



Getting the Most Out of the ArcGIS Explorer (Best Practices)

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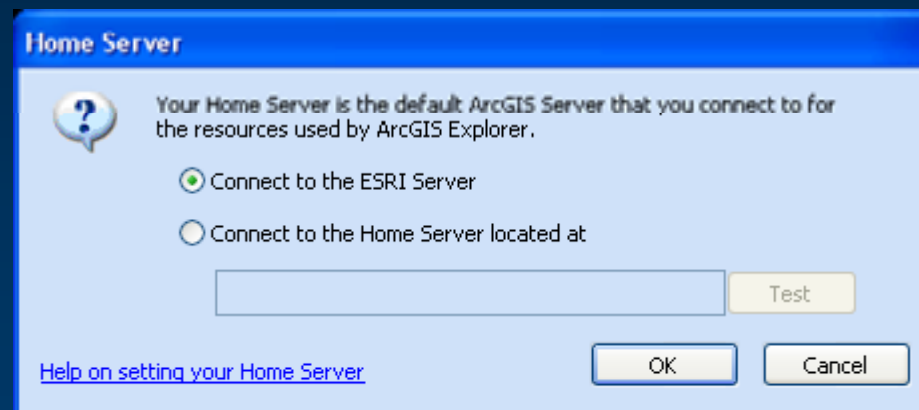
Today's Topics:

- **ArcGIS Server Administration for ArcGIS Explorer**
 - What is a home server?
 - How can I use a home server to benefit ArcGIS Explorer users?
- **Publishing GIS Content for use in ArcGIS Explorer**
 - What should I know to ensure that my service will work in ArcGIS Explorer?
 - How do I create a ArcGIS Explorer task from my Model?
- **Deploying and Maintaining Custom Tasks**
 - What options do I have for distributing custom Tasks?
 - How can web services be of benefit?

Using the Home Server

Client chooses the home server on first start

- ESRI provides one Home Server for use by all. This is also the data for ArcGIS Online.
- Any ArcGIS Server can be an ArcGIS Explorer Home Server



How does it work?

- When ArcGIS Explorer Starts...
 - ArcGIS Explorer connects to the Home Server
 - <http://services.arcgisservices.com/380/explorer>
 - Checks the version information
 - <http://services.arcgisservices.com/380/explorer/software/version.html>
 - Reads Configuration file
 - <http://services.arcgisservices.com/380/explorer/config/e2config.xml>
 - Opens DefaultMap.nmf
 - <http://services.arcgisservices.com/380/explorer/maps/defaultmap.nmf>



Streaming ||| ||| ||| 70 %

What makes any ArcGIS Server an ArcGIS Explorer Home Server?

- The 'explorer' folder and all of its contents.
 - The explorer folder is part of the ArcGIS Server install
 - .NET C:\inetpub\wwwroot\arcgis\explorer
 - JAVA C:\Program Files\ArcGIS\java\web_output\explorer
 - New explorer folder available at <http://serverx.esri.com/ESRIBlogs/blogs/arcgisserver/> 3/19/07
 - Contains example resources for all functionality
 - Fixes case sensitivity issues on JAVA Server

A closer look at using the files

- **Changing the Default Map**
 - Author a new map and replace the existing one

DEMO

Skin file controls look



- **Using Custom Skin**
 - **Splash Screen, Logo, Northarrow...**
 - **Modify E2Config.xml**
 - **Create or Modify Skin.xml**

DEMO

- **Managing Updates of ArcGIS Explorer**

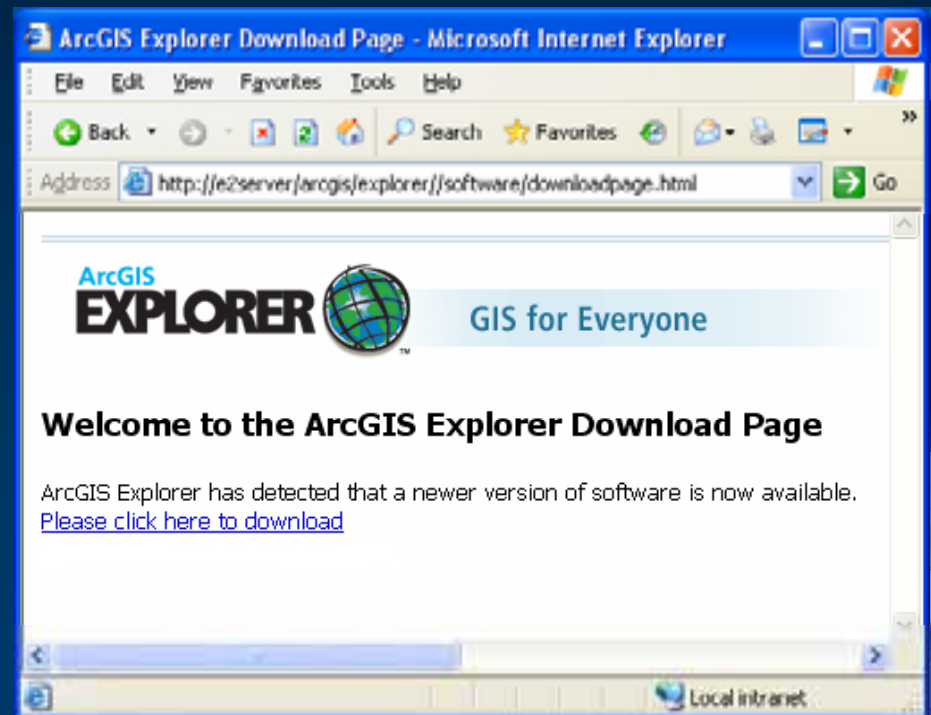
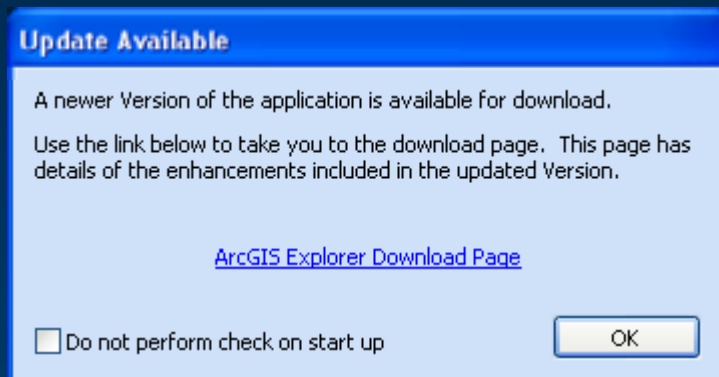
- **Incrementing version number**

- `..\explorer\software\version.html`

- **Instructions for getting the newest version**

- `..\explorer\software\downloadpage.html`

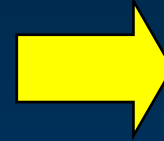
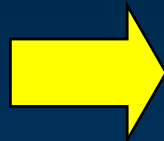
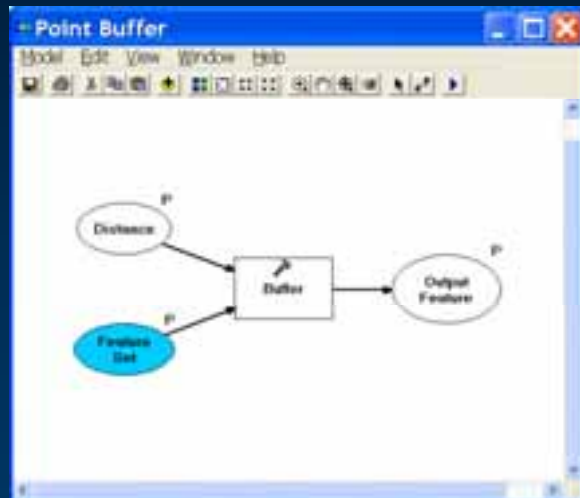
DEMO



Services

- **Anyone with Internet access can use the service**
- **Services execute on the server machine**
- **Types of Services**
 - **Geoprocessing Services**
 - **Map Services**
 - **Globe Services**

Geoprocessing Service



A screenshot of the ArcGIS Desktop 'Task Center - Point Buffer' dialog. The window title is 'Task Center - Point Buffer'. It features a 'Feature Set' input field, a 'Distance' input field with a dropdown menu, and a 'Run' button. The 'Feature Set' field is empty and shows '0 feature(s) entered'. The 'Distance' field contains the value '0'. There are also 'Help' and 'Run' buttons at the bottom.

Geoprocessing service considerations

- **Data Access (all services)**

- Datasets, tools and scripts that are used in your model must be accessible by the server
- Share folders
- Use UNC paths

- **Data Type Support**

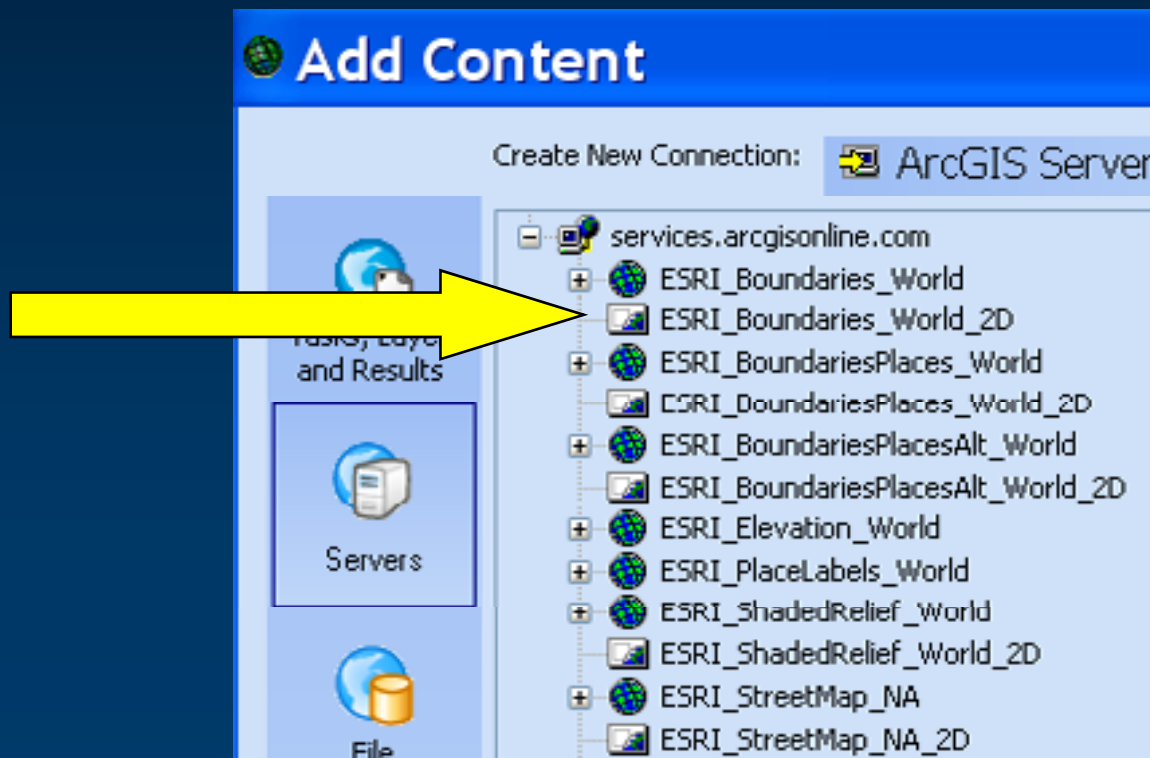
- http://webhelp.esri.com/arcgisdesktop/9.2/index.cfm?TopicName=Input_and_output_data_type_support

- **Multiple processes updating the same data**

DEMO

Map Services

- 2D Service authored in ArcMap
- Slower performance in ArcGIS Explorer
- White is Default Transparent color



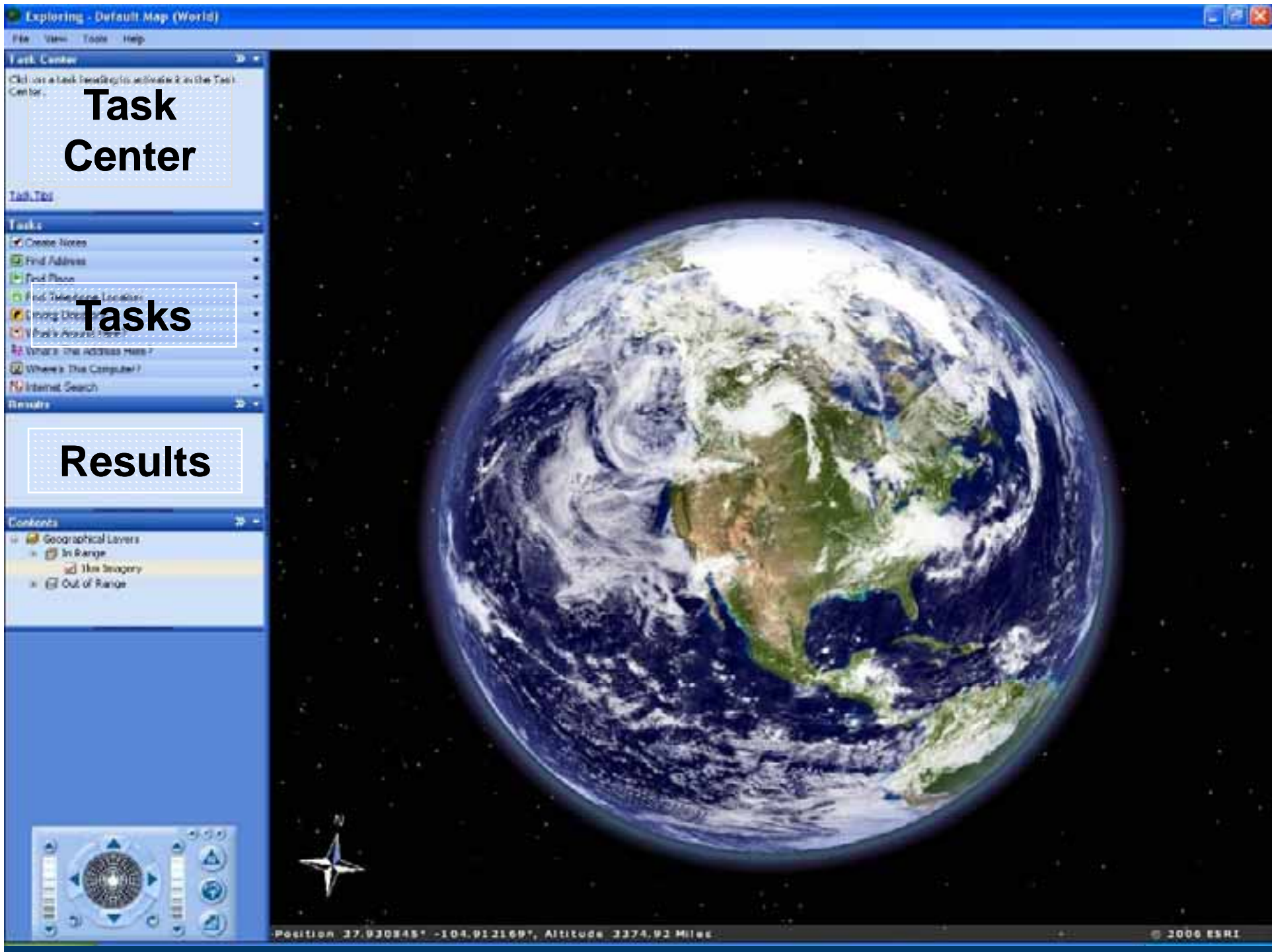
Globe Services

- **3D Services authored in ArcGlobe**
- **Performance is optimized for ArcGIS Explorer**
 - Full Cache
 - Cache on Demand
- **3D visualizations (buildings, extruded polygons...) require Full Cache On the Server**

DEMO

What is a custom task?

- **It's the only way a developer can customize Explorer**
- **Its versatile as it can execute any custom code**
 - Retrieve data or images from the web
 - Query a remote Database
 - Perform a GP task on the server
- **A custom task returns Results**
 - Layer Result
 - Place Result (Shell Result or Address Result)
- **Custom tasks developed in .NET from a template**



Task Center

Tasks

Results

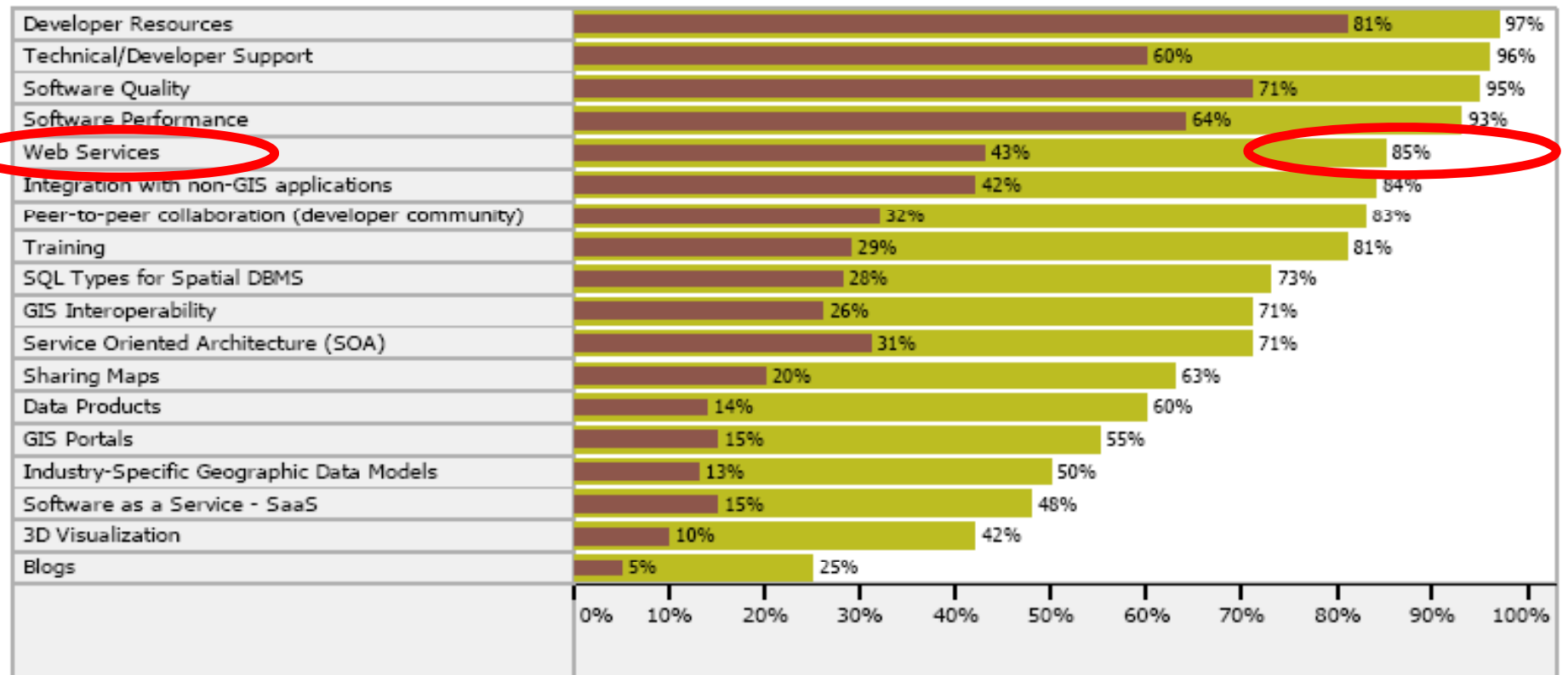
Position 37.930845° -104.912169°, Altitude 3374.92 Miles

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Please indicate the relative importance of each of these areas to your GIS and mapping work.



Consuming Web Services in ArcGIS Explorer

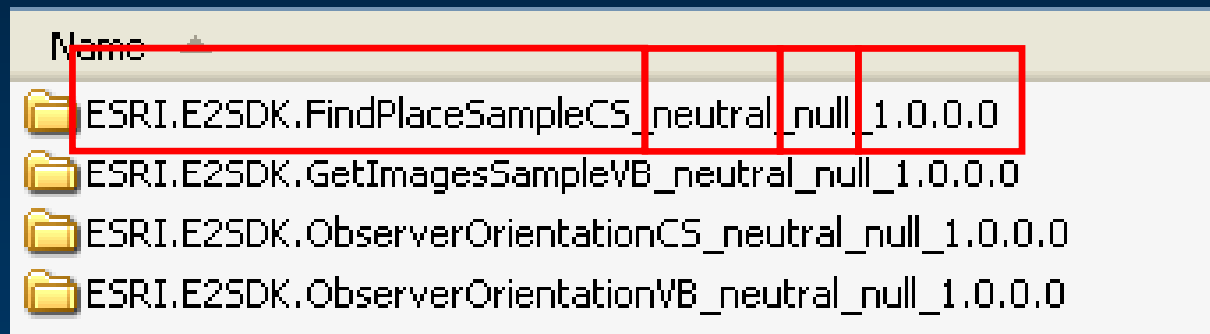
- **Web Services can do lots of stuff**
 - HTML \ XML
 - Images
 - Business Logic
- **Demonstrate requesting an Image from Yahoo**
- **Handy Microsoft .NET Framework namespaces\classes**
 - System.XML (Useful Class -> XmlDocument)
 - System.Net (Useful Class -> HTTPWebRequest)
- **Results have Popup's associated with them, Popup's display Result::Description**
- **Result::Description honors HTML tags**

How does my task plug into ArcGIS Explorer?

- All tasks are loaded from task assemblies located in the 'Tasks folder'
- All tasks are deployed to machines, on a per-user basis
 - C:\Documents and Settings\username\ApplicationData\ESRI\ArcGIS Explorer\Tasks
- Each task assembly has its own unique folder in the 'Tasks Folder'
- Each task in an assembly has its own unique NMF
- NMF is used to identify tasks by ArcGIS Explorer
- NMF's can point to a task assembly located elsewhere and ArcGIS Explorer will copy the task assembly to Tasks folder
 - Remember Explorer honors HomeServer Security settings

Naming your task assembly considerations

- **Prefix your company name and product to an assembly**
 - `ESRI.E2SDK.SomeUsefulSample`
- **We recommend strong naming your task assemblies**



Versioning Tasks

- **ArcGIS Explorer has an independent release cycle to other ArcGIS products**
- **Increment your assembly version in Visual Studio**
- **Modify the NMF that loads your task**
- **ArcGIS Explorer will detect the new version and copy your task to the tasks folder and load into the application**
- **Your previous versions of the custom task assembly will remain on the users PC – you can delete it if you wish**

Security and Custom Tasks

- **ArcGIS Explorer is downloading code from the internet?**
- **You can control access to custom task by configuring your HomeServer**
- **When you in build custom tasks that access resources on a network, ensure the current user has appropriate permissions**

Further questions?

- **TECH-TALK AREAS**

- **What:** Further opportunity to discuss questions and concerns with presenters and subject matter experts
- **Where:** Tech Talk Area 2
- **When:** during the next 15 minutes

- **ESRI Showcase**

- **Meet the ArcGIS Explorer Team – Thursday 10:30**

- **Programming Custom Tasks for ArcGIS Explorer
(Deep Dive)**

Wednesday, March 21, 10:30 a.m.–11:45 a.m.

Wednesday, March 21, 4:30 p.m.–5:45 p.m.