ArcGIS 10.1 Road Ahead: An Overview of the System
ArcGIS 10.1 Road Ahead: An Overview

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Logistics

- Cell phones/Mobiles/Communicators/.....

- Review this (and all) sessions:
  www.esri.com/sessionevals
Trends in GIS
GIS Has Evolved

Use is Augmented, not replaced
Rich Web Applications

Web App
Web API
Server
Web Content

Straightforward, Easy, Focused…
Content is Key

Categories:
- Streets
- Topo
- Ocean
- Imagery
- Demographic
- National Geographic
Information Sharing is Critical
Imagery is Core to GIS, GIS is core to Imagery
ArcGIS 10.1
ArcGIS 10.1 Themes

- Provide a New Online GIS Platform
- Make Sharing easy
- Reinforce Traditional GIS
- Strengthen Server GIS
- Expand Mobile GIS
- Empower Developers
ArcGIS Online is Evolving Rapidly

- Basemaps
- Catalogue and Group Based Sharing
- Viewers and Web Maps
- Open Data and Application Mapping
- Mapping
ArcGIS Online is Evolving Rapidly

- Basemaps
- Catalogue and Group Based Sharing
- Viewers and Web Maps
- Open Data and Application Mapping
- Subscriptions, Infrastructure, Hosting, Organizations
- Integration with 10.1
What can I do with ArcGIS Online?

- Leverage existing maps and data
- Upload and Connect to Your Data
- Style and Create intelligent webmaps
- Store, Manage, and Share
- Interact with the map on any device
- Embed in web sites or applications
- Compliment Current Infrastructure
- Organize your organizations data
Intelligent Maps

- Interactive
- Easily Created by Anyone
- Incorporates multiple services & datasets
- Visualize
  - Story
  - Situational Awareness
- Editing & crowd sourcing
- Analysis

Services and Data
Geospatial Infrastructure

- Create hosted map services
  - Tiled maps and feature services
  - No servers, infrastructure, or technical expertise
- Managed, secure, scalable
- Catalog of the organizations geospatial content including your existing ArcGIS Server services
- Personalized look and feel
Hosted Map Services

- **Publish from ArcMap 10.1**
  - Create feature and/or tile services from within the software
  - Define the tiling scheme and other parameters
  - Tiles are generated in the cloud as part of the service
- **Publish feature services from web clients**
  - ArcGIS.com
  - ArcGIS Explorer Online
  - Feature services from
    - CSV’s, GPX’s
    - Shapefiles
Organizational Online Site

- Create
  - Secure groups
  - Control Data Sharing Policies
- Administer
  - Web Services
  - Users / Access
Sharing Maps and Analysis
Sharing as a Package

Professional to Professional

ArcGIS Online

ArcGIS for Desktop

Map and Layer Packages

New at 10.1
Geoprocessing, Tile, & Locator Packages

Sharing Tradecraft
Sharing as Services

Professional to Everyone

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

Analysis → Share → Package → GIS Professionals → Everyone

Share

Service
Sharing Locators

- Packaging locators
- Share as a geocode service
Sharing as Services

Professional to Everyone

Desktop

Services

Packages

Online (Cloud)

Server

Portal
Improving GIS Tools
Mapping and Visualization

*Enhancing the functionality from 10*

Dynamic Legends

More Python scripting

Time live mode

Rule-Based Generalization

Before

After
Mapping Improvements

Layout

Coordinate Systems

Symbology

Labeling
Improved Desktop Search

Spatial Search
(extent or name)

Improved Sort & Filter
(Type, Projection, Spatial relevance,..)
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
New Geoprocessing Tools

• 85 New Tools
• 117 New Parameters
More Formats and Better Support

- GOS (GPX) to Layer
- GeoTagged Photos To Points
- Better KML experience
- Easier to do complex workflows
  - Tabulate Intersection
  - Polygon Neighbors
Improved Analysis Tools

- Spatial Scale
  - ¼ Mile Radius
  - ½ Mile Radius
  - 1 Mile Radius

- Geodetic Buffers

- Space /Time Clusters

- Areal Interpolation

- Empirical Bayesian Kriging

- 3D Shadow & Visibility Volumes
Geodatabase Improvements

Enhanced Geodatabase
- Admin Tools
- Schema Updates

Feature Edit Tracking
- Editor
- Tom
- Bill
- Joe

Native SQL Access
- SQL Server
- Oracle
- Postgres
- DB2
- NETEZZA (New)

ArcGIS

DBMS

GDB
Imagery

- Automatic Image Enhancement / More Tools
- Mensuration (Height measurement)
- Easier Georeferencing
- Raster Products
- Additional Format/Models (CSM)
- Mosaic Dataset Analyzer
- REST Based Management (New, Update, Delete, Mensuration, Metadata...)

Automatic Enhancement

Highly Accurate Measurement

Integrates Video (FMV)
Lidar

- Support Lidar LAS files
- Dynamic Mosaic
- Use directly as
  - TIN
  - Raster
  - Point Cloud
- Visualization & Analysis
Tools for 3D Virtual Cities

City planners, emergency response, public safety

- Easily find, consume and share city data online
- Targeted city analysis tools
- Performance / Usability
- Intuitive editing of city level data
Tools for 3D Virtual campuses

*Universities, military bases, hospitals*

Virtual campus template

Intuitive editing of campus level data

BISDM 3.0

Easily find, consume and share campus data online
New Tools to Build 3D Content

Not part of 10.1, will be integrated in the future
Vision

Powerful GIS capabilities

Delivered as Web services

To help solve real problems by real people
ArcGIS Server

Enhancing the Architecture and Adding Capabilities

- Improved Performance
- Easy Install/Admin
- Simple Service Creation
- Native 64 Bit
- Strong Linux
- Highly Scalable
Listening to your specific functional requests
Cloud

Enhanced and Expanded

- More cloud friendly architecture
  - Better clustering support: publishing, async-gp and caching
  - Easier to administer: launch, auto-scaling etc
  - Publishing from ArcGIS Desktop
- Enhanced Amazon support
- Support for Azure
  - GIS Server and Spatial Data Server
  - Support for SQL Azure
- Private Clouds
  - Cloud burst
  - VM Ware
ArcGIS Runtime
ArcGIS Runtime

A New Lightweight Platform for Developers

- Easy to Deploy
- Fast & Powerful
- Small Footprint
- Windows/Linux
- 64-Bit Native (& 32)
- WPF/Java/Qt

... Supports in Connected and Disconnected Environments
ArcGIS Runtime for Windows and Linux

Addresses Limitations With Current Technology

- New Architecture (64 bit)
- Easy to Deploy Solutions
  - Software, maps and data
  - No install required
  - Deploy only needed components
  - Side-by-Side deployment
  - Independent of other ArcGIS installs
- Modern API (WPF, Java and Qt)
- Supports both Connected and Disconnected Environments
- Mapping, Geoprocessing and Editing
Runtime is a Key Component of Our System

Configurable applications and native ArcGIS Runtime SDKs

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<thead>
<tr>
<th>Windows</th>
<th>Linux</th>
<th>iOS</th>
<th>Android</th>
<th>Windows Phone</th>
<th>Windows Mobile</th>
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<td>· ArcGIS Explorer*</td>
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<td>· WPF, Java, Qt</td>
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<td>· Objective C</td>
<td>· Java</td>
<td>· Silverlight</td>
<td>· .NET</td>
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Devices Get Easier

- Waypoint Navigation
- Edit Existing Geometry
- Geodatabase Attachments
- Simplified Data Collection
- Bookmarks
- Map Notes and popups
- Dateline Support
- ArcGIS Portal support
Work with your Mobile GIS Device Offline
Get Ready

ArcGIS 10.1 will be here sooner than you think

• Beta
  July 2011
• Release
  Early 2012

ArcGIS 9.3.1
ArcGIS 10
ArcGIS 10.1
ArcGIS Next

Sign up for Beta Now! Open to All Users!
Betacommunity.esri.com
IMPORTANT: Some stuff goes away…

The following does NOT ship with 10.1

- ArcInfo Workstation (10.0 continues to work)
- ArcIMS
- 32-bit version of ArcGIS Server
- SQL Server 2005 Support
- Visual Studio 2008 support
- Windows Server 2003 Support
- VBA*
Thank you . . .

. . . Open Q&A

Please submit your review of this session here:
www.esri.com/sessionevals