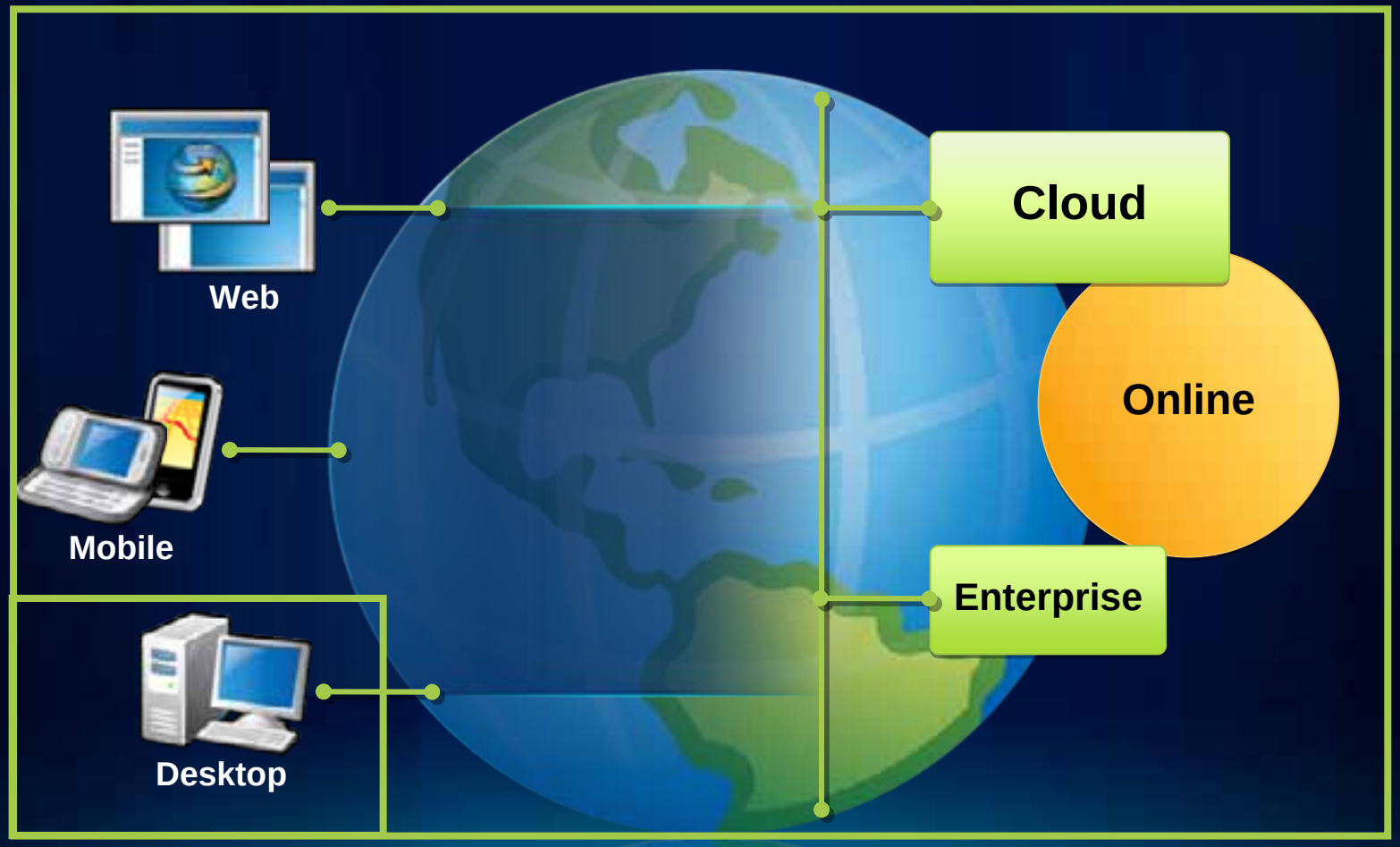
Esri International User Conference | San Diego, CA

Technical Workshops |

ArcGIS for Desktop 10.1

ArcGIS

A Complete System for Geographic Information



Agenda

- Sharing Maps and Data
- Analysis and Geoprocessing
- Mapping and Visualization
- Editing
- And more

ArcGIS Desktop 10.1

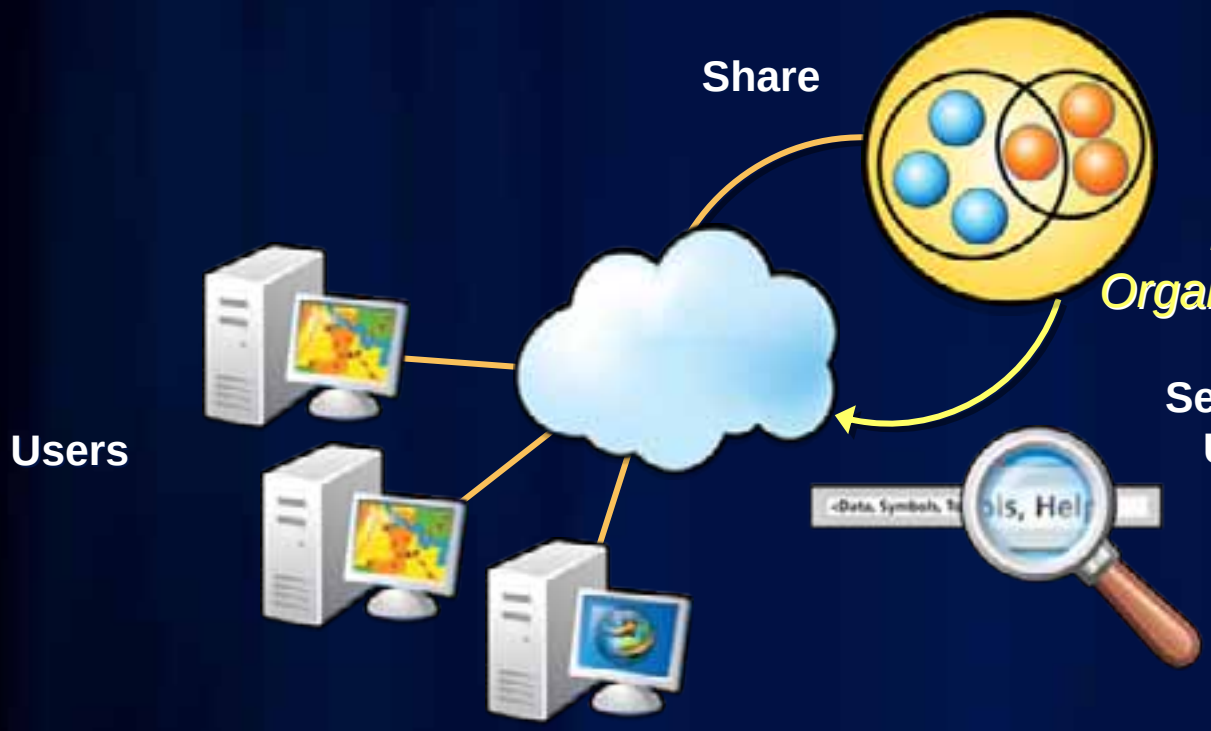
- Builds on 10.0
- Beta 1 July \ August
- Release early 2012
- BetaCommunity.esri.com

- Review this (and all sessions)
  - www.esri.com/sessionevals

Sharing

Information Sharing is Critical

Primary focus of the Desktop Team



. . . Sharing With a Group, Organization, or the Open Web

Transparency and easy information access are now expected…

Sharing as a Package

Professional to Professional

Packaging Demo

Sharing as Services

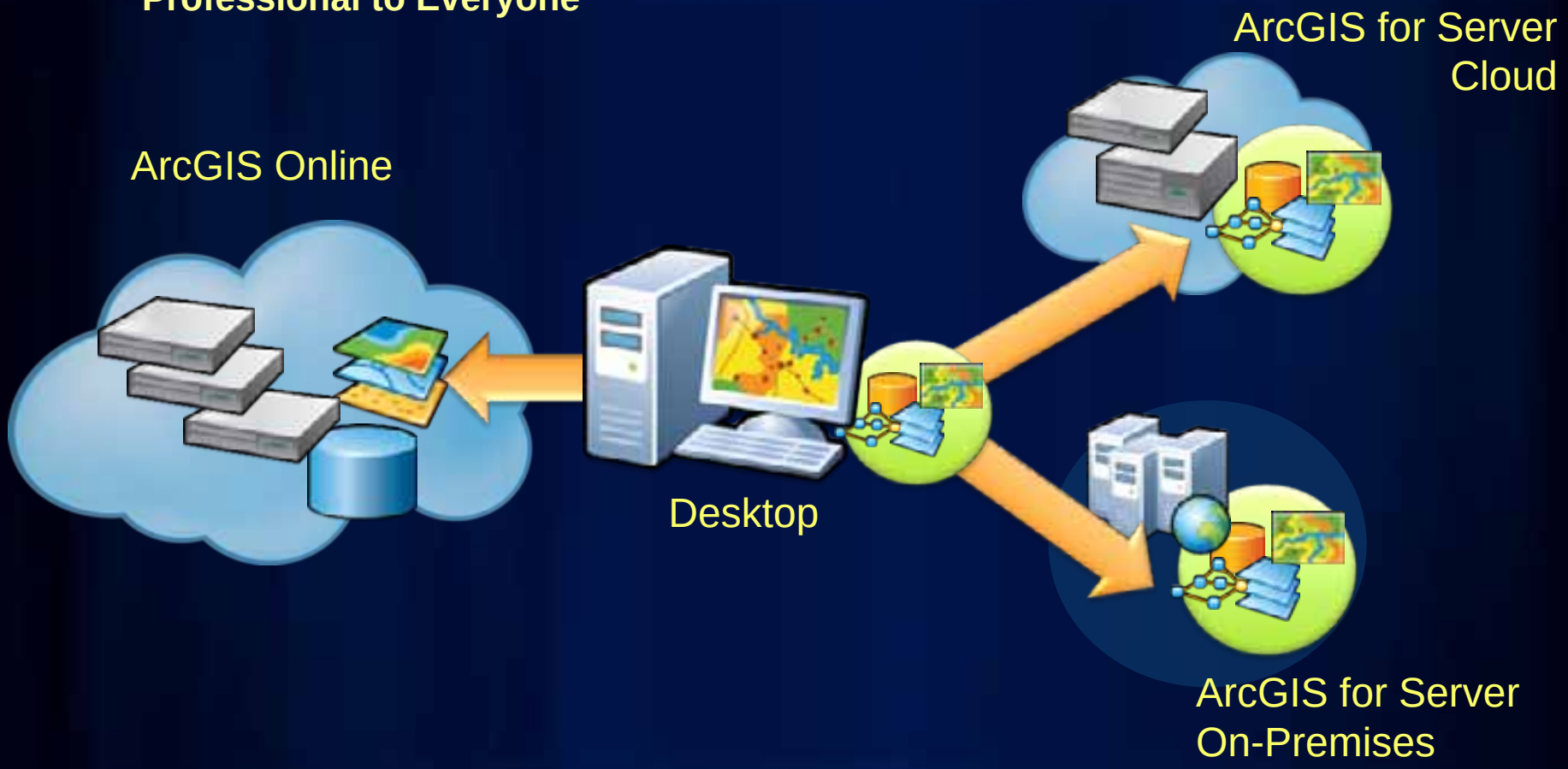
Professional to Everyone

Vision

- **Make it easier to share GIS resources**
  - **Unified sharing experience**
  - **Comprehensive Analysis**
  - **Sharing to servers in the cloud and to ArcGIS Online**

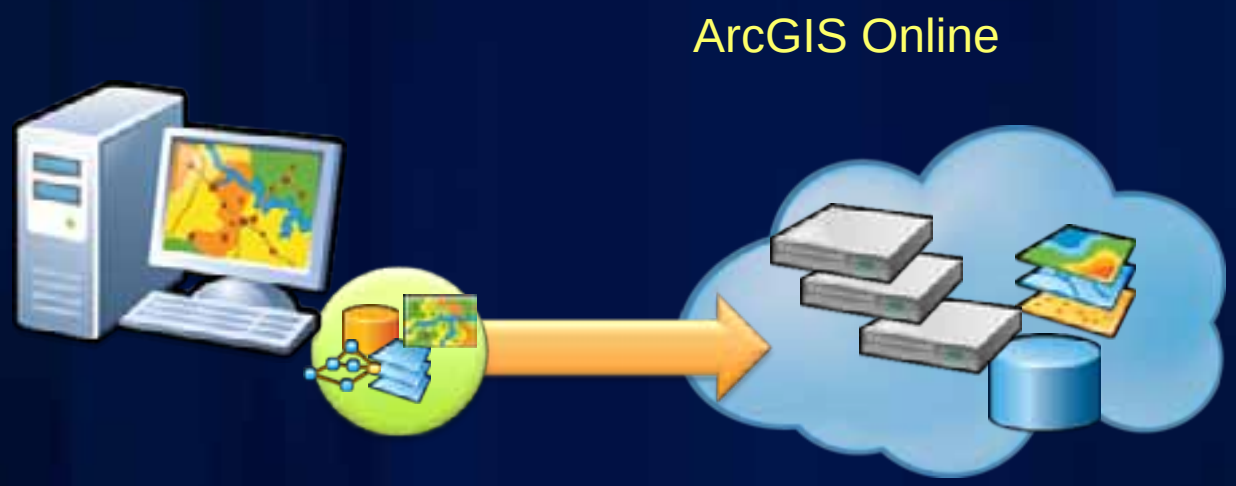
Sharing as Services

Professional to Everyone



Demo

Sharing services as hosted Maps on ArcGIS Online

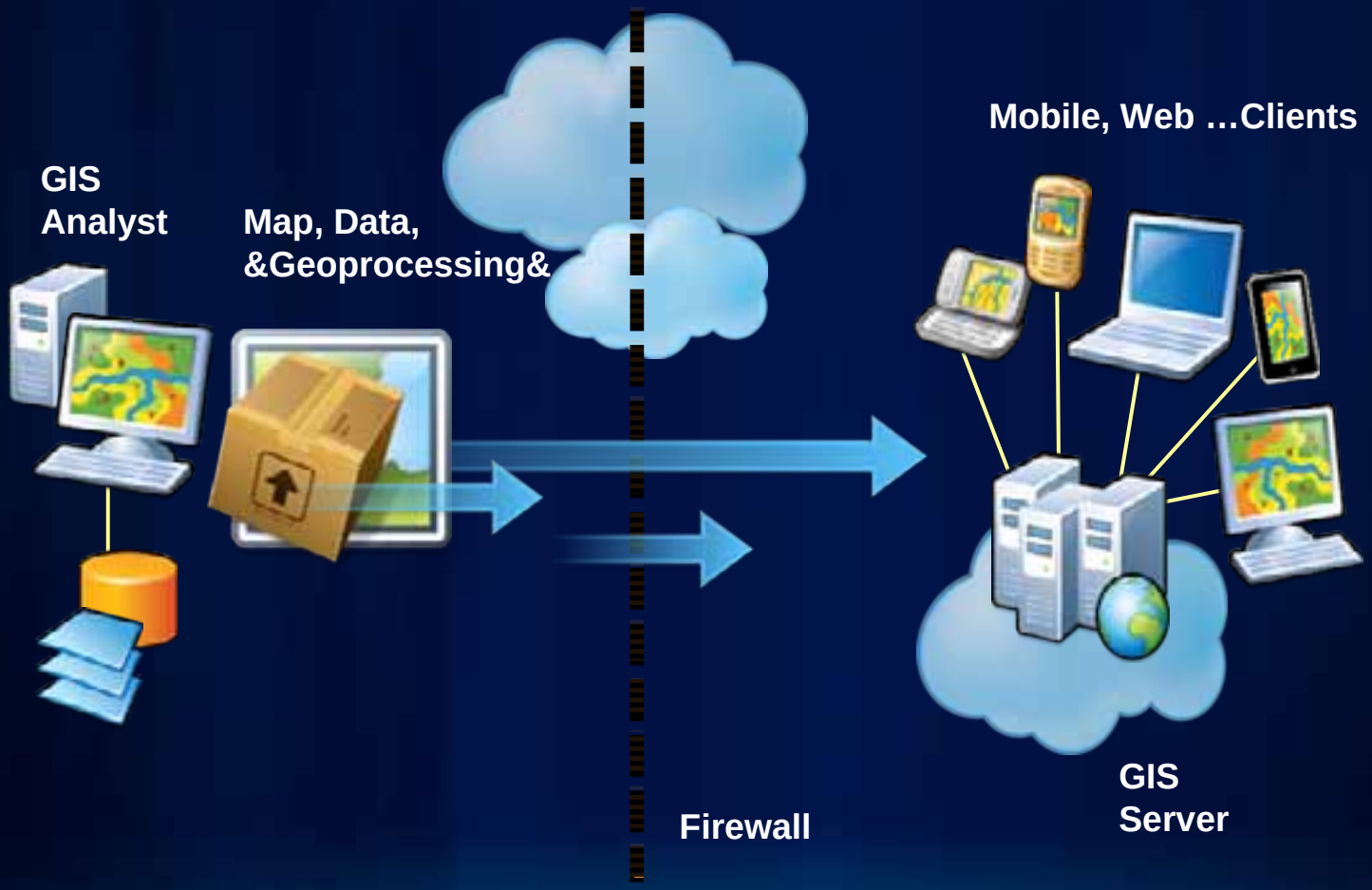


ArcGIS Online – Hosted Mapping

Unlock the skills and knowledge of Desktop users

- **Ready to use ArcGIS in the cloud**
- **No server installation or administration**
- **Access from any where**

Sharing GIS Capabilities to Cloud Servers



Demo

ArcGIS Simplifies Sharing Your Work

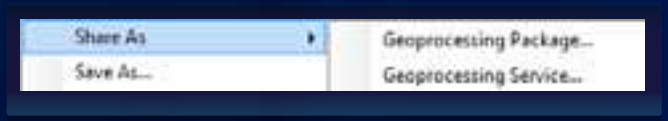
Maps, Data, Tools, and Models . . .

. . . Automating the Process of Creating Services

Sharing Analysis

Analysis

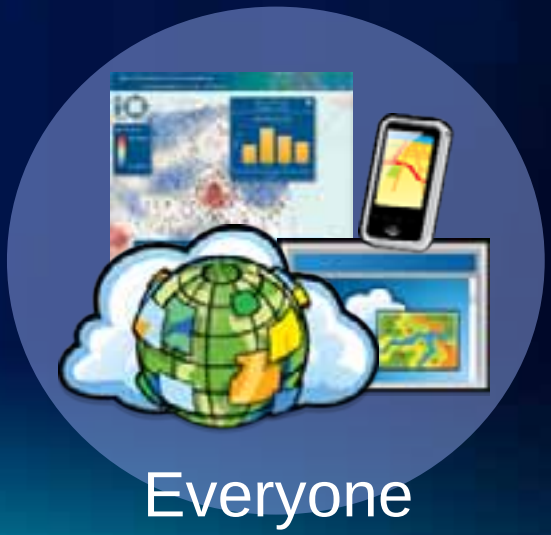
Share as…



Package

GIS Professionals

Service

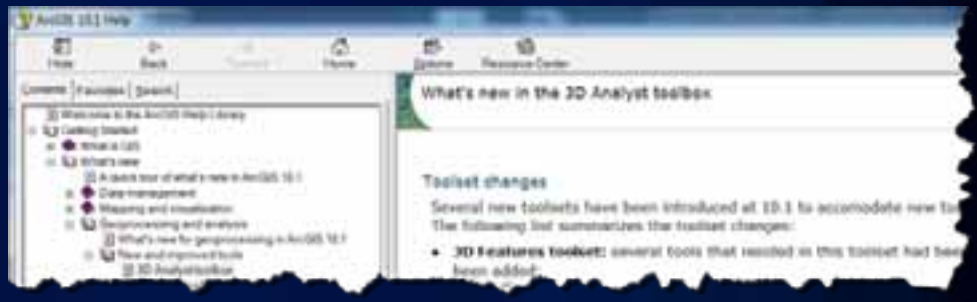


Everyone

Sharing Analysis and Geoprocessing Demo

New Geoprocessing Tools

- 85 New Tools
- 117 New Parameters



- Data Management Tools.tbx
  - Attachments
  - Data Comparison
  - Distributed Geodatabase
  - Domains
  - Feature Class
  - Features
  - Fields
  - File Geodatabase
  - General
  - Generalization
  - Geodatabase administration
  - Geometric Network
    - Add Edge-Edge Connectivity Rule To Geometric Network
    - Add Edge-Junction Connectivity Rule To Geometric Network
    - Create Geometric Network
    - Remove Connectivity Rule From Geometric Network
    - Remove Empty Feature Class From Geometric Network
    - Set Flow Direction
    - Trace Geometric Network

- 3D Analyst Tools.tbx
  - 3D Features
  - Conversion
  - Data Management
    - LAS Dataset
      - Add Files to LAS Dataset
      - Change LAS Class Codes
      - Create LAS Dataset
      - LAS Dataset Statistics
      - Remove Files from LAS Dataset
      - Set LAS Class Codes Using Features

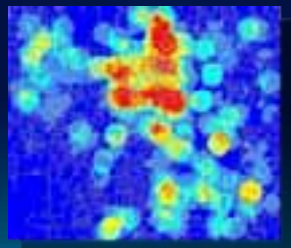
New Tools and Enhancements

- Identify space-time clusters
- Easily identify key explanatory variables for regression analysis

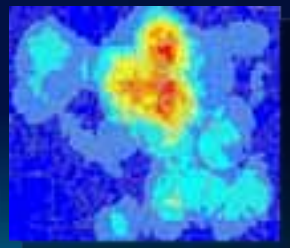
Libya Ushahidi events in space and time

Foot and Mouth outbreaks in 2001

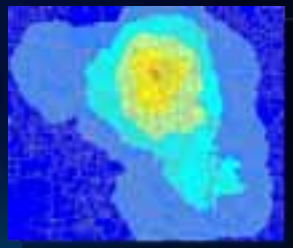
- Group similar features
- Find appropriate scale of analysis



¼ Mile Radius



½ Mile Radius

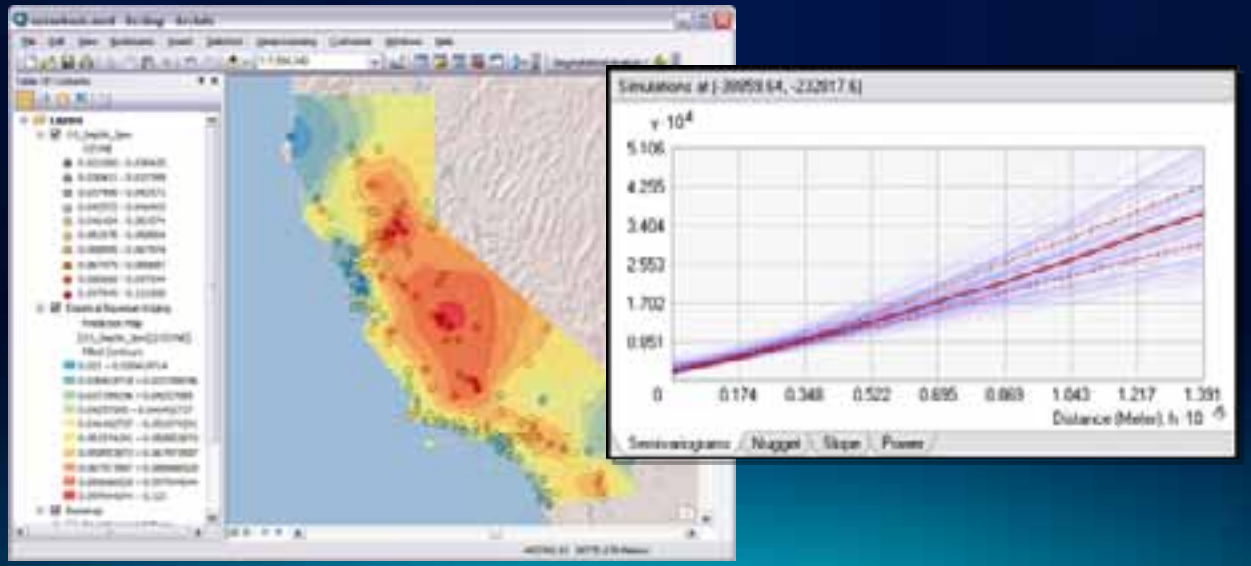


1 Mile Radius

New Tools and Enhancements – Geostatistical Analyst

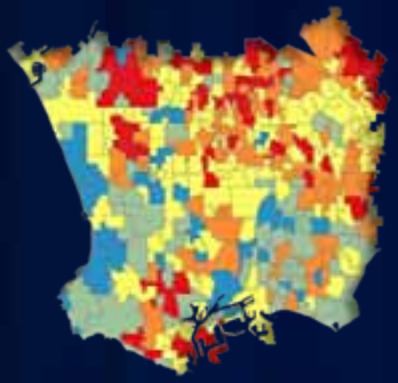
Empirical Bayesian Kriging

- Spatial relationships are modeled automatically
  - Very easy to use (few parameters)
  - Available as a GP tool
- Results often better than traditional kriging
- Uses local models to capture small scale effects
  - Doesn't assume one model fits the entire data

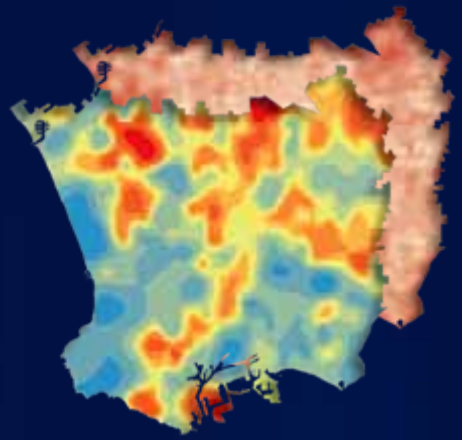


New Tools and Enhancements – Geostatistical Analyst

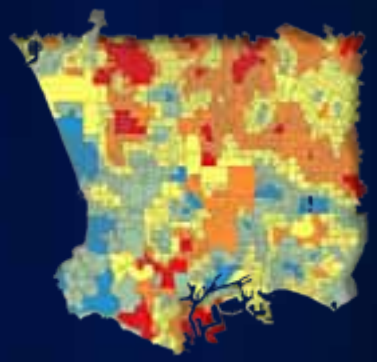
Areal Interpolation



Obesity by school zone



Obesity surface and error surface

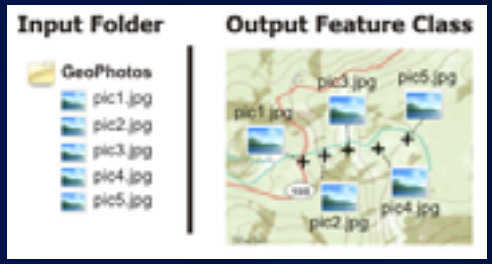


Obesity by census block

- Cast data to a different geometry
  - School zones to census tracts
- Design your aggregation scheme to fit your analysis
- Model and fill-in missing data

New Tools and Enhancements

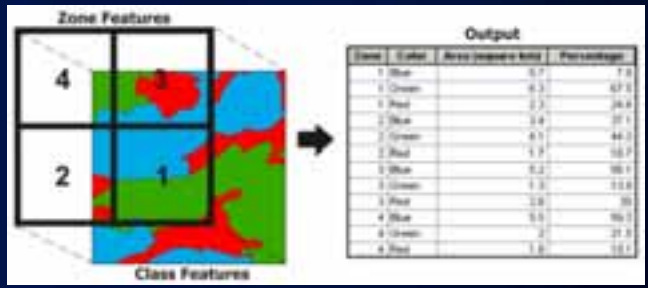
- **Easier to work with GPS data**
  - GPX to Layer
  - GeoTagged Photos To Points
  - Match Photo To Row By Time



Geotagged Photos To Point

- **Better KML experience**
  - KML to Layer, Layer to KML

- **Easier to do complex workflows**
  - Tabulate Intersection
  - Polygon Neighbors



Tabulate Intersection

- **More Accurate Buffering (geodesic)**

Geoprocessing Demo

Python Improvements

- Network Analyst Module
  - Automate NA workflows through Python
- Data Access Module
  - Fast cursor performance
  - Edit operations
  - Geometry operators
- Python Toolboxes
  - Easier for python developers to create tools
  - Create tools outside of desktop
- Python Add-ins
  - Extend desktop functionality with Python

Python Demo

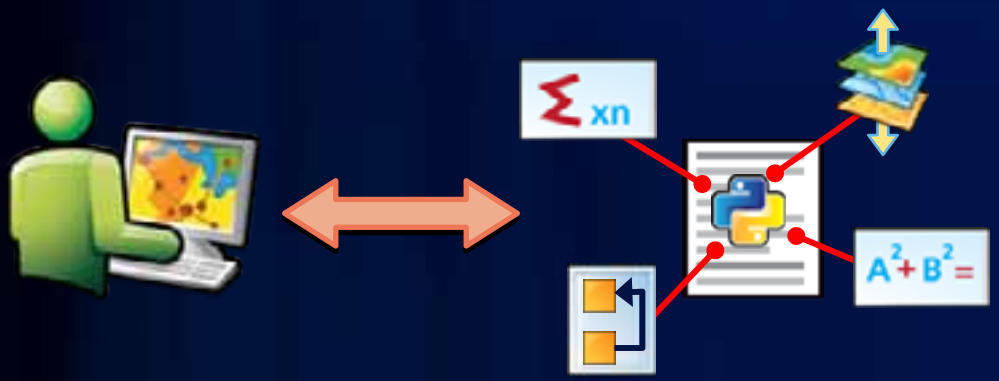
ROAD AHEAD SESSIONS

Road Ahead - Sharing of Analysis
Wednesday July 15th 11:05AM 11:25AM 6 B

Road Ahead - Python Scripting Abilities
Thursday, July 14th, 4:05PM 4:25PM 6 B

Road Ahead - Analysis Capabilities
Thursday July 16th 3:40PM 4:00PM 6 B

Developer



Python Scripting for
automation and scientific task

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

ArcObjects SDK
Visual Studio 2010

What about VBA?

- No VBA ArcObjects SDK
- VBS support only for legacy solutions
- Start your migration now

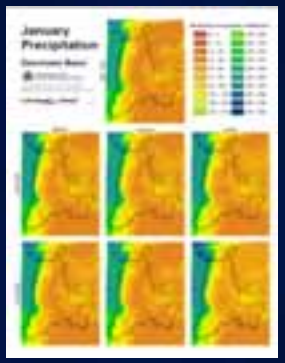
Mapping and Visualization

Mapping and Visualization

Enhancing the functionality from 10

Dynamic legends

More Python scripting



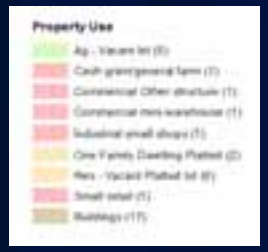
Additional layer types in basemaps

Time live mode

Large data set generalization

Mapping Improvements

Layout



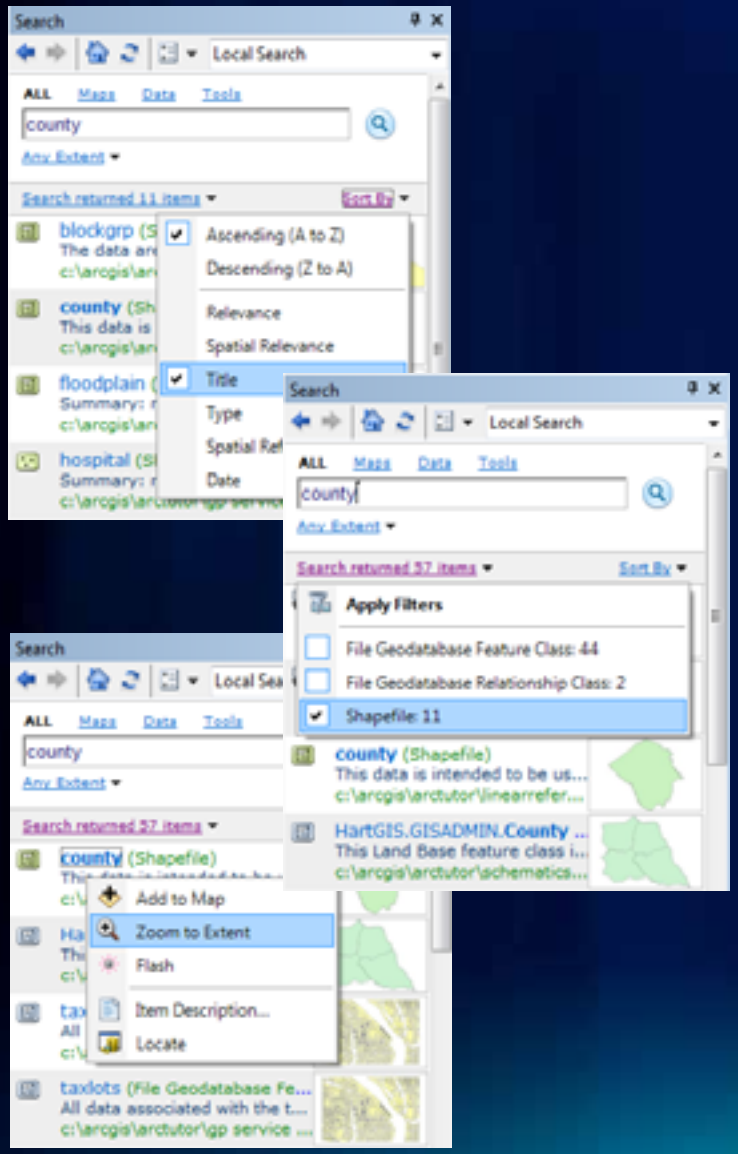
Coordinate Systems

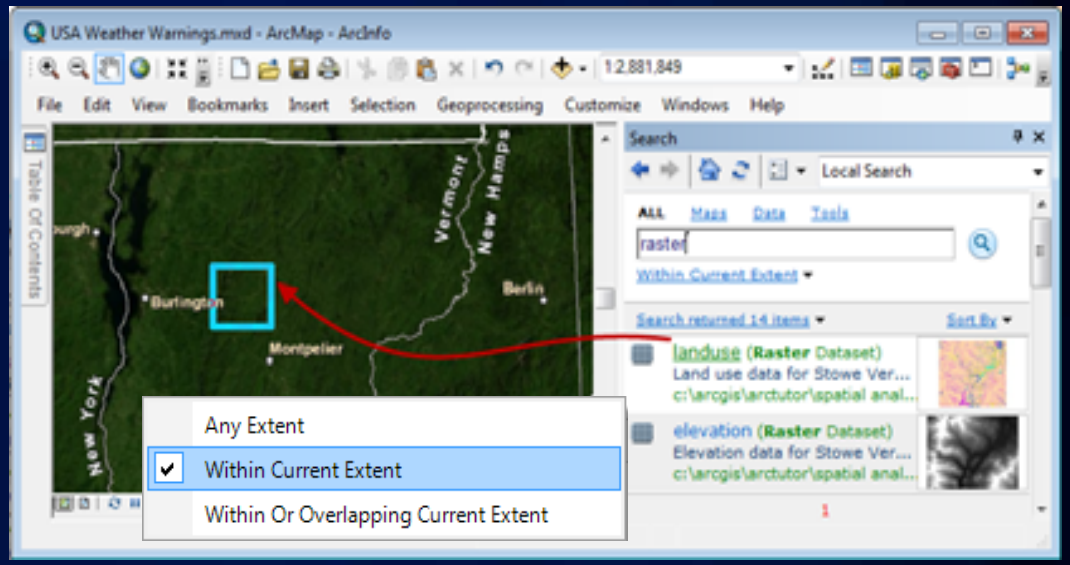
Symbology

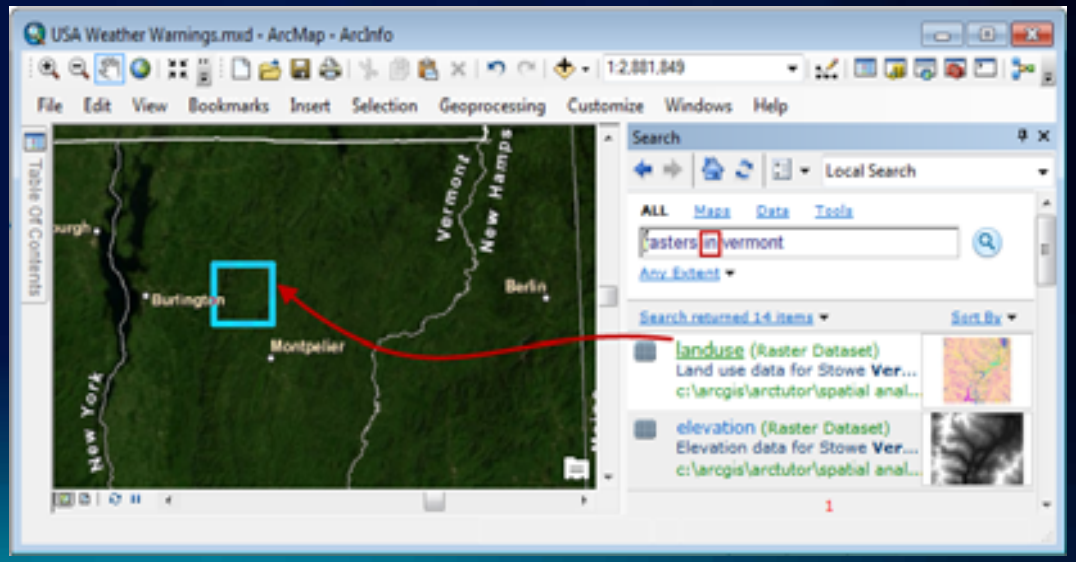
Labeling

Mapping Demo

New in Search at 10.1







Editing

Editing: Auto-Populated Fields

- Tracks who’s editing what and when
  - Created by user and time
  - Last updated by user and time
- Popular custom tool and common enhancement request

Continued improvements to support best practices

Editing of Integrated Datasets

- **Many “traditional” GIS domains have continuous data**
  - **Forestry, geology, land use, etc.**

- **Improve data quality**
  - **Align data to resolve inconsistencies**
  - **Allow reshaping of multiple edges at same time**
  - **Enable recapture of existing geometry**

Simplify user experience for maintaining integrated data

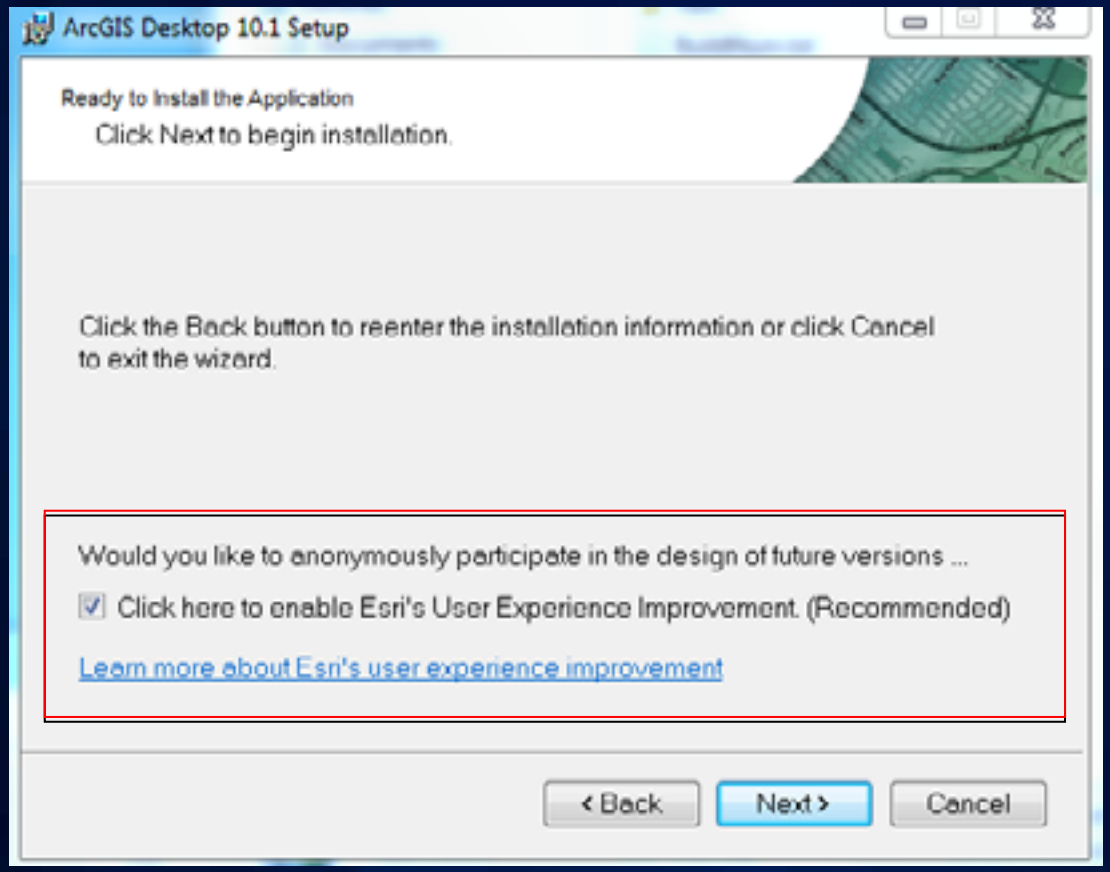
Editing Demo

Beta

Beta

- Coming Soon
- http:\\betacommuntiy.esri.com
- Better forums, task, journals and bug reporting

User Experiences Improvement Program



Name Change

Name Prior to 10.1	New Name
ArcGIS Desktop	ArcGIS for Desktop
ArcInfo	ArcGIS for Desktop Advanced
ArcEditor	ArcGIS for Desktop Standard
ArcView	ArcGIS for Desktop Basic

License Upgrading

- New simpler, automated process to upgrade licenses to 10.1
  - Uninstall 10.0 without de-authorizing any licenses
  - Install 10.1
  - Wizard will help you automatically upgrade licenses to 10.1 (internet required)
- No need to enter new authorization numbers
- Single and Concurrent Use
- 10.0 can use a 10.1 License Manager

Desktop Product Changes

- No ArcInfo Workstation at 10.1
  - 10.0 Continues to work with
- No SQL Server 2005 Support
- No Visual Studio 2008
- No VBA ArcObjects SDK

Thanks!

- Session evaluations online
- www.esri.com/sessionevals

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