Introduction to ArcGIS Earth

E-Learning for the GIS Professional – Any Time, Any Place!
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Housekeeping Items

- Webinar duration
- Handouts and recording
- Audio
- Questions
Webinar Outline

- ArcGIS Earth Interface
- Navigation
- Supported GIS Data Formats
- Basemaps and Terrain
- Adding Layers
- Sketching and Labeling Features
- Measuring
- Sharing Your Work
- Search
- Settings
- Point Based Service Access
- What’s Coming
- Demonstration
About Me

- Eric Pimpler
- Owner of Geospatial Training Services
  - [http://geospatialtraining.com](http://geospatialtraining.com)
- 25 years experience with GIS and Esri products
- Technical specialties
  - Programming ArcGIS with Python
  - ArcGIS Server Application Development with JavaScript

[Images of book covers and social media icons]

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Other Webinars Coming Soon

- **Introduction to QGIS**
  - March 29th – 11:00-12:00 PM Central

- **Introduction to AppStudio**
  - April 25th – 11:00-12:00 PM Central
The Basics

- Interactive 3D globe viewer for data exploration and visualization tool
  - Familiar to Google Earth users
- 2D and 3D
- Supports KML (including Network Links), shapefiles, ArcGIS Server and ArcGIS Online services
  - Feature layers, map services, image services, 3D object scene layers
- Multiple basemaps plus terrain
- Supports Web Mercator and WGS84 GCS
- Sketch and annotate features
- Draw and measure
- Share
- Search
System Requirements

Supported platforms

- Windows 7 SP1 Ultimate, Enterprise, Professional, and Home Premium (64 bit [EM64T])
- Windows 8 Basic, Pro, and Enterprise (64 bit [EM64T])
- Windows 8.1 Basic, Pro, and Enterprise (64 bit [EM64T])
- Windows 10 Home, Pro, and Enterprise (64 bit [EM64T])
- Windows Server 2008 SP2 Standard, Enterprise, and Datacenter (64 bit [EM64T])
- Windows Server 2008 R2 SP1 Standard, Enterprise, and Datacenter (64bit [EM64T])
- Windows Server 2012 Standard and Datacenter (64 bit [EM64T])
- Windows Server 2012 R2 Standard and Datacenter (64 bit [EM64T])

DirectX

- ArcGIS Earth uses DirectX to provide high-performance map rendering. DirectX provides support for hardware and software rendering of graphics and is provided by the supported Windows platforms.
- Direct3D feature level 9_3
- Default: DirectX 11 hardware support
- Falls back to DirectX 11 software rendering if hardware support is not available

Hardware requirements

- CPU speed: 2.2 GHz or higher; Hyper-Threading Technology (HTT) or multicore recommended.
- Processor: Intel Pentium 4, Intel Core Duo, or Xeon Processors; SSE2 minimum. Run this Microsoft utility from your Windows command prompt to check your processor.
- Disk space: 50 MB is needed for the application, and more is needed for cache and swap.
- Memory/RAM: 2 GB or higher.
- Display: 24-bit color depth.
- Screen resolution: 1024x768 or higher recommended at normal size (96 dpi).
- Swap space: Determined by the operating system; 500 MB minimum. ArcGIS Runtime will create cache files when used; additional disk space may be required.
- Video/Graphics adapter: 256 MB RAM minimum, 1 GB RAM recommended; NVIDIA, ATI, and Intel chipsets supported; accelerated graphics card driver; Shader Model 4.0 minimum. Be sure to use the latest available driver.

ArcGIS Earth Interface

- Google Earth alternative?
- Demonstration
• Many options for navigation

• Very similar to Google Earth
  – Interface
  – Mouse
  – Keyboard
  – Touch
Supported GIS Data Formats

- KML
  - Support for version 2.2 including Network Links
- Shapefiles
- ArcGIS Server and ArcGIS Online Services
Basemaps and Terrain

- Topographic
- Imagery
- Streets
- Canvas (Dark and Light)
- National Geographic
- Oceans
- OpenStreetMap
- USA Topo Maps
- USGS National Map
- Terrain – Provides the elevation reference
Adding Layers

- ArcGIS Online
  - Public, My Content, My Groups, My Organization (same as ArcGIS Online)
- Files
  - KML, KMZ, Shapefiles
- URL
  - ArcGIS Server service
  - KML endpoint (service or file)
Sketching and Labeling Features

- Points, lines, polygons
- Label
- Define symbols, colors, size, transparency
- Save to TOC
  - Not saved to file
• Measure points, lines, polygons, circles
• Change units of measure
• Polygons and Circles
  – Perimeter and area
• Length of a line or path (more than 2 pts)
• Longitude/Latitude of a point
Sharing Your Work

- Email view
  - Screenshot of view as email attachment
- Save view as image
  - JPG, PNG, TIF
- Print
• Uses Esri World Geocoding Service and AGOL Geosearch service
• Address
• City
• County
• Postal Code
• Lat/Long Coordinates
• Points of Interest and Landmarks
  – Grand Canyon
• General
  – Default Portal URL
  – Startup view
  – Spatial reference

• Navigation
  – Fly to speed
  – Mouse wheel speed
  – Mouse wheel zoom direction

• Advanced
  – Proxy settings
Point Based Service Access

• Additional information about point locations
  – Google Street View, What3Words, Mapillary

• Pop-up window showing information about a point location returned by a service
  – Service must return KML – KML displayed in the pop-up window
  – Many services don’t return KML so additional steps needed
    • https://blogs.esri.com/esri/arcgis/2016/03/08/point-based-service-access-with-arcgis-earth/

• CTRL-RIGHT-CLICK to invoke the service
  – Latitude, Longitude, Elevation are passed to the service

• ArcGISEarth.exe.config
  – C:\Users\<user>\Documents\ESRI\ArcGISEarth
  – serviceURL element
Point Based Service Access
What’s Coming in Future Releases

- Offline use
- Maptours
- Timesliders
- Support for WMS
Help Links

- Product page- http://www.esri.com/software/arcgis-earth
- GeoNet forum: http://j.mp/Earth1_0Forum
- Twitter - @ArcGISEarth
• **Upcoming Classes**
  – Introduction to ArcGIS Earth

• **½ Day Class**

• **Classroom**
  – May 18th – Phoenix
  – June 16th – Denver
  – August 8th – Helena, MT

• **Live, Online**
  – May 4th
  – June 1st
Introduction to ArcGIS Earth

• Course Modules
  – Module 1: Introduction to ArcGIS Earth
  – Module 2: ArcGIS Earth Navigation, Basemaps, and Search
  – Module 3: Adding Layers To the View (KML, Shapefiles, CSV, ArcGIS Server, ArcGIS Online)
  – Module 4: Sketching, Symbolizing, and Labeling Features
  – Module 5: Measuring Distances and Areas
  – Module 6: Sharing Your Work
  – Module 7: What’s Coming in Future Versions

• http://geospatialtraining.com/introduction-to-arcgis-earth/
• Any questions about today's webinar?
• All our webinars will be recorded for later viewing.
• Questions after the webinar?
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