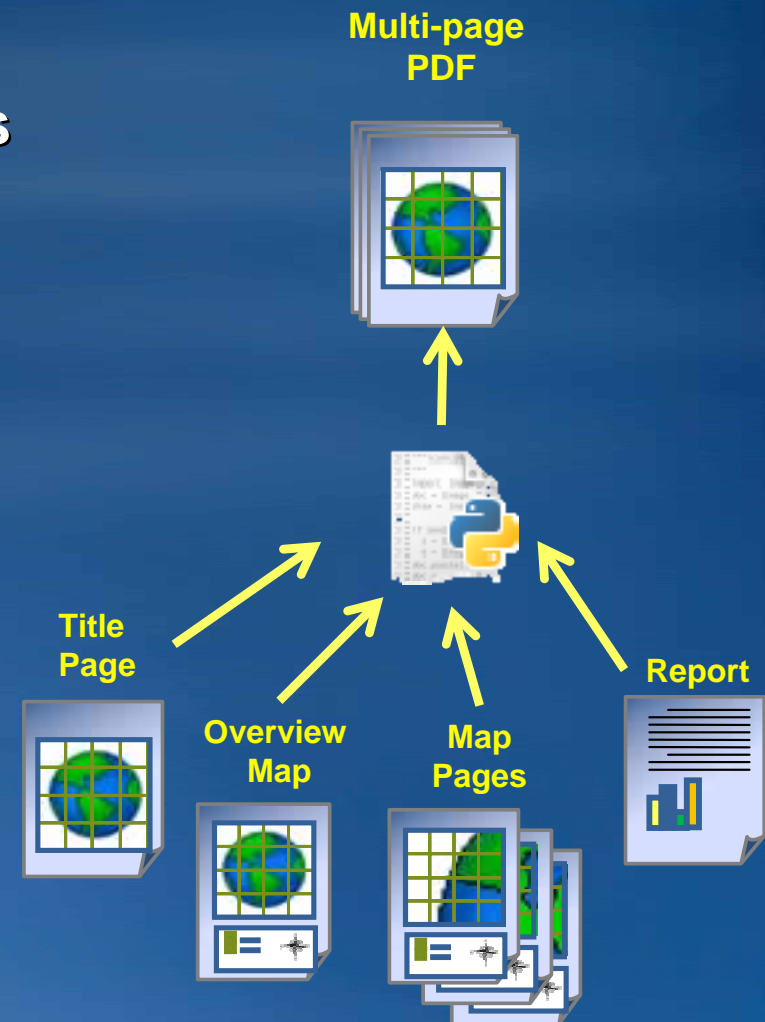
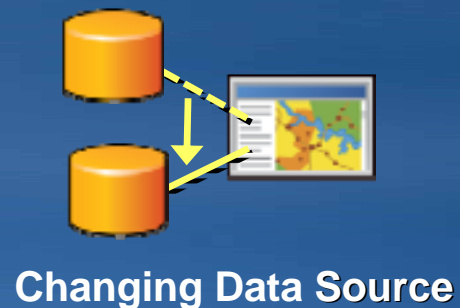
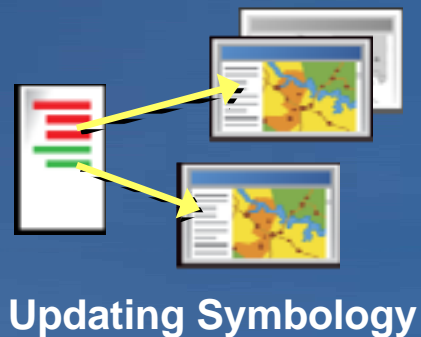
Create Map Books and Atlases

- **Dynamic Text**
- **Dynamic Locator Maps**
 - New extent options
 - Extent Indicators
- **Highlight pages**
 - Exclude layers in Clip to shape
- **Multi-page PDF export**



Automate Mapping Workflows

- Simple Python scripting (arcpy.mapping)
- Manage large numbers of map, layers and datasets
- Save time doing repeatable task
- Expose as a Geoprocessing Services



Map Automation Demonstration



Author High Quality Maps

- ArcMap makes great maps for print and the web
 - Improvements in Labeling, Representations and Templates
- New Tools for generating multi-scale maps
 - Focus on transportation and buildings
 - Reduce complexity and resolve conflicts



1:4k



1:9k



1:18k

Cartographic Generalization

Reduce Feature Count

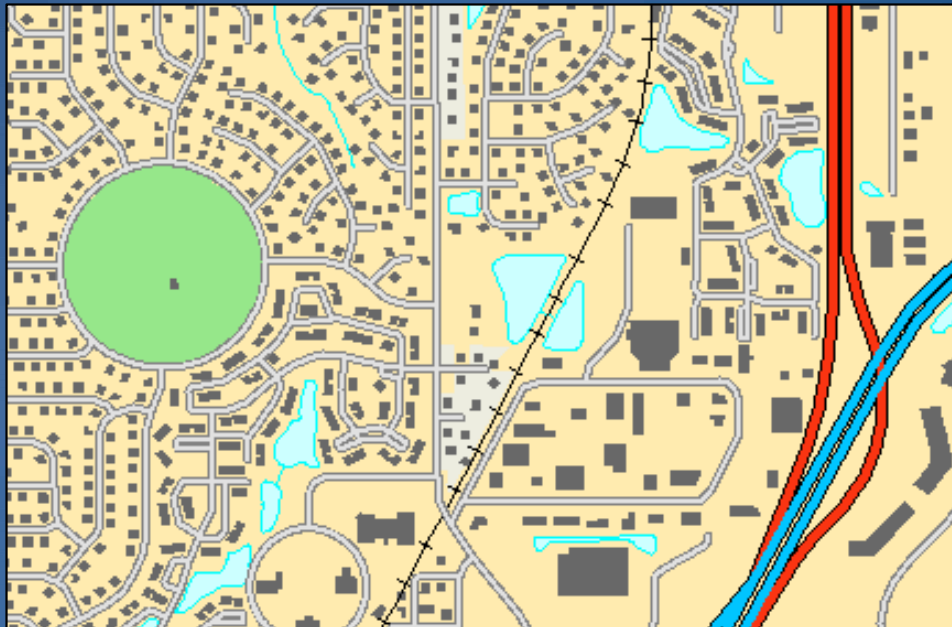
- Thin Road Network

Reduce Complexity

- Merge Divided Roads

Resolve Conflicts

- Resolve Road Conflicts
- Propagate Displacement
- Resolve Building Conflicts



1:9 000



1:18 000

Maplex Labeling Enhancements

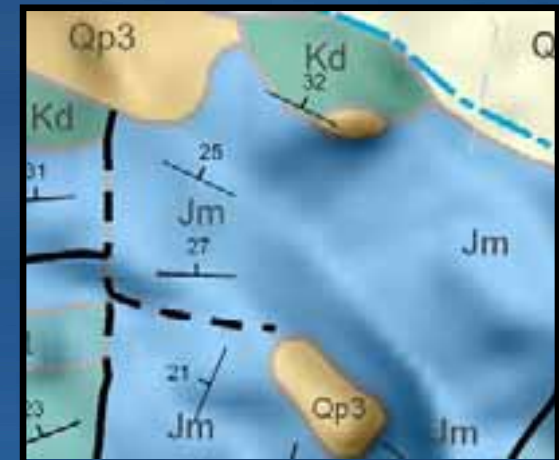
- Retain label properties when opening a map without Maplex
- Maplex labels draw in optimized map services



Single Sided Boundaries



Overflow Polygon Holes

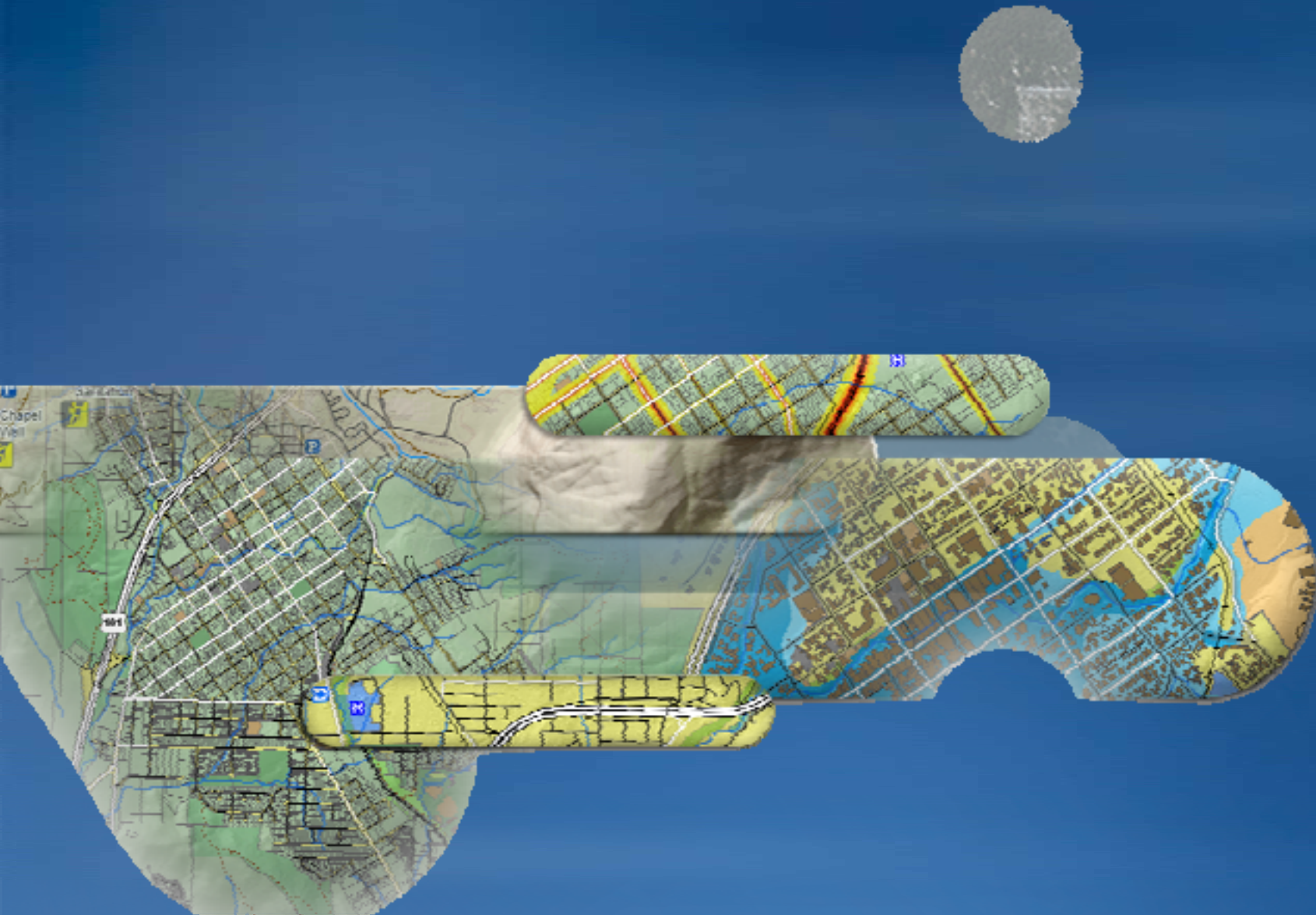


Repeat Polygon Labels

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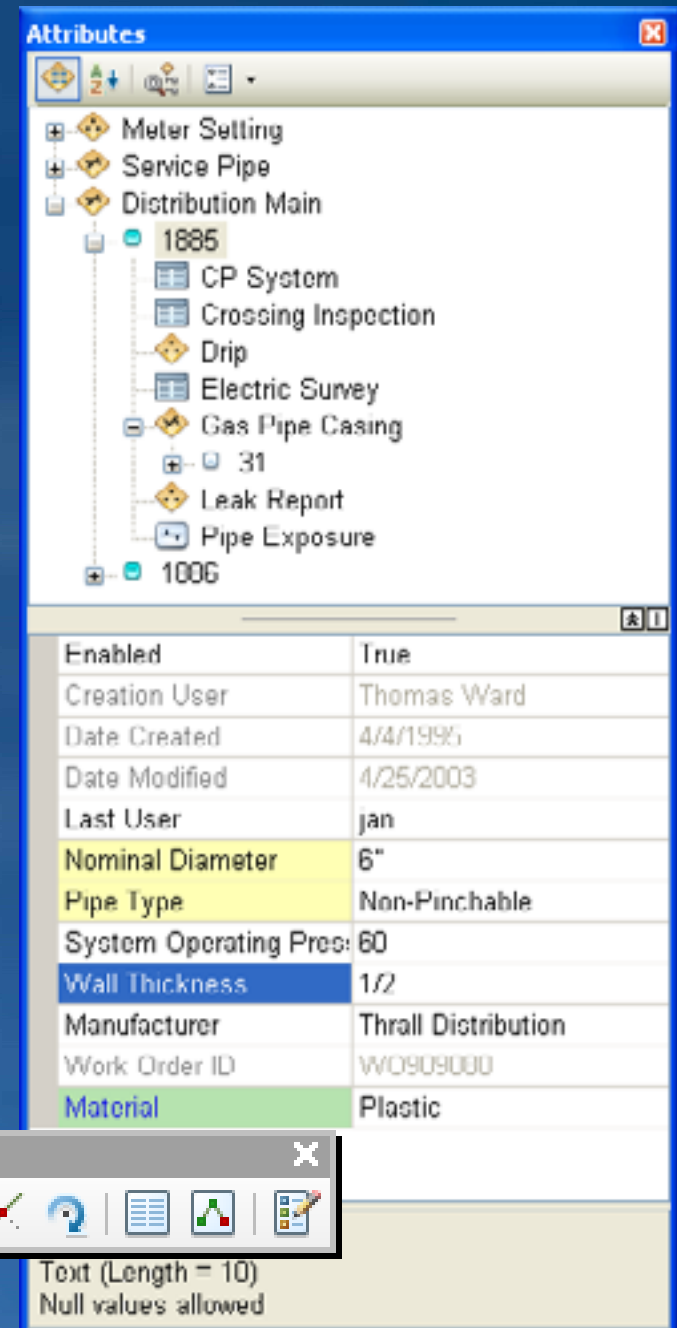
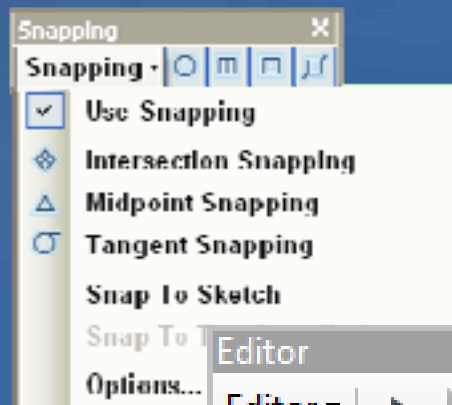
Simple & Streamlined Editing Demonstration



Editing Experience

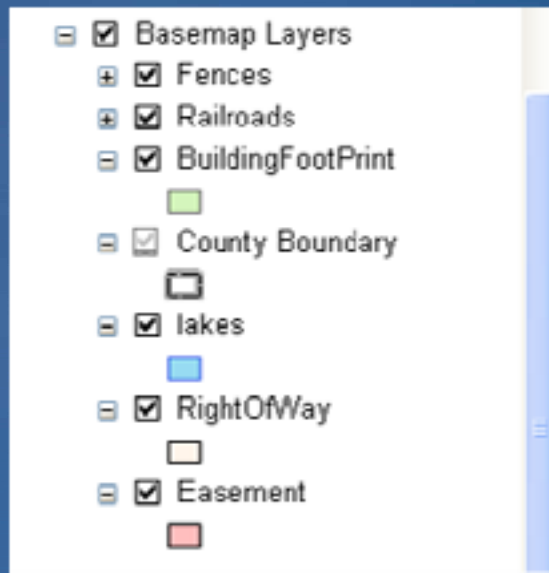
A Simple & More Intuitive Approach

- Layer-based editing
- Efficient feature construction
- Simple dataset creation (Packing)
- Simplified snapping environment
- Productivity improvements
- Improved attribute management



Authoring Maps for Editing

- Author map layers
 - Basemaps
 - Set Field properties
- Author feature templates



The Template Properties dialog box for the 'Meters - Large Flag' template. It shows the following fields and values:

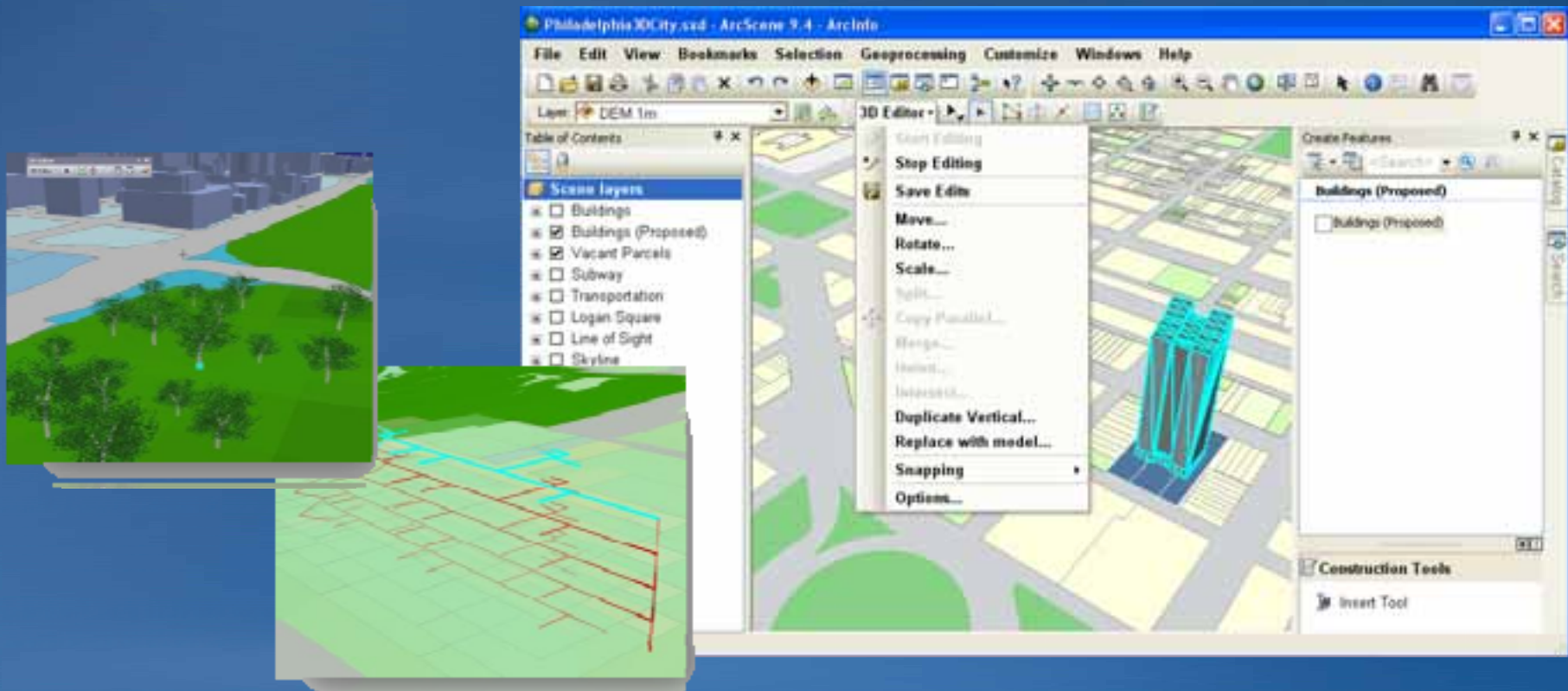
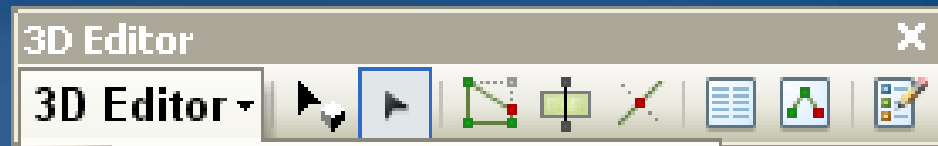
- Name: Meters - Large Flag
- Description: (empty)
- Tags: Point
- Default Tool: Point
- Target Layer: Point (selected), Point at end of line
- Drawing Symbol: (red flag icon)
- View: (expanded)

Field	Value
Facility Identifier	<Null>
Large Meter Flag	False
Install Date	<Null>
Rotation	0
Account Identifier	<Null>
Location Identifier	<Null>
Critical Customer	True
Enabled	True

Buttons: OK, Cancel, Apply

Editing in 3D

- Same editing experience as with 2D features
 - Define what you want to add
 - Efficient attribute update
- 3D-specific tools
 - Model placement
 - Vertical line support



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Geoprocessing Framework

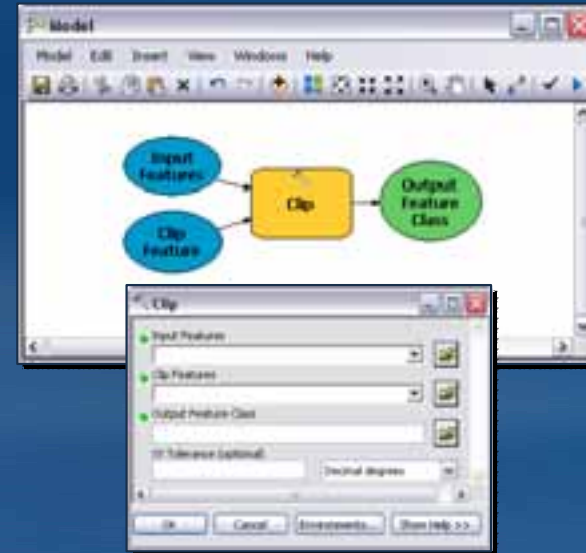
Commonly Used Tools and Options



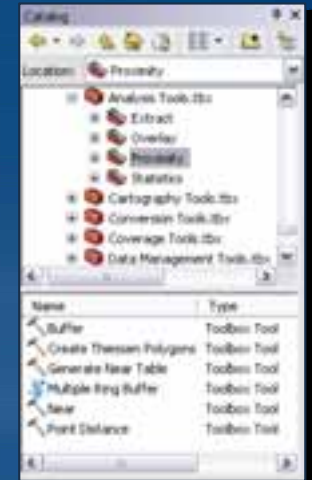
Finding Tools and Data



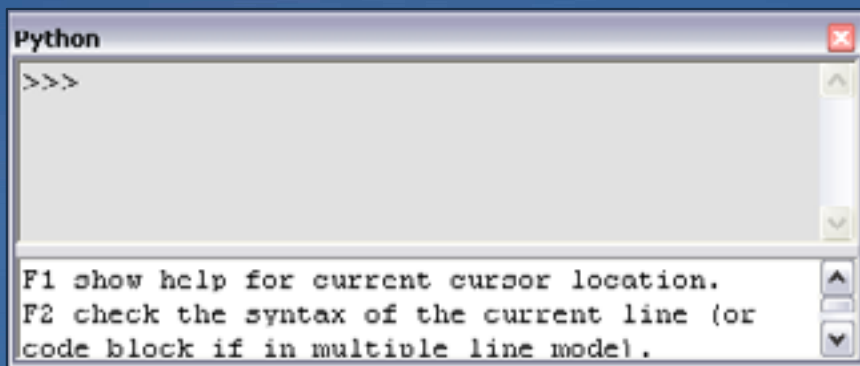
Using and Building Tools



Organizing Tools and Data



Scripting with Python



Set Geoprocessing Options



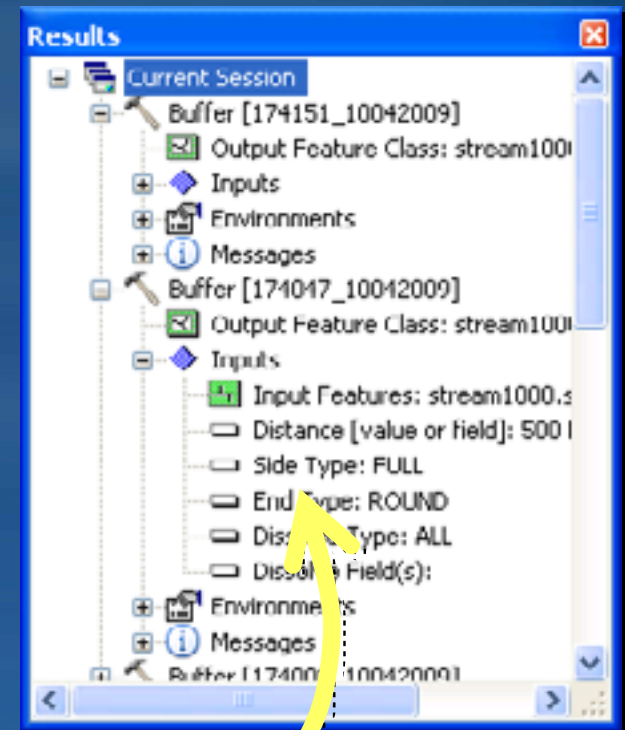
Setting Environments



Background Geoprocessing

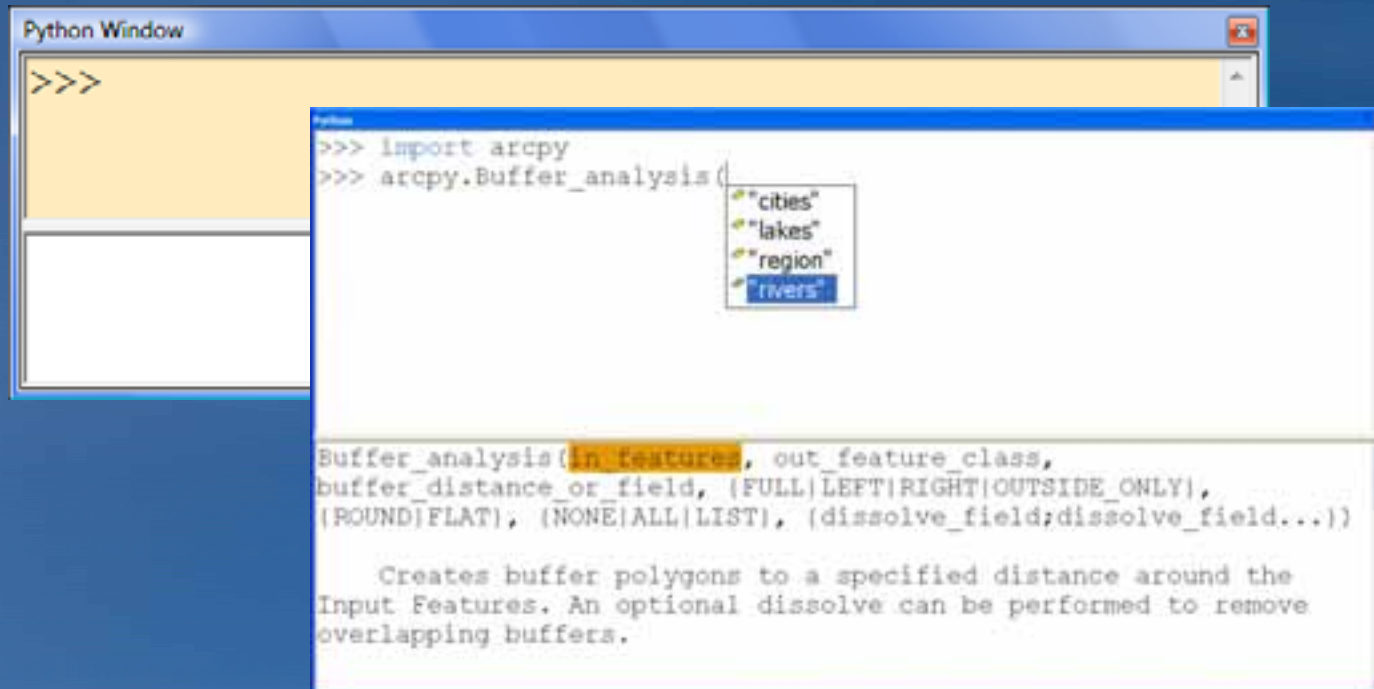
Keep the application interactive while running tools

- Execution
 - Allows queuing of multiple tools
 - Progress and completion reported
 - Geoprocessing Options
- Background
 - Model tools can run in the background
 - Python window can run in the background
- Foreground
 - ModelBuilder runs in the foreground
 - During an edit session, all run in foreground



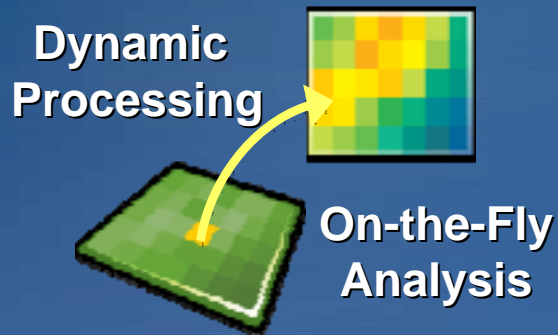
Python in ArcGIS Desktop

- New Python Window to replace the command line; interactive, multiline
- New support of map production and automation
- Spatial Analyst Map Algebra in Python
- Geostatistical Analyst functions in Python

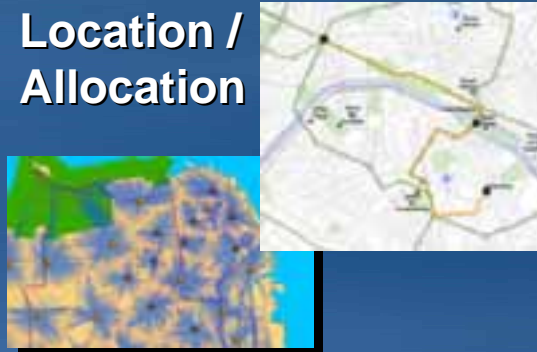


Advancing Geographic Analysis

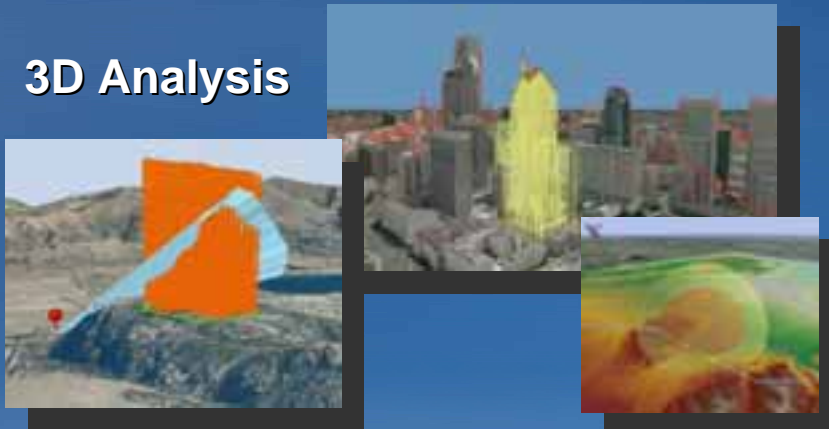
- The power of ArcGIS
- 130+ New Geoprocessing Tools
 - 750+ Tools in ArcGIS



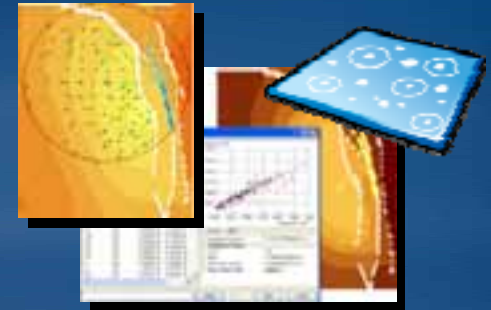
Location / Allocation



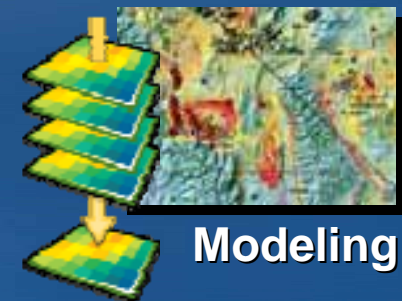
3D Analysis



Ecological Sampling

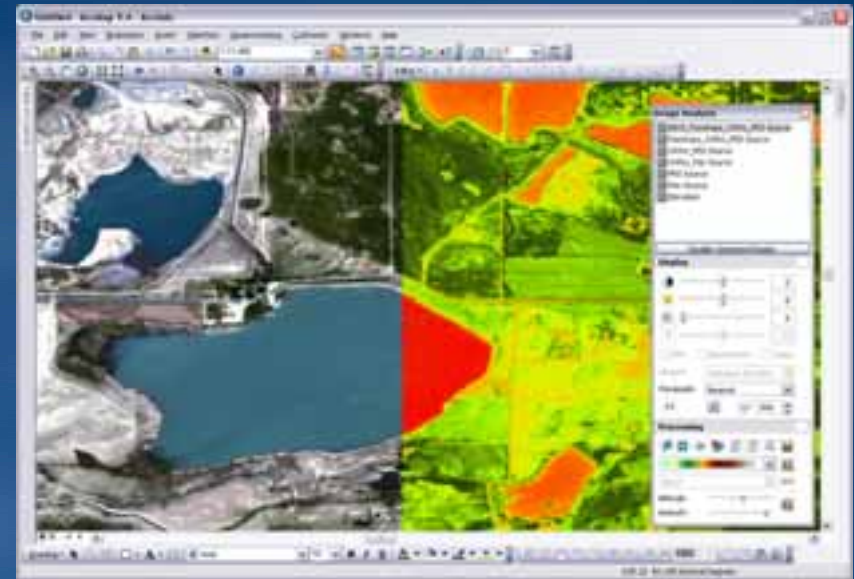


Fuzzy Overlay



Imagery in ArcMap

- Fast and smooth navigation
- Large images and more formats supported
- Image Analyst Tools
 - Contrast, brightness, transparency, and Gamma sliders
 - Dynamic range adjustment
 - One click options to apply processing and analysis functions (NDVI, Difference,..)
 - Clipping, exporting, and mosaicking tools



ArcGIS Desktop the common platform for geospatial imagery

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Improved Visualization

Fast Display



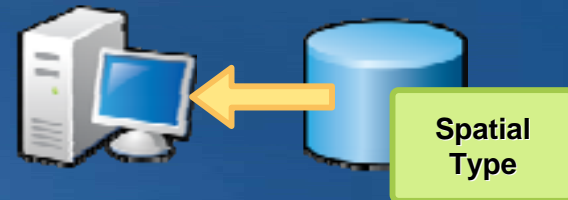
Better Tables/
Reports/Graphs

Time Visualization



Shape	AREA	FID	NAME	OWNER
Polygon	2224.6132	36500001900	OREGON	OREGON STATE OF
Polygon	990421.64	36500001900	OREGON	OREGON STATE OF
Polygon	5100019.084	36500001900	LONDON	LONDON NEW FARM COMPANY
Polygon	1815415.962	36500001900	LONDON	LONDON NEW FARM COMPANY
Polygon	166274.109	36500001900	SPROW	SPROW LOW LONPSE
Polygon	127095.917	36500001900	HEWNE	HEWNE LEE ROBERT E AND
Polygon	218625.087	36500001900	LONDON	LONDON NEW FARM COMPANY
Polygon	1716819.162	36500001900	BUCKLE	BUCKLEY WALTER H & PERRY LL
Polygon	6177953.62	36500001900	MAPISH	MAPISH GEORGE E
Polygon	1841190.942	36500001900	BUZZSA	BUZZARD MOUNTAIN TREE FARM LLC
Polygon	5661752.091	36500001900	SCHEM	SCHEMUS FARMER H TR

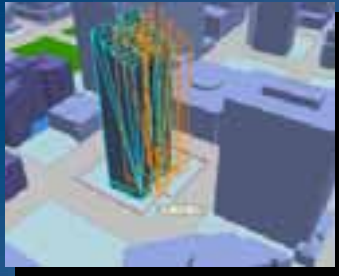
Attribute Tables



Direct Access
(SQL Query Layer)

ArcGIS 10 - A Complete 3D GIS

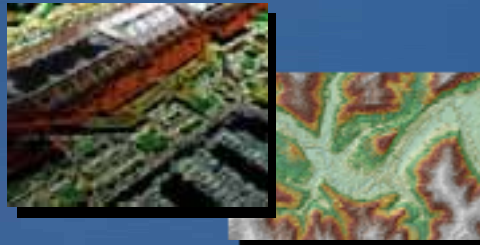
Providing Powerful Data Management, Analysis & Visualization



3D Editing



Fast Visualization



Terrain Editing

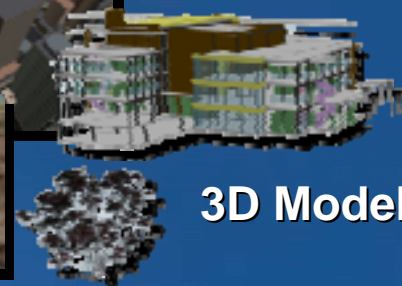


Video Integration

3D Analysis



Virtual Cities

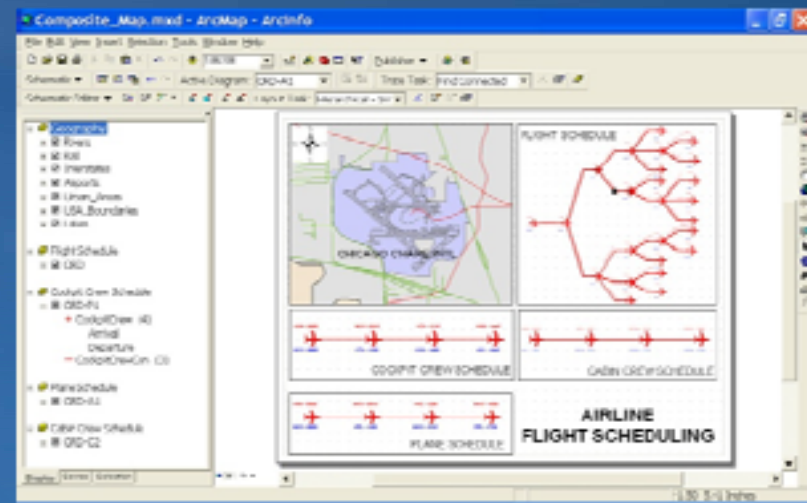
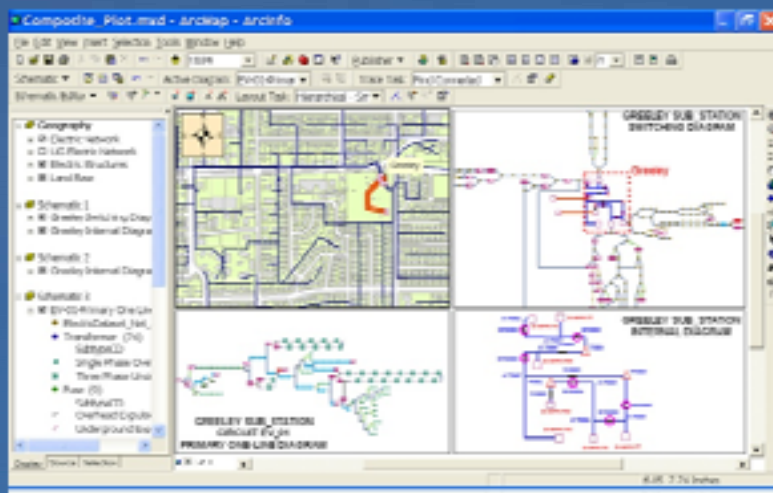


3D Models

... Removing Limitations & Dramatically Improving Performance

ArcGIS Schematics

- Schematic layers just another map layer
- Diagrams are now a set of features displayed as layers
 - Simplify and enhance both configuration and usability
 - Standard labeling and symbology
 - Simple configuration
- Enhance diagram management and sharing



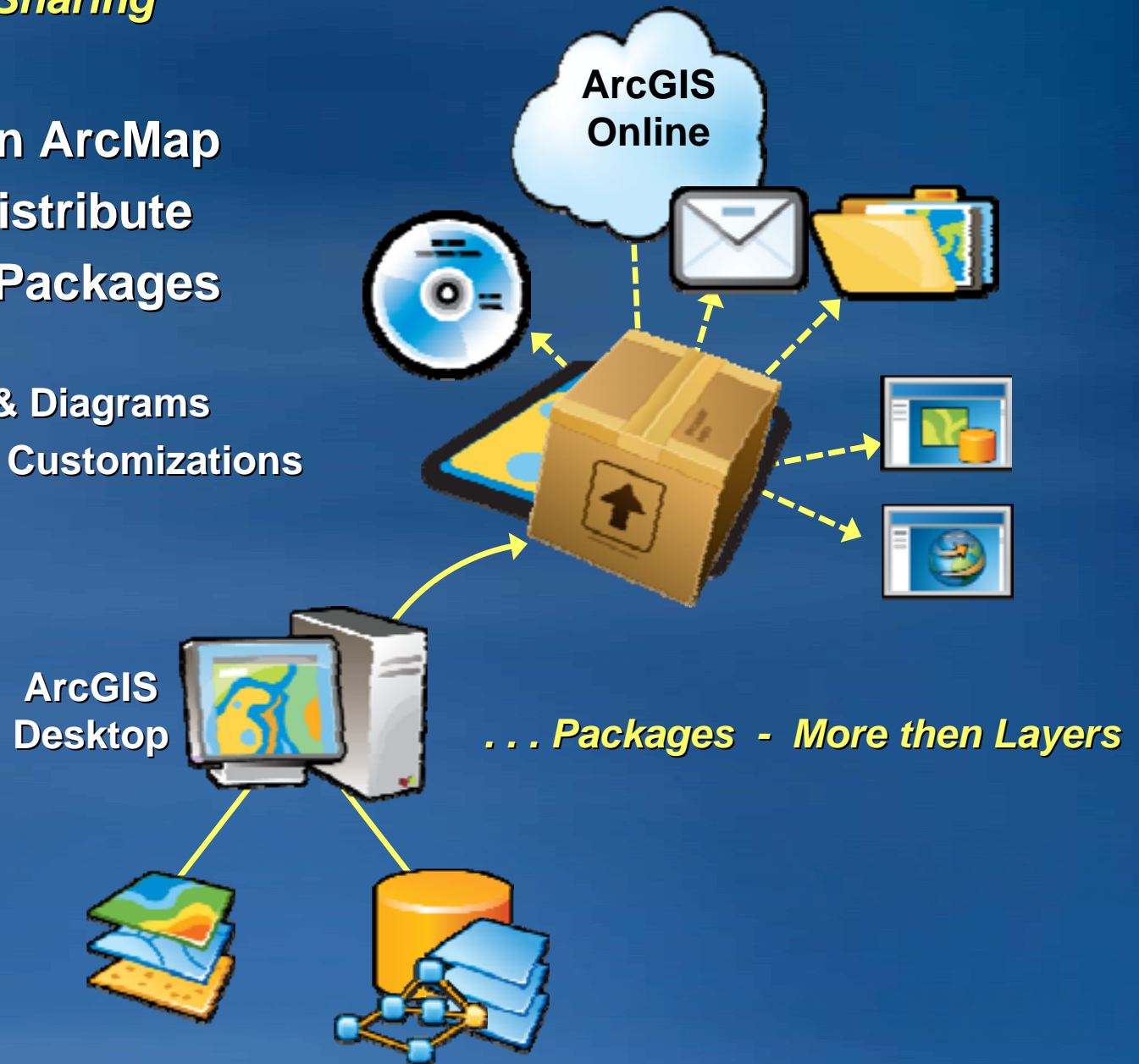
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Sharing Your Work - *Packages*

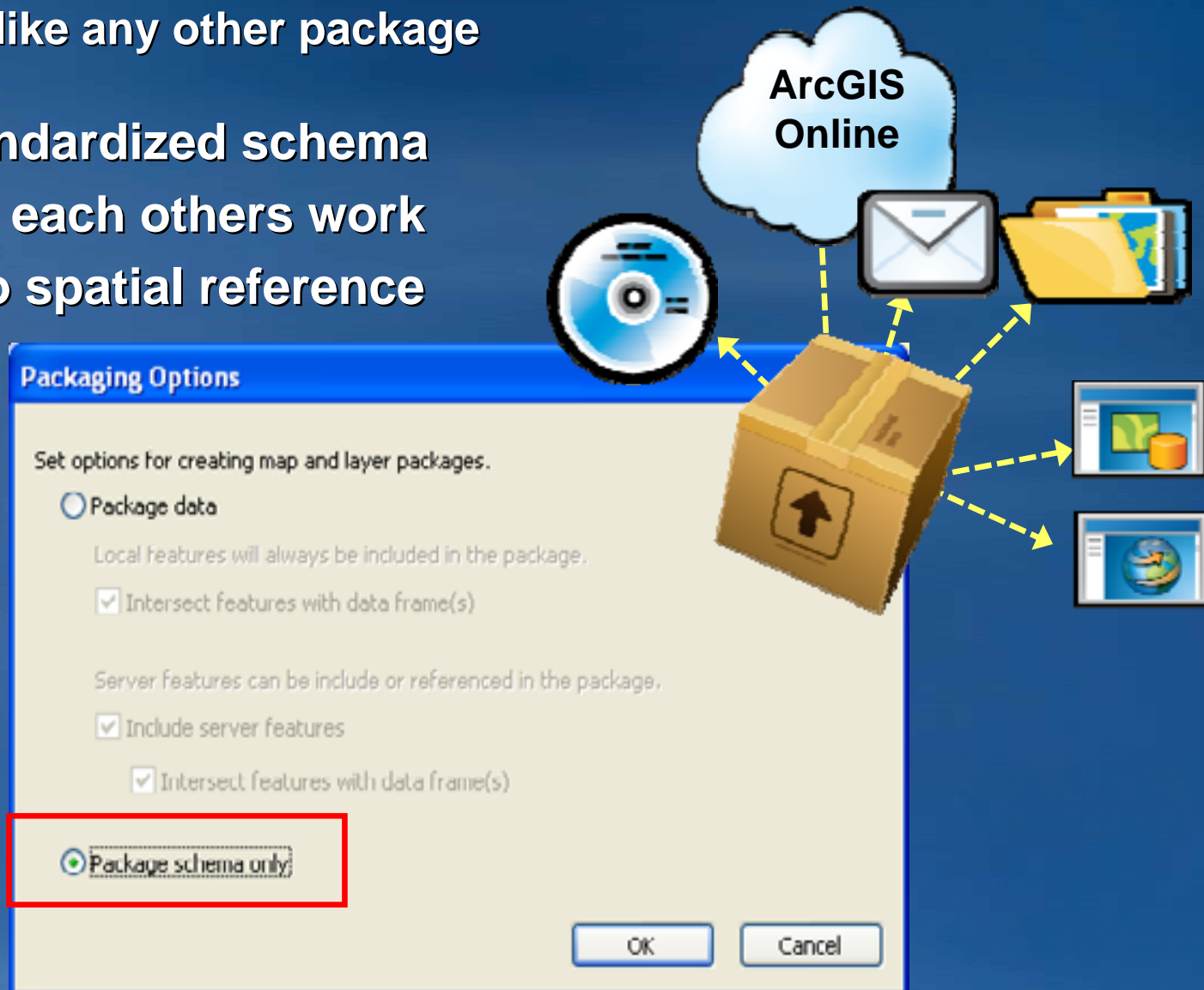
A New Method for Sharing

- Easy to create in ArcMap
- Many ways to distribute
- Share Maps as Packages
 - Layers & Data
 - Maps, Globes & Diagrams
 - Tools, Models, Customizations



Sharing Editing Templates

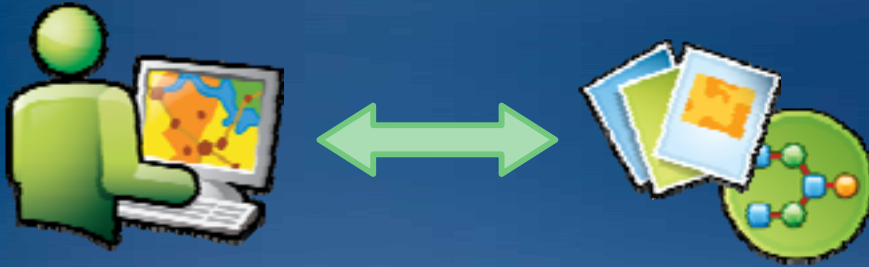
- Save Package schema only
 - Deploy like any other package
- Share standardized schema
- Leverage each others work
- Not tied to spatial reference



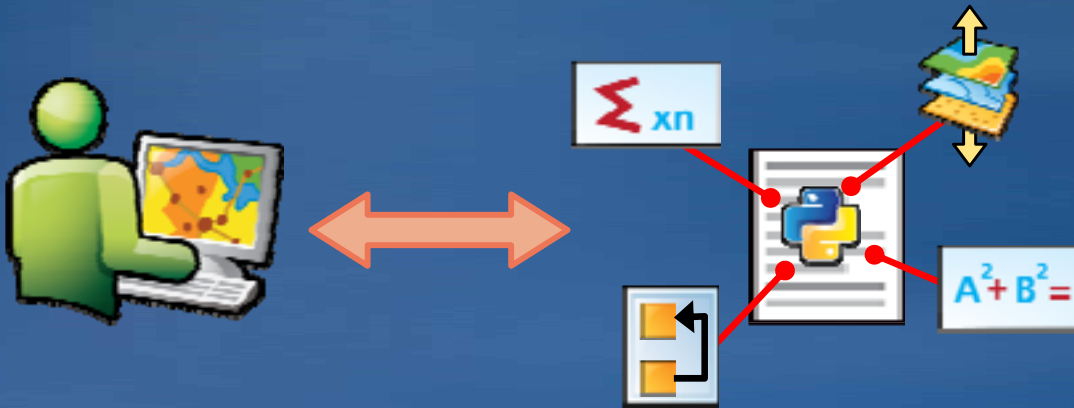
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ArcGIS 10 Desktop Developer



**Custom User Interface
No Code**



**Python Scripting for
automation and scientific
task**



**.NET or Java Add-Ins
Simple to build and share**

Software Development Kits (SDK)

- **Visual Basic for Applications (VBA)**
 - Separate install and authorization
 - Last release
- **ArcObjects .NET SDK**
 - Help, Resources and Samples
 - Visual Studio 2008 and 2010* (VB.Net and C#)
 - Desktop, Engine, Server
- **ArcObjects Java SDK**
 - Help, Resources and Samples
 - Eclipse
 - Desktop, Engine, Server

Deployment

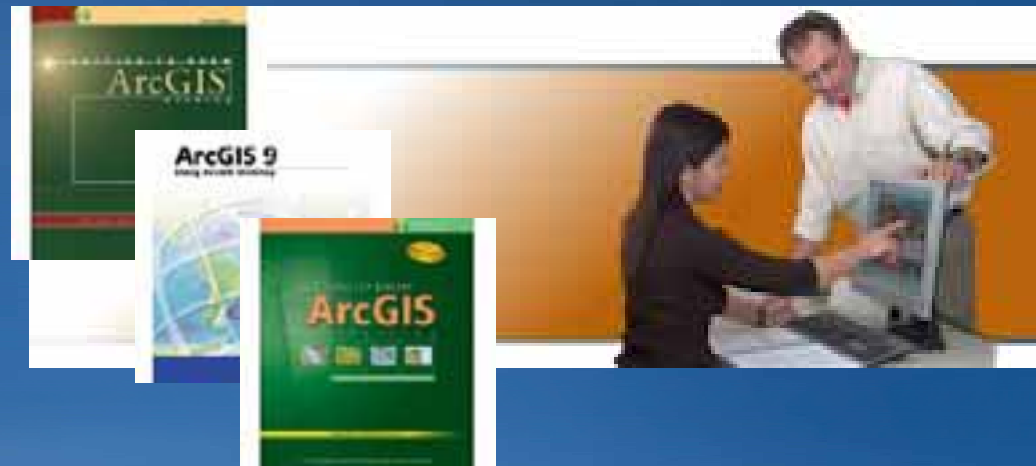
- One Desktop Install program
 - License controls the product level
- Improved Setups
 - Desktop typically installs 40% faster
 - Service Packs can be uninstalled
 - Service Packs for individual products can be installed in isolation from each other
- Licensing and Copy Protection
 - No hardware key
 - New Administration tools
 - License Borrowing

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ArcGIS Community

- Resources
- Training
- Books
- Partners



The Keystone

ArcGIS
Desktop

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Save time on map production

Easier to manage and create data

Better Analysis and Modeling

New ways to share

Thank you for your time