The ArcGIS System
Putting it all Together
Kris Bezdecny and Canserina Kurnia
Agenda

- Why a system?
- ArcGIS System
- Putting it all together
  - Products that make up the ArcGIS System
Why a system?
GIS Implementation

GIS can make a difference

Coastal Protection & Marine
Agriculture
Defense
Port Security
Rescue
Telecommunication
Facility Management
Public Works
Land Records
Education
Economic Development
Electric/Gas
Security
Government
Tourism
Banking
Parks & Recreation
Hospital
Museum
Refuse Collection
Landscape Planning
Lighting
Sign Inventory
Why a GIS system?

Provide access from anywhere, anytime, using any device

Creating The Common Picture

Many Data Sources

Integrate And Analyze

Geographic Information System

Turn into Actionable Intelligence (Knowledge)

Coordinated Action

Share Communicate Collaborate
A New Pattern Is Emerging

• An Intuitive Platform for Sharing, Discovery, Access, and Use

Cloud GIS

- Knowledge Workers
- Managers
- Policy Makers
- Casual Users

Geospatial Professional

Content

Hosting

Groups

Catalog

Services

Maps

Apps
Demo

ArcGIS - A complete system
ArcGIS Addresses Many Common Workflows

- Modeling and Analysis
- Design and Planning
- Asset Management
- Situational Awareness
- Cartographic Design
- Field Collection
- Collaboration and Transparency
Common GIS Implementation Patterns

- **Asset Management**: Store, manage & maintain accurate asset records
- **Planning & Analysis**: Transform data into actionable intelligence
- **Field Mobility**: Get information into and out of the field
- **Operational Awareness**: Disseminate knowledge where & when it’s needed
- ** Citizen Engagement**: Share information with stakeholders

*ArcGIS*
ArcGIS Is A Complete System

Enterprise

Desktop

Server

ArcGIS Online

ArcGIS Online
Author – Share – Use workflow

Desktop → Author

Author → Server

Server → Clients

Clients → Use

Use → Author

Author → Desktop
Data-driven systems: the geodatabase

- Support the breadth of GIS system
- Leverage existing RDBMS technology
- Scalable
- Foundation
ArcGIS for Desktop

Basic
- Mapping
- Visualization

Standard
- Compilation
- Data Management
- Mapping

Advanced
- Compilation
- Data Management
- Mapping
- Analysis
- Advanced Geoprocessing

Authoring & Applying Geographic Knowledge

Mapping & Visualization
- Compilation & Editing
- Spatial Analysis & Modeling
- Catalog & Metadata
## ArcGIS for Desktop Functionality

- [www.esri.com/desktop](http://www.esri.com/desktop)

### ArcGIS for Desktop Functionality Matrix

<table>
<thead>
<tr>
<th>ArcGIS Version</th>
<th>ArcReader</th>
<th>ArcView</th>
<th>ArcEditor</th>
<th>ArcInfo</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.1</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Topology</th>
<th>ArcReader</th>
<th>ArcView</th>
<th>ArcEditor</th>
<th>ArcInfo</th>
</tr>
</thead>
<tbody>
<tr>
<td>Map Display</td>
<td>x</td>
<td>2</td>
<td>x</td>
<td></td>
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<tr>
<td>Construct and Edit Topology Created in Layers in the Map</td>
<td>x4</td>
<td>x4</td>
<td>x4</td>
<td>x4</td>
</tr>
<tr>
<td>Move Topology Edges and Nodes</td>
<td>x4</td>
<td>x4</td>
<td>x4</td>
<td>x4</td>
</tr>
<tr>
<td>Split and Merge Edges between Features</td>
<td>x4</td>
<td>x4</td>
<td>x4</td>
<td>x4</td>
</tr>
<tr>
<td>Modify the Coordinates of Shared Edges or Nodes</td>
<td>x4</td>
<td>x4</td>
<td>x4</td>
<td>x4</td>
</tr>
<tr>
<td>Split Edges at a Specific Point, Distance, or Percentage along the Edge</td>
<td>x4</td>
<td>x4</td>
<td>x4</td>
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<tr>
<td>Move Edges and Nodes to a Specific Location</td>
<td>x4</td>
<td>x4</td>
<td>x4</td>
<td>x4</td>
</tr>
<tr>
<td>Adjust Edges and Nodes based on an Offset from Their Current Location</td>
<td>x4</td>
<td>x4</td>
<td>x4</td>
<td>x4</td>
</tr>
<tr>
<td>Merge Connected Edges</td>
<td>x4</td>
<td>x4</td>
<td>x4</td>
<td>x4</td>
</tr>
<tr>
<td>Created Violations and Connect Violated Nodes When a Shared Edge is Added</td>
<td>x4</td>
<td>x4</td>
<td>x4</td>
<td>x4</td>
</tr>
<tr>
<td>Change Violations from Users or Clear Violation Messages</td>
<td>x4</td>
<td>x4</td>
<td>x4</td>
<td>x4</td>
</tr>
<tr>
<td>Split Lines When They Intersect</td>
<td>x4</td>
<td>x4</td>
<td>x4</td>
<td>x4</td>
</tr>
<tr>
<td>Validate a Specific Area of the Entire Topology</td>
<td>x4</td>
<td>x4</td>
<td>x4</td>
<td>x4</td>
</tr>
</tbody>
</table>

### Administration and Geoprocessing

<table>
<thead>
<tr>
<th>Administration and Geoprocessing</th>
<th>ArcReader</th>
<th>ArcView</th>
<th>ArcEditor</th>
<th>ArcInfo</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modify Data Privileges for Entities on a Multiuser Database</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
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</tbody>
</table>

### Dataset Support and Reprocessing

<table>
<thead>
<tr>
<th>Dataset Support and Reprocessing</th>
<th>ArcReader</th>
<th>ArcView</th>
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<th>ArcInfo</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reprocess DFD Data with the Geodatabase</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
</tbody>
</table>
ArcGIS for Desktop Core Applications

ArcMap and ArcCatalog

ArcScene

ArcGlobe
ArcGIS for Desktop Extensions

- Providing Specialized Capabilities
  - Analyst series
  - Productivity tools
  - Specialized software
Demo

ArcGIS for Desktop
Publishing Workflow

Use →

HTTP

Geodata
Globe services
Map services
Analysis/modeling services
Image services
Geometry

Share/Serve →

Publish to ArcGIS Server...

ArcGIS for Server

Author →

ArcGIS for Desktop

GDB

Globe

Map

Analysis/
modeling

Image

Geometry
## ArcGIS for Server service types

<table>
<thead>
<tr>
<th>GIS resource</th>
<th>Service type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Map document</td>
<td>Map</td>
</tr>
<tr>
<td>Raster or mosaic dataset</td>
<td>Image</td>
</tr>
<tr>
<td>Address locator</td>
<td>Geocoding</td>
</tr>
<tr>
<td>Geoprocessing result</td>
<td>Geoprocessing</td>
</tr>
<tr>
<td>Geodatabase or connection</td>
<td>Geodata</td>
</tr>
<tr>
<td>System default</td>
<td>Geometry</td>
</tr>
<tr>
<td>GIS workspaces</td>
<td>Search</td>
</tr>
<tr>
<td>Globe document</td>
<td>Globe</td>
</tr>
</tbody>
</table>
Deployment options

ArcGIS Online subscription

On-premises

Cloud
ArcGIS for Server is Interoperable

Standards:
- OGC
- CAD
- WCS
- ISO
- INSPIRE
- WWW
- KML
- WFS
- WMS
- SQL

Open API's:
- Flex
- Silverlight
- REST
- JavaScript

Open Data Access

Mashups
ArcGIS for Server 10.1

- Provides an Open and Productive Platform
- Much Easier
- Improved Performance
- Native 64-Bit
- Highly Scalable
- Strong Linux and Windows

- Dramatically Improving GIS Infrastructure

On-the-Fly Symbology
Improved Standards

- Web Printing
- Server
- WMS
- WCS
- WFS
- KML
- HTML
- JSON
- REST
- WPS
- WMTS

Server
Demo
ArcGIS for Server
ArcGIS Online is a New GIS Pattern
ArcGIS Online Provides the Capabilities to . . .

Organize and share your authoritative content

Make it easy for anyone to make and use maps

Leverage enterprise cloud computing (hosted & on-premises)
ArcGIS Online Organizes Geospatial Content

- Makes it Accessible Across An Organization

A New Architecture

... For Managing and Providing Easy & Secure Access
Intelligent Web Maps Can Be Used Everywhere

- Enhancing Access and Collaboration

Any Device
- Smart Phones
- Tablets
- Desktop

One Map
- ArcGIS Online

Social Media
- Web Sites
- Browsers

... Enhancing Access and Collaboration
ArcGIS on Mobile Devices

ArcGIS Mobile for Windows
- Field workforce
- Collect & Inspect
- Task-based workflow
- Server management
- Create custom apps

ArcPad
- Accurate Data Capture
- GIS in your pocket
- Ad hoc deployment
- Desktop management

iOS, Android, Windows Phone
- Observe and Report
- Device Specific or Mobile Browser
- Services Based
- Focused Solution
- Custom Applications

ArcGIS Server
Demo
Mobile Application
ArcGIS Empowers Developers

- Supporting Multiple Platforms and APIs

**Platforms and APIs:**
- iOS
- JavaScript
- WPF
- HTML 5
- C++
- Flex
- Silverlight
- .NET
- Java
- Android

**Applications:**
- Mobile
- Web
- Desktop
ArcGIS Can Now Be Embedded Anywhere

- New Lightweight Runtime Platform
  - Easy to Deploy
  - Fast
  - Small Footprint
  - Windows/Linux
  - Affordable

Providing Rich Geospatial Functionality
Web Applications Are Important

- Many Web Viewers and APIs

- Easily Configured and Deployed
- . . . Fueling an Explosion in Growth
Summary

“ArcGIS is more than just mapping. It is a complete system that transforms the way you do business and makes organizations efficient and effective”

Think about how we can help you enable ArcGIS as a system in your organization....
Take The Next Step

Visit:
- ArcGIS.com – http://www.arcgis.com
- ArcGIS Resource Center – http://resources.arcgis.com

• Attend related Technical Workshops
Questions

Please fill in the survey.....

http://www.esri.com/ucsessionsurveys
Session ID: 611

Thank you