Esri International User Conference
San Diego, California

Technical Workshops | July 24, 2012

ArcGIS for Developers:
An Introduction

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Andy Gup *@agup*

Goals

- Cover all of ArcGIS, high pass, developer's angle

- *What is there?*
- *What can I do with it?*
- *What resources are available to get the most from it all?*
- *Where is the community?*

- How do I get started?

Who are you?

- Are you a GIS pro?
  - new to dev?
- Are you an experienced developer
  - new to ArcGIS?
- Are you a Project Lead?
  - what’s available?

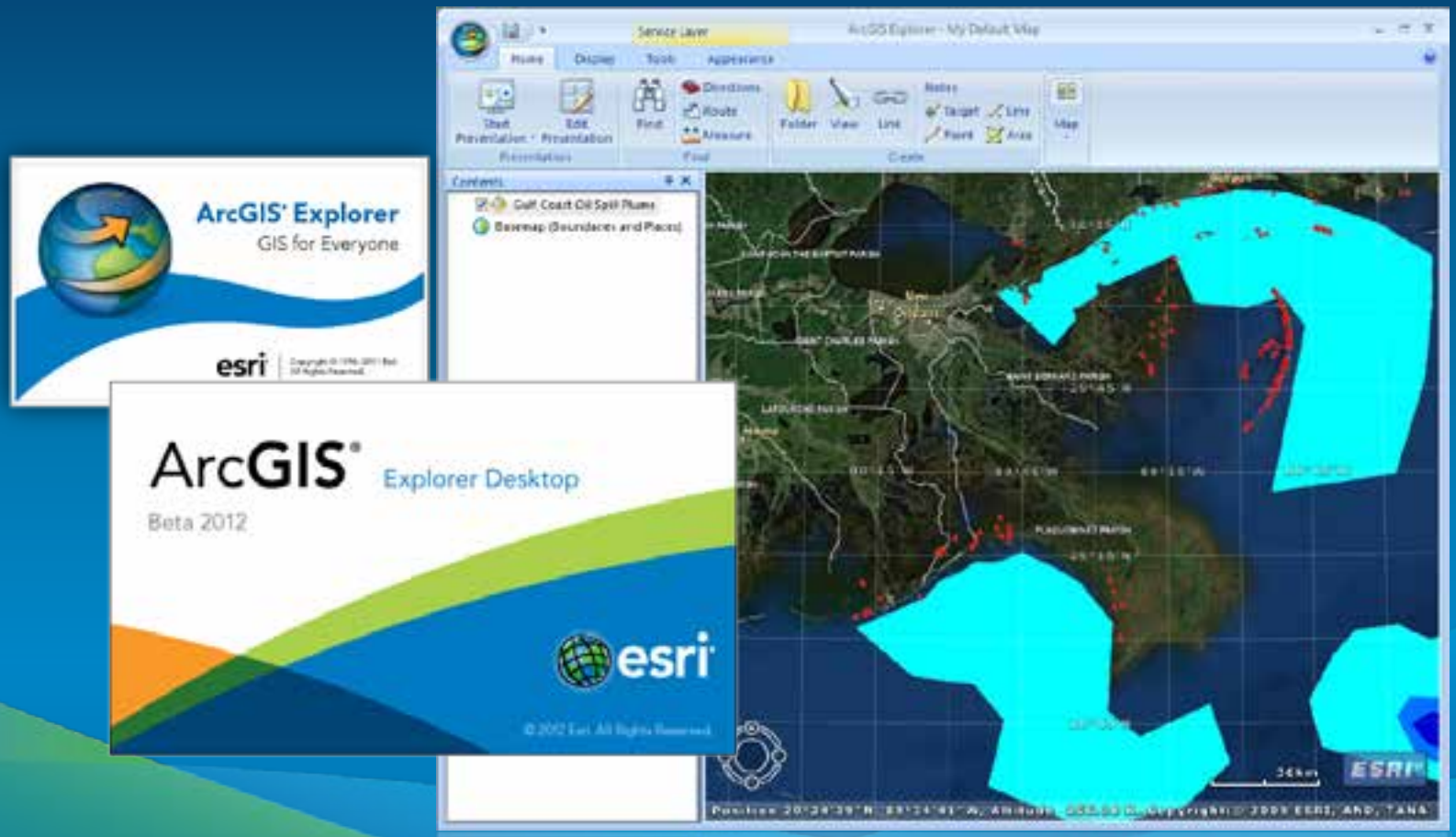
Agenda

- ArcGIS as a developer's toolbox
  - Desktop applications
    - ArcGIS Explorer Desktop, ArcGIS Desktop, ArcGIS Engine
  - Geoprocessing
  - Geodatabase
  - Client-Server applications
    - ArcGIS Server
    - ArcGIS Online
    - Web APIs
    - ArcGIS Runtime for Devices
- Developer Resources

10.1

- Online
- Desktop
- Server
- Mobile

ArcGIS Explorer Desktop



ArcGIS Explorer Desktop

Free to use, develop against, and deploy

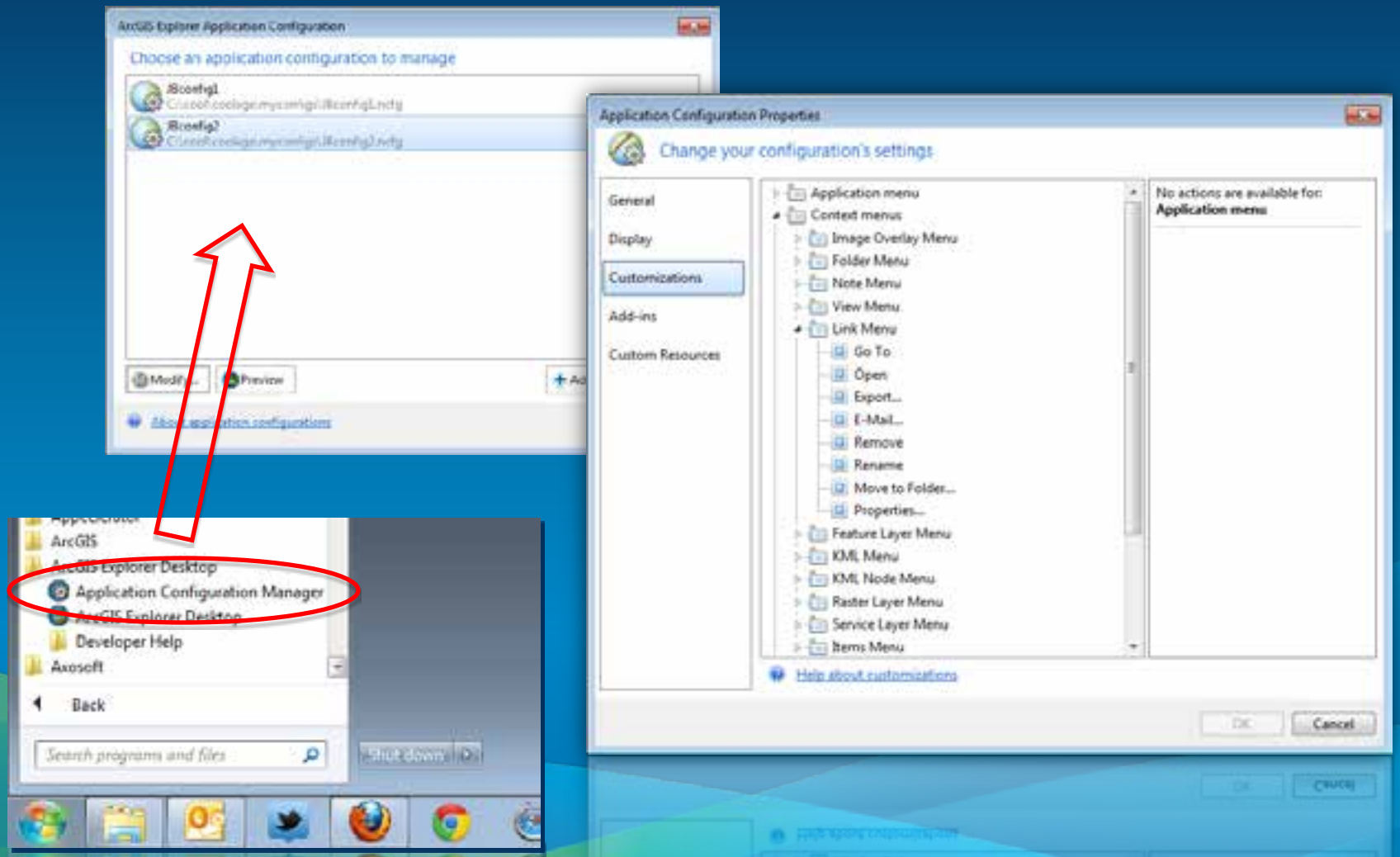
For Developers

1. **Application Configuration**
   - **Customize UI and functions, no code necessary**
2. **ArcGIS Explorer SDK**
   - **Create Add-ins with Visual Studio**

- **Portable files, easy to share**

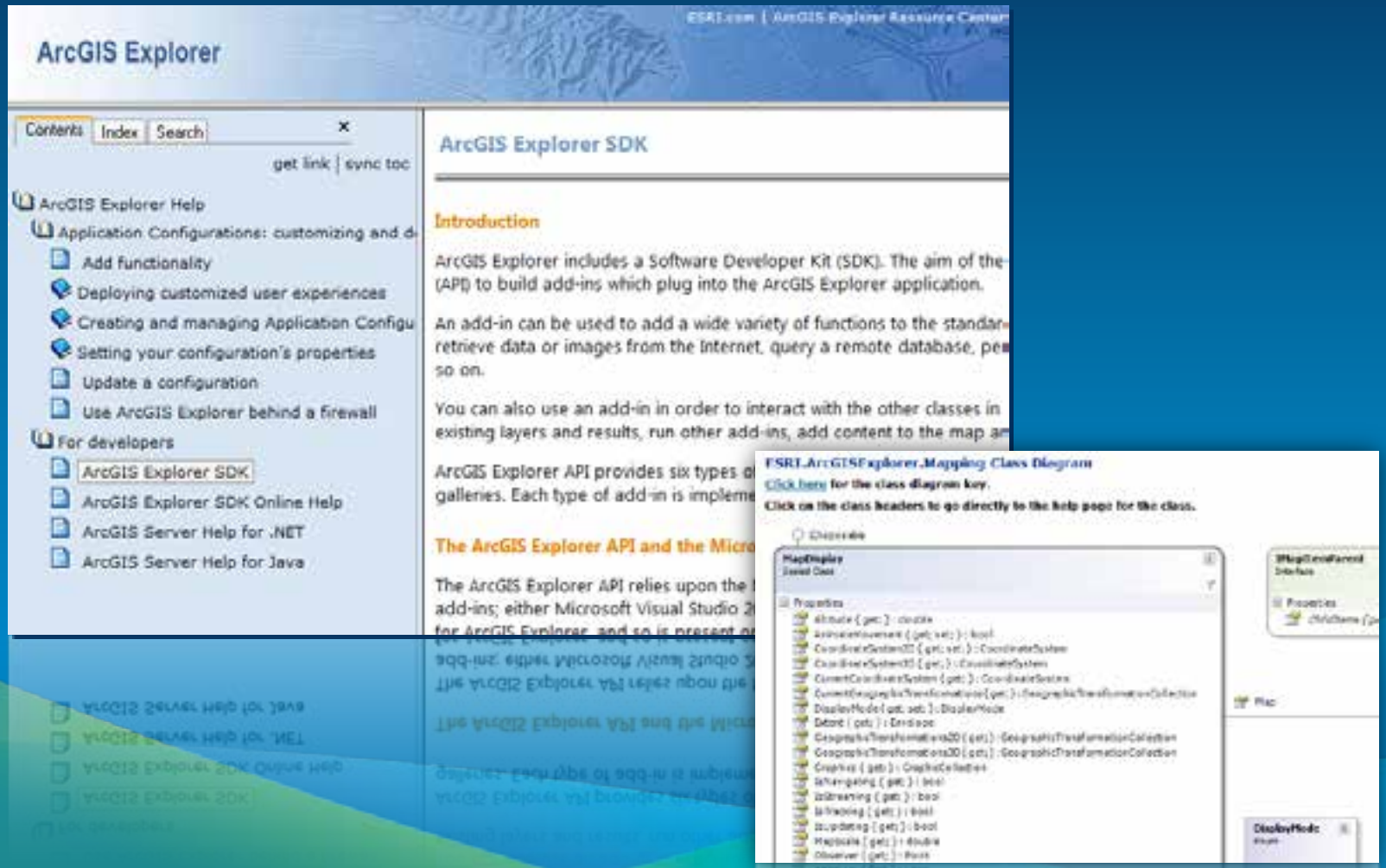
ArcGIS Explorer Desktop

Application Configuration



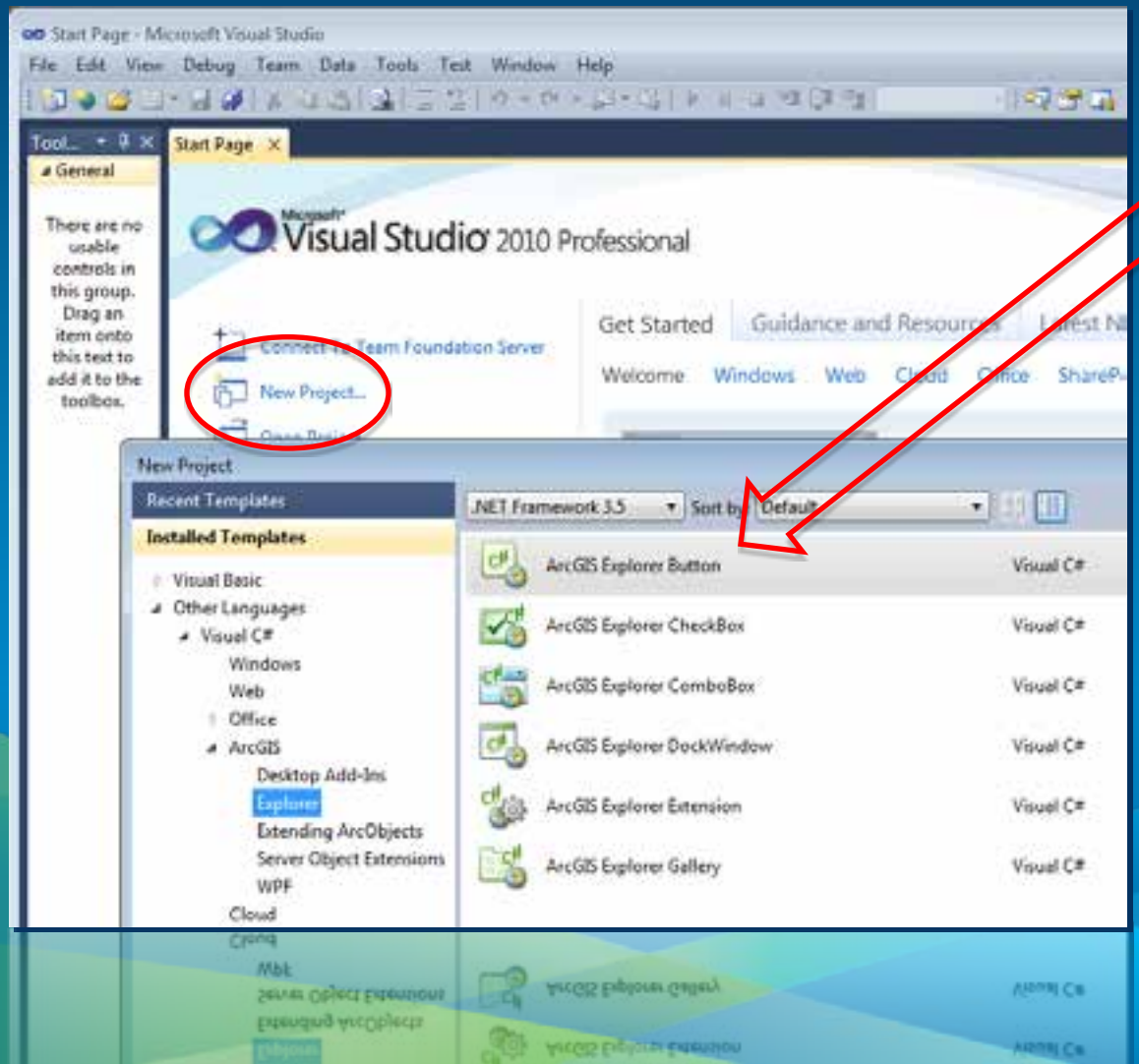
ArcGIS Explorer Desktop

SDK



ArcGIS Explorer Desktop

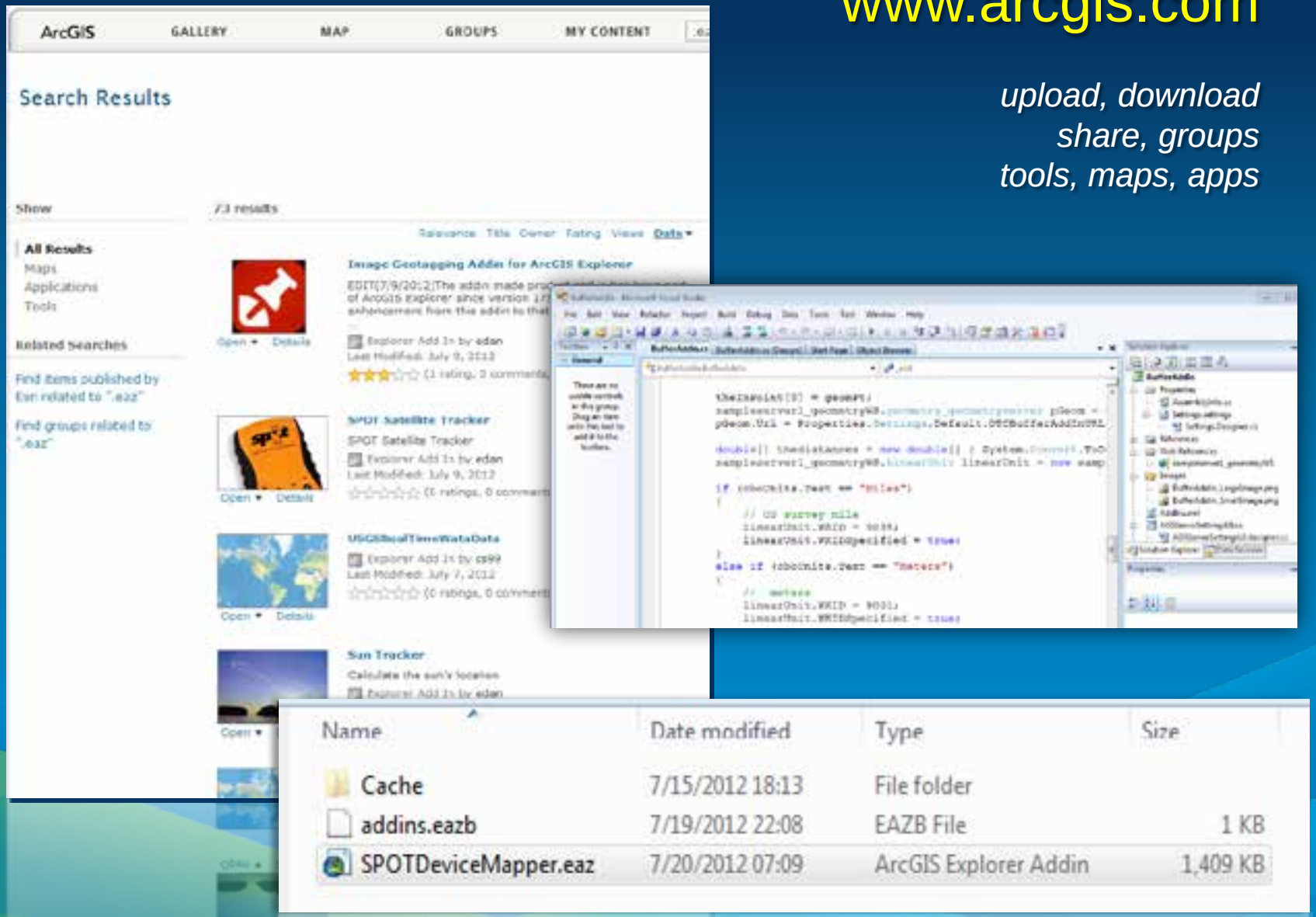
Creating Add-Ins

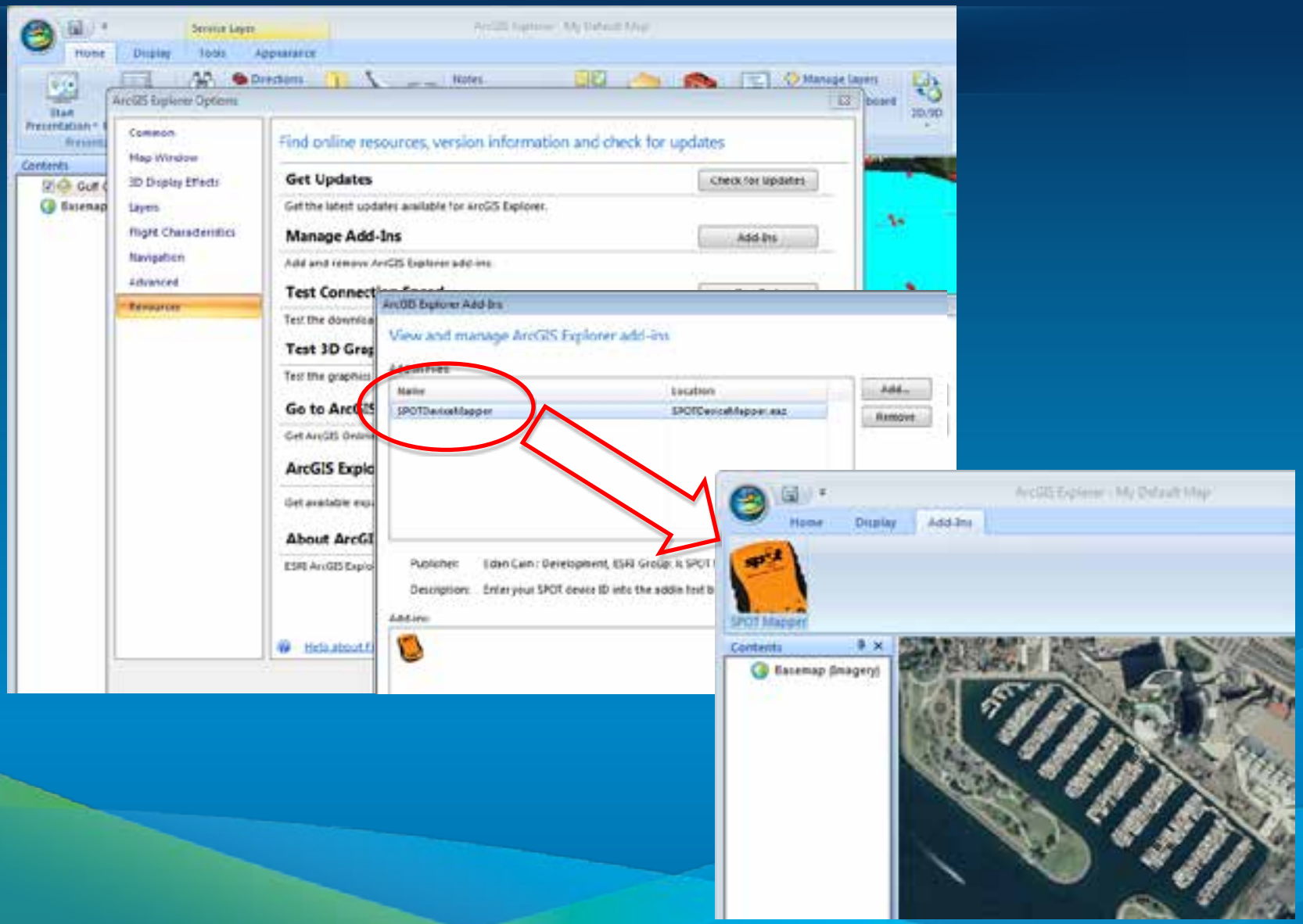


Templates

www.arcgis.com

upload, download
share, groups
tools, maps, apps




Home
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Appearance
ArcGIS Explorer Options
Common
Map Window
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Layers
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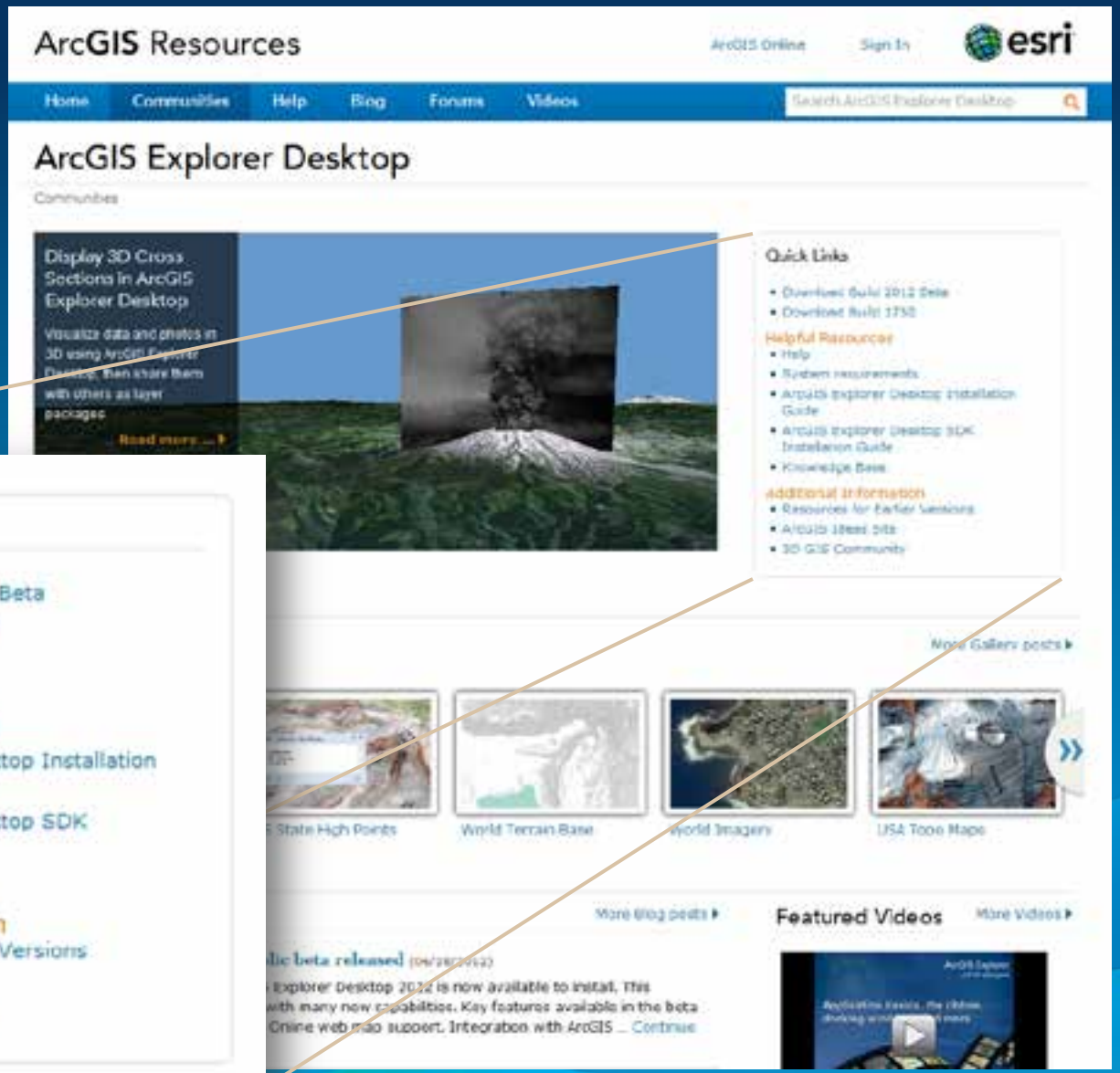
Resources
Find online resources, version information and check for updates
Get Updates
Check for Updates
Get the latest updates available for ArcGIS Explorer.
Manage Add-Ins
Add-Ins
Add and remove ArcGIS Explorer add-ins
ArcGIS Explorer Add-Ins
View and manage ArcGIS Explorer add-ins
Name
Location
SPOTDeviceMapper
Add...
Remove
Publisher:
Description:
Add-ins
Contents
Basemap
Home
Display
Add-Ins
SPOT Mapper
Contents
Basemap (Imagery)



Quick Links

- Download Build 2012 Beta
- Download Build 1750

Helpful Resources

- Help
- System requirements
- ArcGIS Explorer Desktop Installation Guide
- ArcGIS Explorer Desktop SDK Installation Guide
- Knowledge Base

Additional Information

- Resources for Earlier Versions
- ArcGIS Ideas Site
- 3D GIS Community

ArcGIS Explorer Desktop SDK 1750

Home | Concepts & Samples | API Reference | Forum | Blog

- Welcome to the ArcGIS Explorer .NET developer help
  - Welcome to the ArcGIS Explorer .NET developer help
  - Glossary
  - New API types and members
  - Getting Started with ArcGIS Explorer customizations
  - Visual Studio
  - Deploying Add-ins
  - ArcGIS Explorer namespace overviews
  - Programming with the ArcGIS Explorer API
  - Samples
    - Samples
    - Application Conditions
    - Bookmark Gallery
    - Drive Time Analysis
    - GeoNames Find
    - Layer Attributes
    - Locale Specific ComboBox
    - Map Content Updates
    - Query Demographics
    - Query Features
    - Track Shapes
    - Update Note Geometry
    - VehicleTracker Extension
  - Class diagrams and namespace reference

```
namespace DriveTimeAnalysisCS
{
  public class DriveTimeAnalysis_Button : ESRI.ArcGISExplorer.Application.Button
  {
    private string sDriveTimes = "3 5"; //Drive times to be used with the sample

    public override void OnClick()
    {
        //Get the active map display
        MapDisplay mapDisp = ESRI.ArcGISExplorer.Application.Application.ActiveMapDisplay;

        //Get a point from the screen to start the analysis from
        ESRI.ArcGISExplorer.Geometry.Point startPt = mapDisp.TrackPoint();
        if (startPt == null) return;

        //Call the routine for generating the drive time polygons
        GPFeatureRecordSetLayer gpOutput = CreateBufferPolys(startPt);
        if (gpOutput == null)
        {
            MessageBox.Show("No results returned from geoprocessing service!  Try location
            return;
        }

        //Add a folder to the contents to hold the results
        Folder fold = new Folder("Drive Time Analysis");
        mapDisp.Map.ChildItems.Add(fold);
        DriveTimeAnalysisCS.DriveTime.RecordSet recs = gpOutput.RecordSet;

        //Figure out which field contains the shape (though it's probably always index 1)
        int shapeFld = 0;
        for (int i = 0; i < recs.Fields.FieldArray.Length; i++)
        {
            Field f = recs.Fields.FieldArray[i];
```

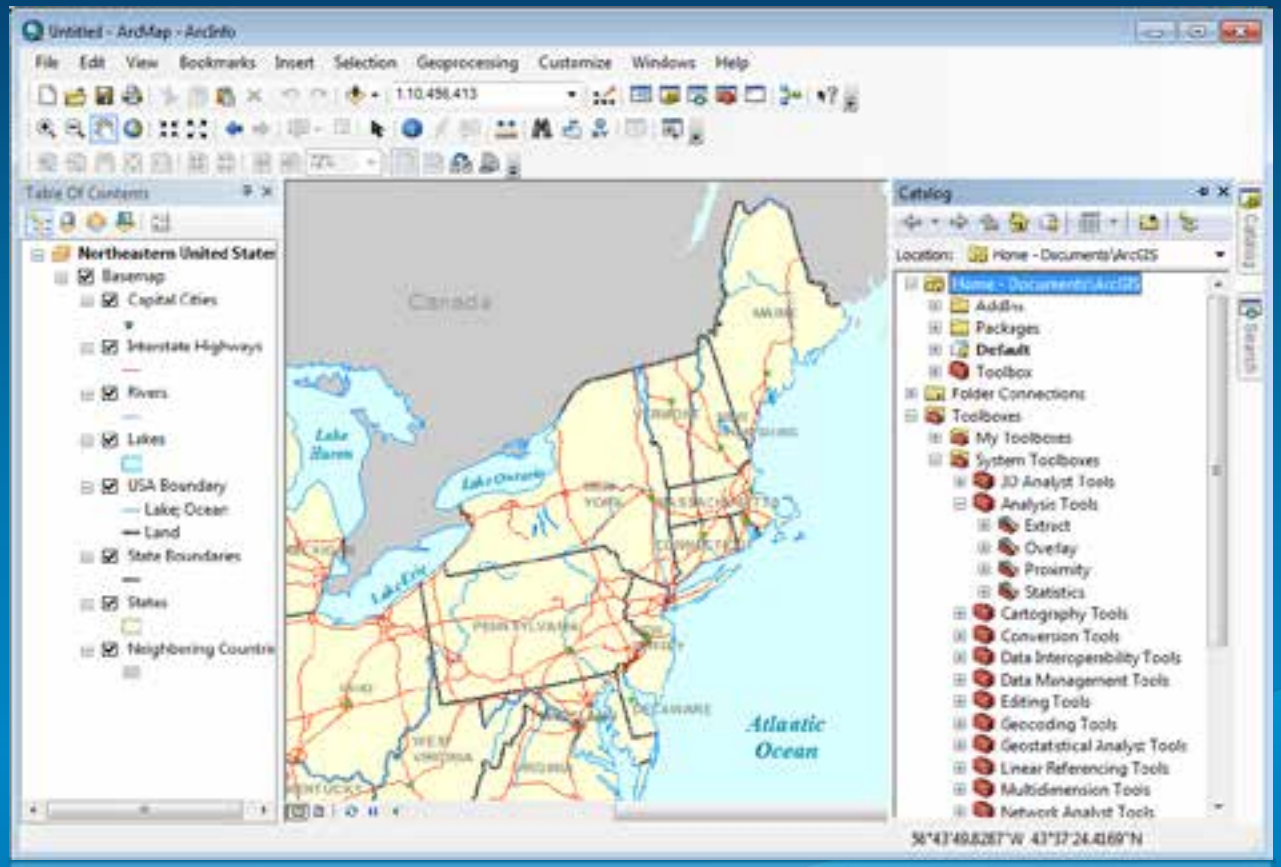
Demo Theater

Configuring and Customizing ArcGIS Explorer Desktop

- **Tuesday @ 12:00 noon**
- **Thursday @ 11:00am**

- **SDK Demo Theater**

ArcGIS Desktop



ArcGIS Desktop

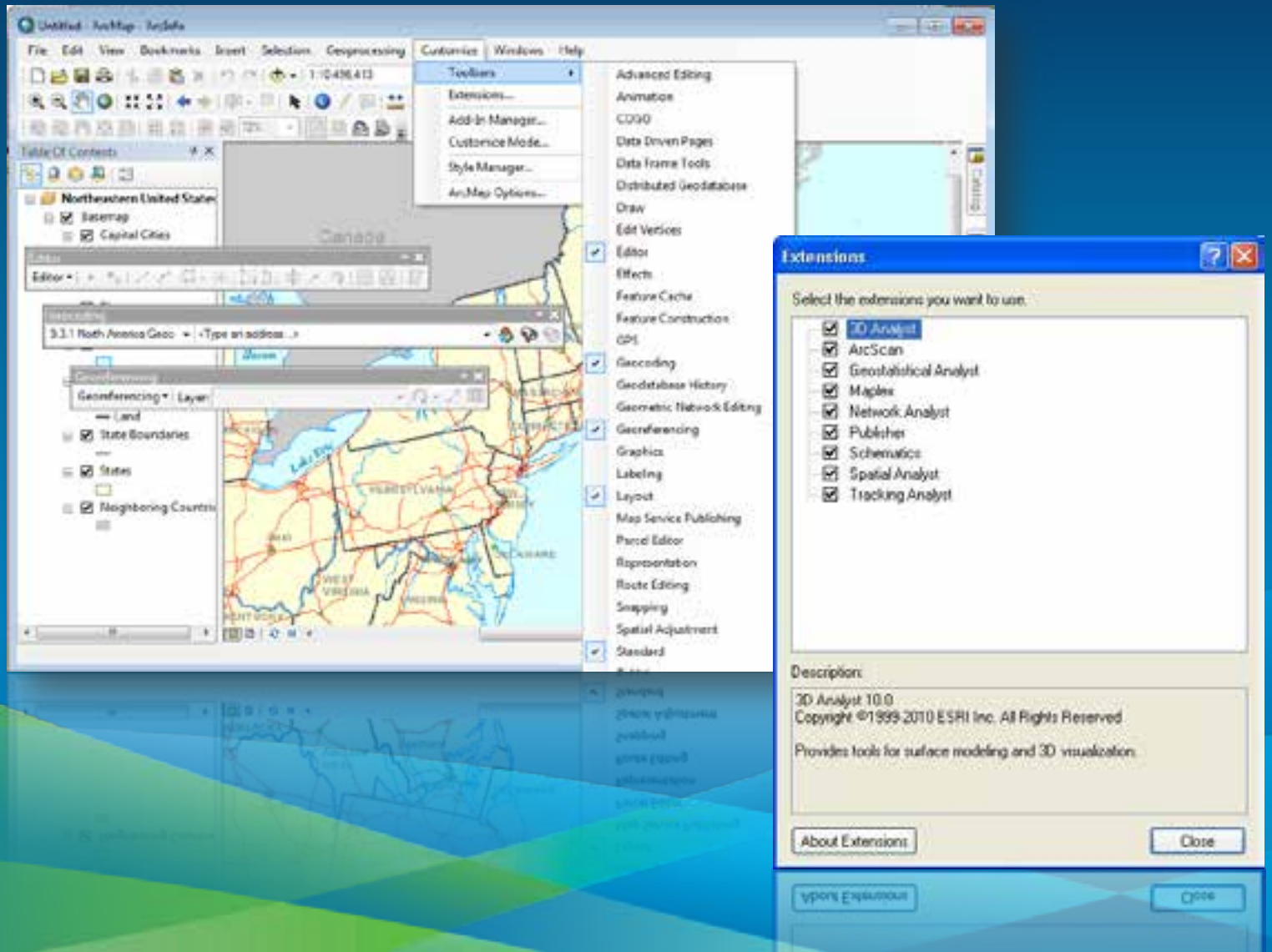
The professional GIS workstation

For Developers

1. **Customization of UI and functionality**
2. **ArcObjects SDK**
   - .NET, VC++
3. **Add-ins**
   - .NET, Java (Eclipse)
4. **Script Tools**
   - Python

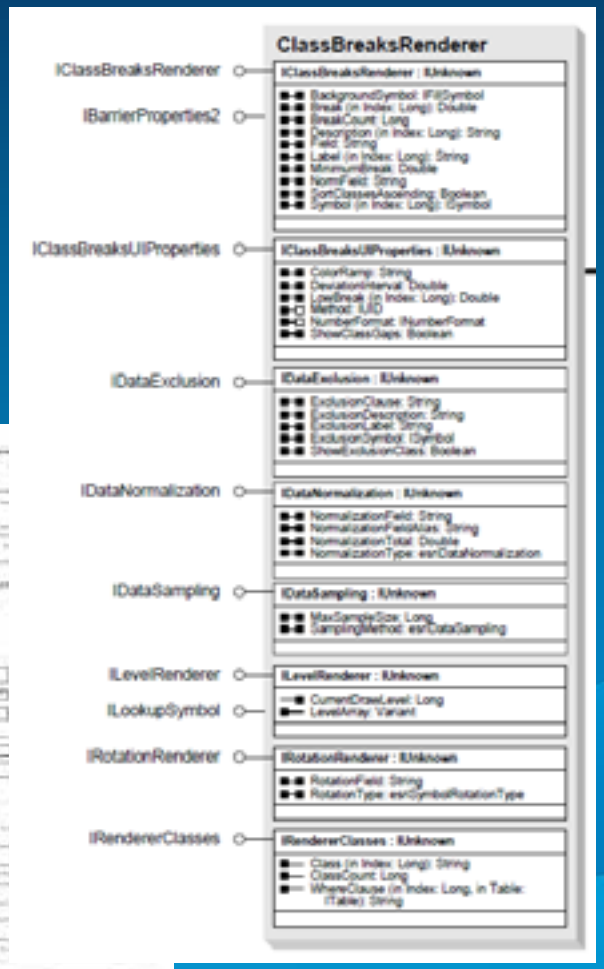
ArcGIS Desktop

Customizing



ArcGIS Desktop

ArcObjects



ArcGIS Desktop

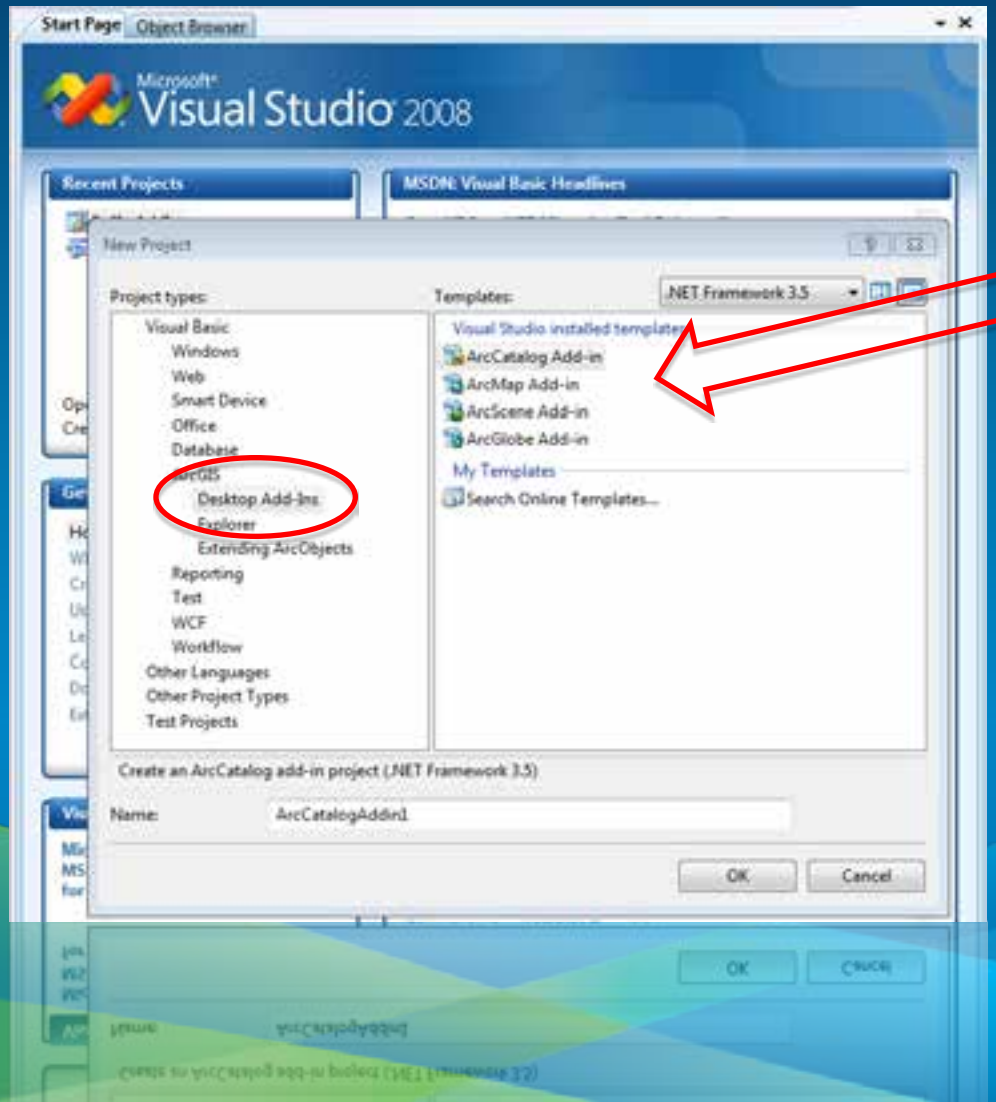
Creating add-ins

- **Create or share -** *.esriAddin
- **Copy into well-known location -** local or network
- **Install wizard**
- **Use**

- **Key advantages over classic ArcObjects dev pattern**

ArcGIS Desktop

Creating add-ins

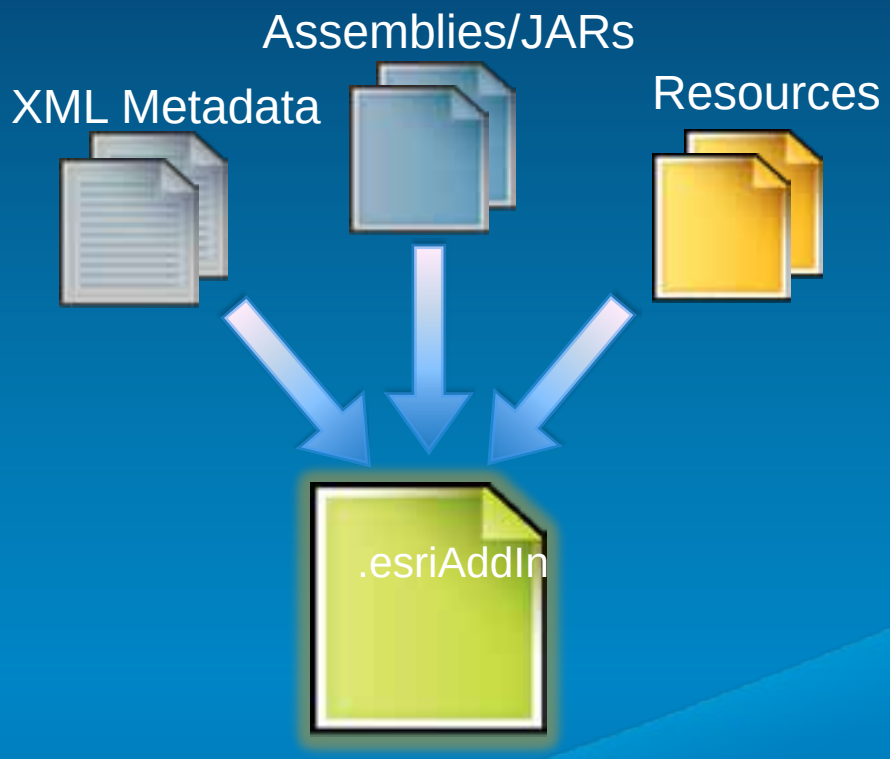


Templates

ArcGIS Desktop

Creating add-ins

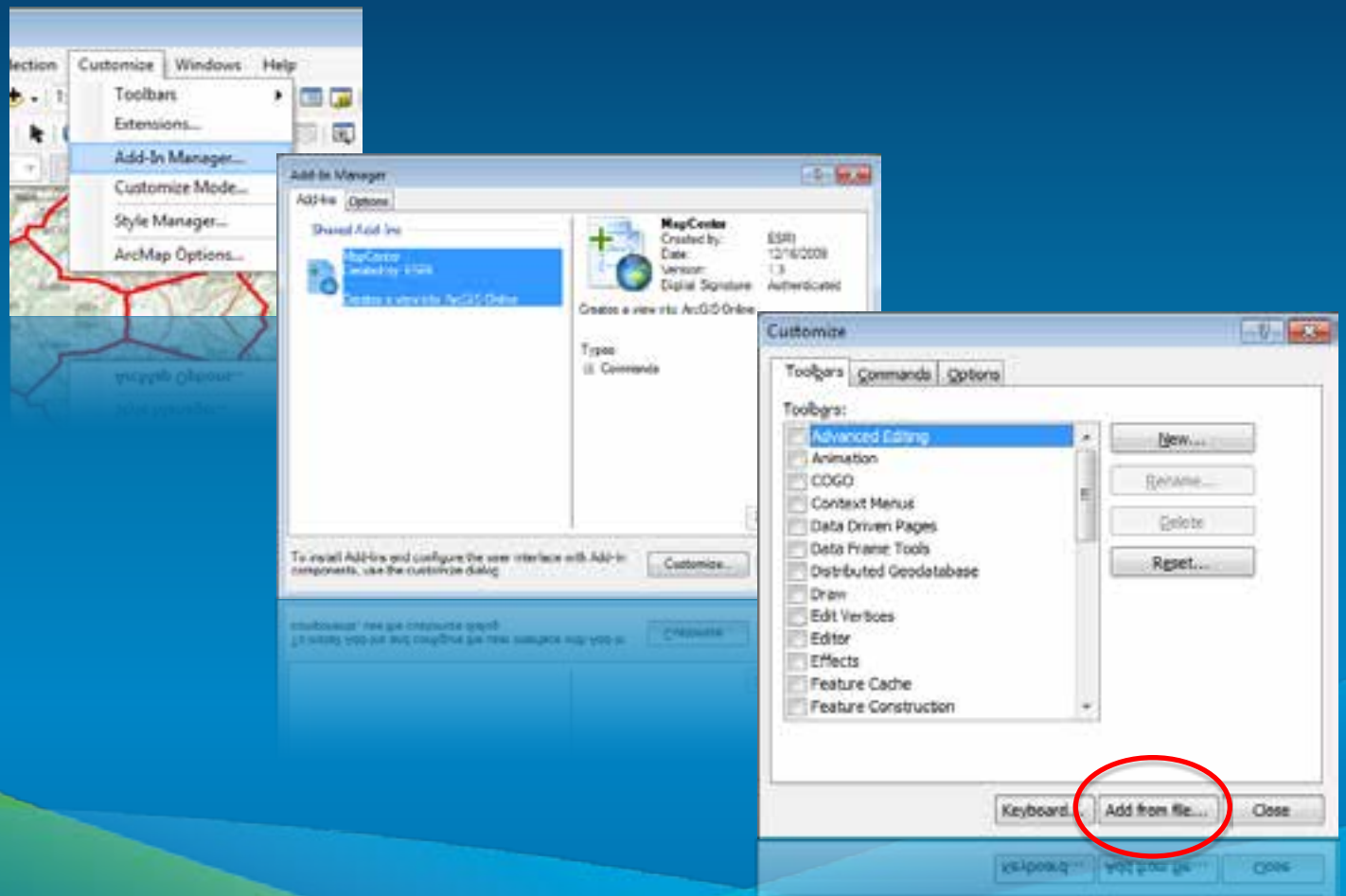
- Buttons
- Tools
- ComboBoxes
- Multi-items
- Menus
- Content Menus
- Toolbars
- Tool Palettes
- Dockable Windows
- Application Extensions
- Editor Extensions



.esriAddIn File
(zipped folder)

ArcGIS Desktop

Creating add-ins

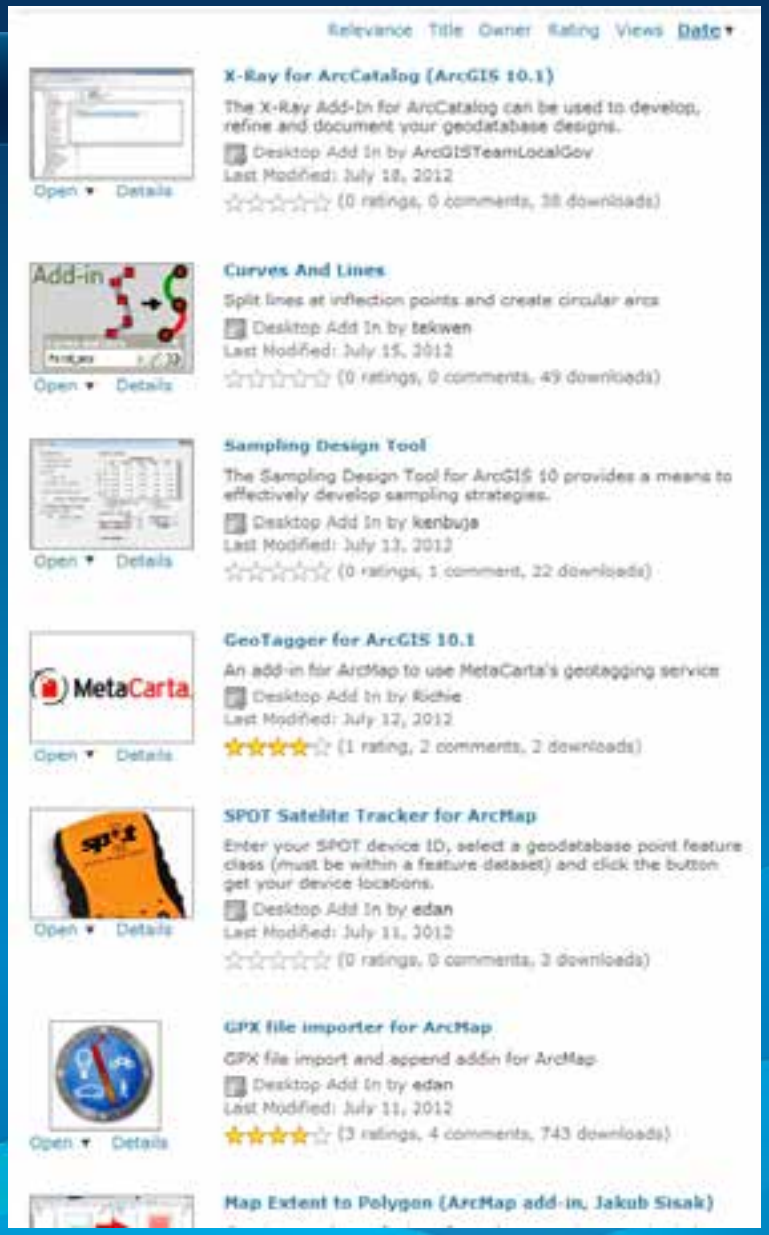


ArcGIS Desktop

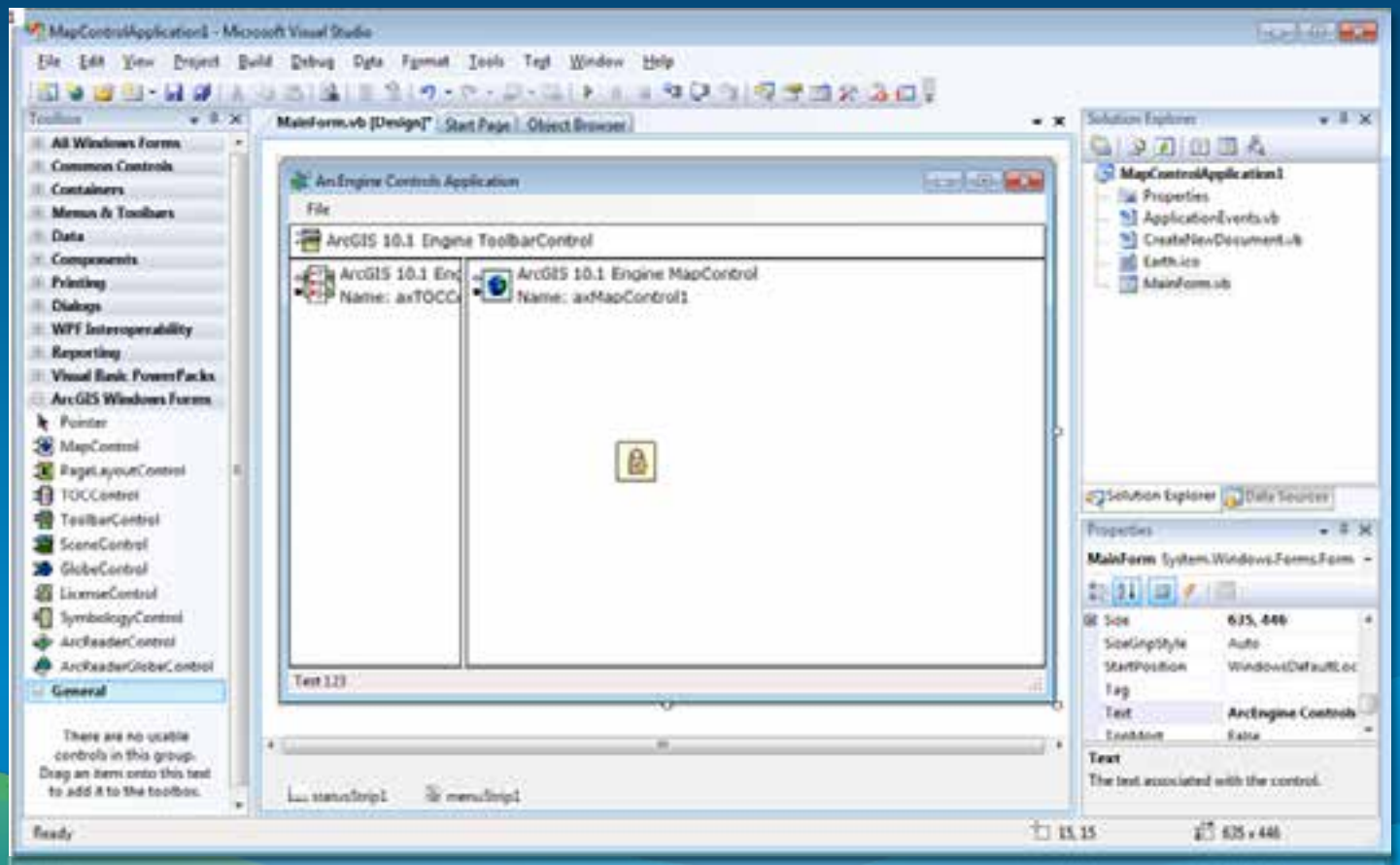
Creating add-ins

Finding, Using Add-ins

- www.arcgis.com



ArcGIS Engine



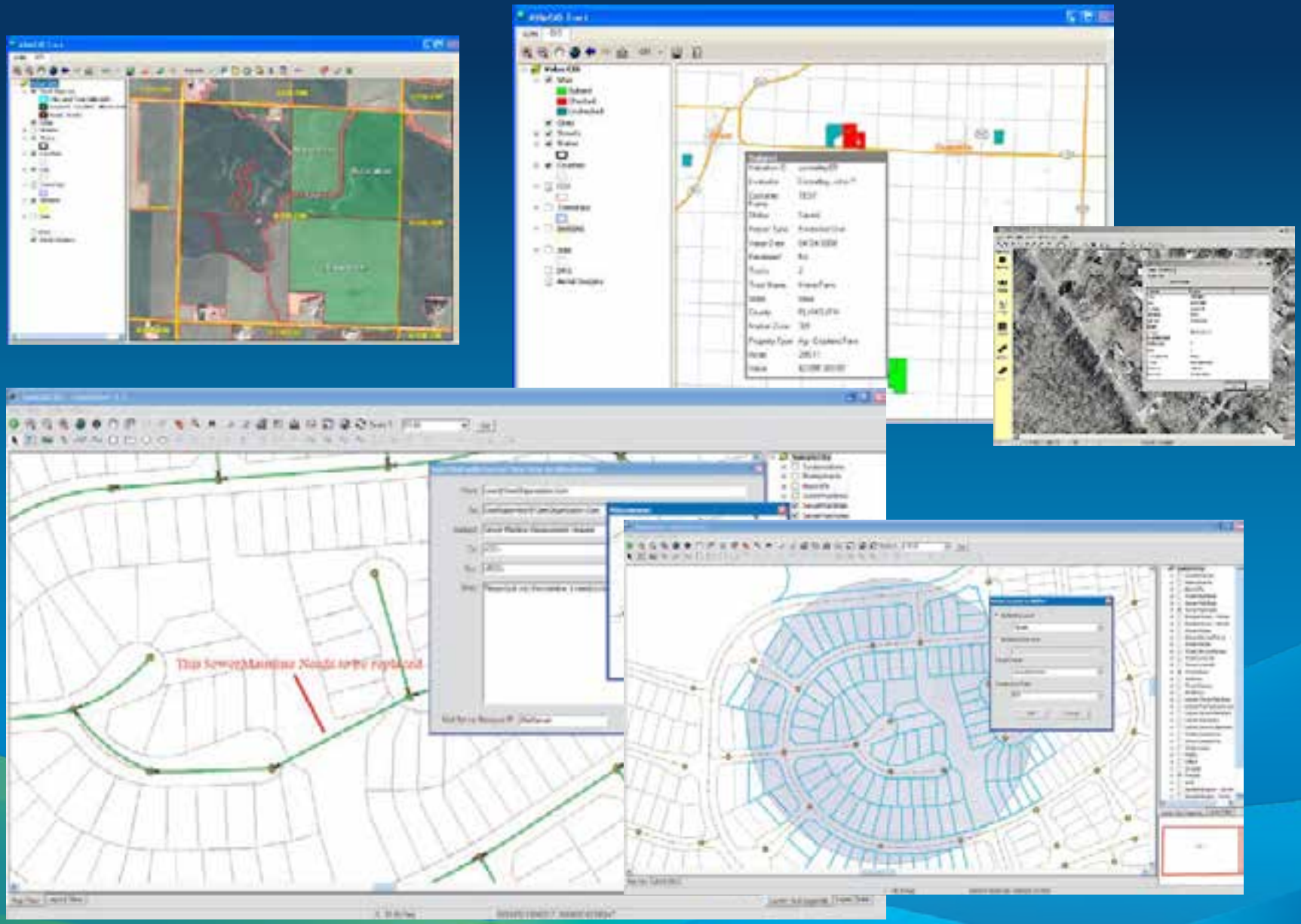
ArcGIS Engine

Embeddable and Extensible GIS Components

For Developers

- **ArcObjects SDK**
  - **.NET, Java, VC++, Cross-platform C++**
  - **1000s of classes, interfaces, methods**
  - **10+ controls**

- **Compiled and deployed stand-alone applications**



Geoprocessing

Interrogating, manipulating, managing map data

For Developers

Interactive scripting window

Use Modelbuilder then export as a script

Portable files, easy to share

- .py, .gpk, .esriAddIn

ArcGIS Resources

ArcGIS Online | Sign Out | esri

Home | Communities | Help | Blog | Forums | Videos

Search Python for ArcGIS

Python for ArcGIS

Communities

Writing add-ins for ArcGIS Desktop in Python

At ArcGIS 10.1, you can develop your own buttons and

Quick Links

ArcGIS Python Code Recipes
- ArcGIS Python Recipes

Learning Python
- Python tutorial
- Python.org beginners guide
- Learn Python the Hard Way
- Dive into Python
- Popular Python recipes
- Python Module of the Week

Python for ArcGIS
- New at 10.1 for Python and ArcPy
- A quick tour of ArcPy
- Extending ArcGIS with Python Tutorials

More Gallery posts

Getting Started

ArcGIS 10.1 arcpy Wall Reference Poster

ProcessEarthShaker v1.0.1

Export PDF web application and GP service sample

More Blog posts

arcpy

arcpy Getting arcpy.da rows back as

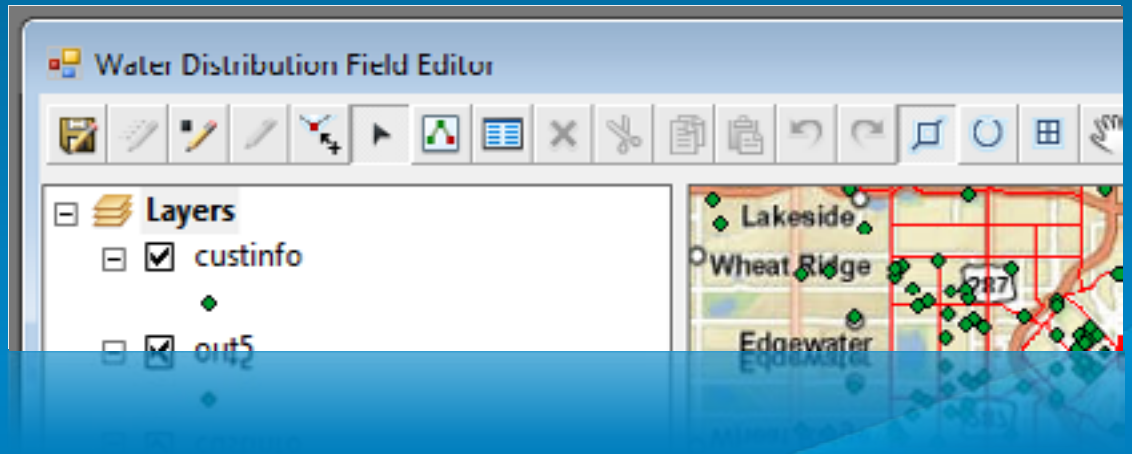
lists, you can easily transform these on-the-fly with

Geodatabase

- Components
- ArcObjects
- File Geodatabase API

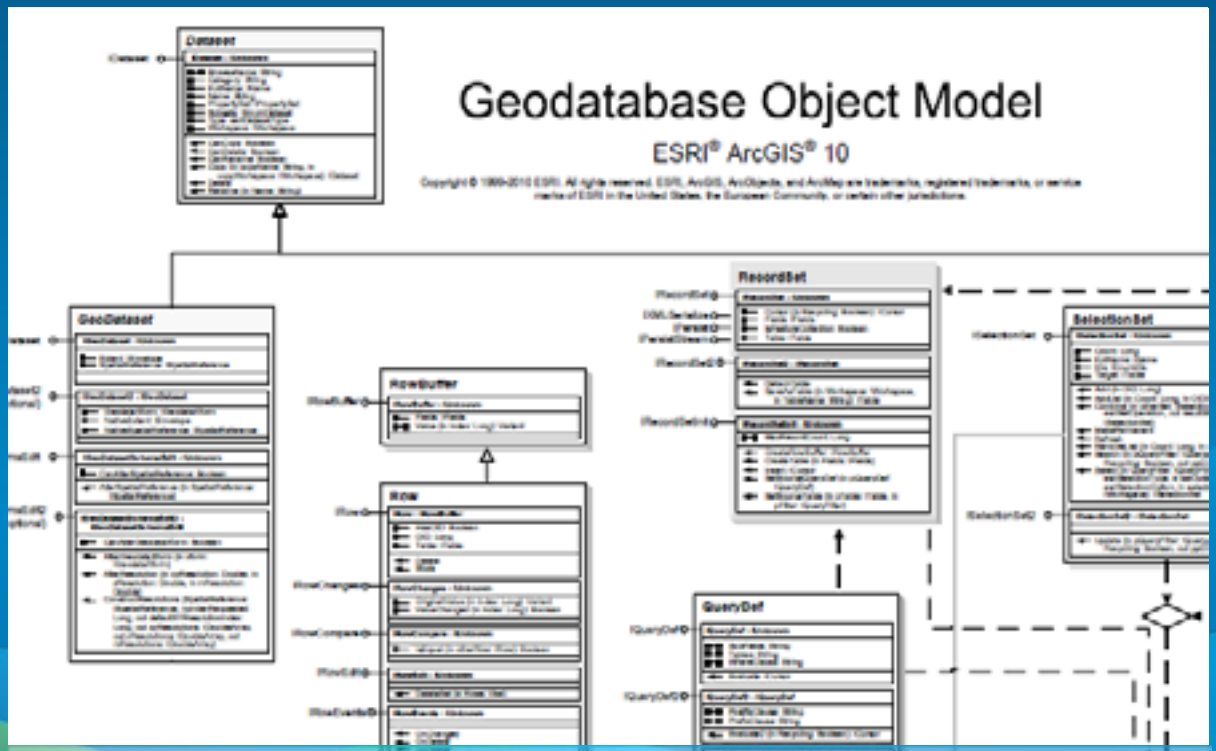
Geodatabase

- Components



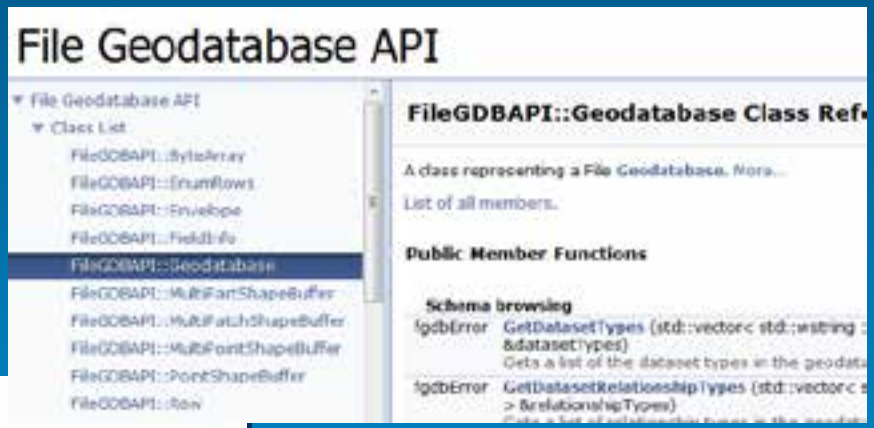
Geodatabase

- **ArcObjects**



Geodatabase

- **File Geodatabase API** *(v 1.2)*
  - **C++**
  - **.NET wrapper**
  - **Mac**



File Geodatabase API 1.2

Software	
File Geodatabase API 1.2 version for Linux 32-bit	FileGDB_API_1_2-32.tar.gz
File Geodatabase API 1.2 version for Linux 64-bit	FileGDB_API_1_2-64.tar.gz
File Geodatabase API 1.2 version for Mac 64-bit	FileGDB_API_1_2-64.zip
File Geodatabase API 1.2 version for Windows (Visual Studio 2008)	FileGDB_API_VS2008_1_2.zip
File Geodatabase API 1.2 version for Windows (Visual Studio 2010)	FileGDB_API_VS2010_1_2.zip

Agenda

- ArcGIS as a developer's toolbox
  - Desktop applications
    - ArcGIS Explorer Desktop, ArcGIS Desktop, ArcGIS Engine
  - Geoprocessing
  - Geodatabase
  - Client-Server applications
    - ArcGIS Server
    - ArcGIS Online
    - Web APIs
    - ArcGIS Runtime for Devices
- Developer Resources

ArcGIS Server – An end-to-end GIS system

Developer architecture

Services

APIs

Demos

ArcGIS Server – Works with many different clients

Including…

iPhone

Android

Windows Phone

ArcGIS Web APIs

ArcGIS Explorer

ArcGIS Runtime SDKs

ArcGIS Online

ArcGIS Desktop

.Net

Java

Python

Microsoft Silverlight

Flex/Flash

Ruby

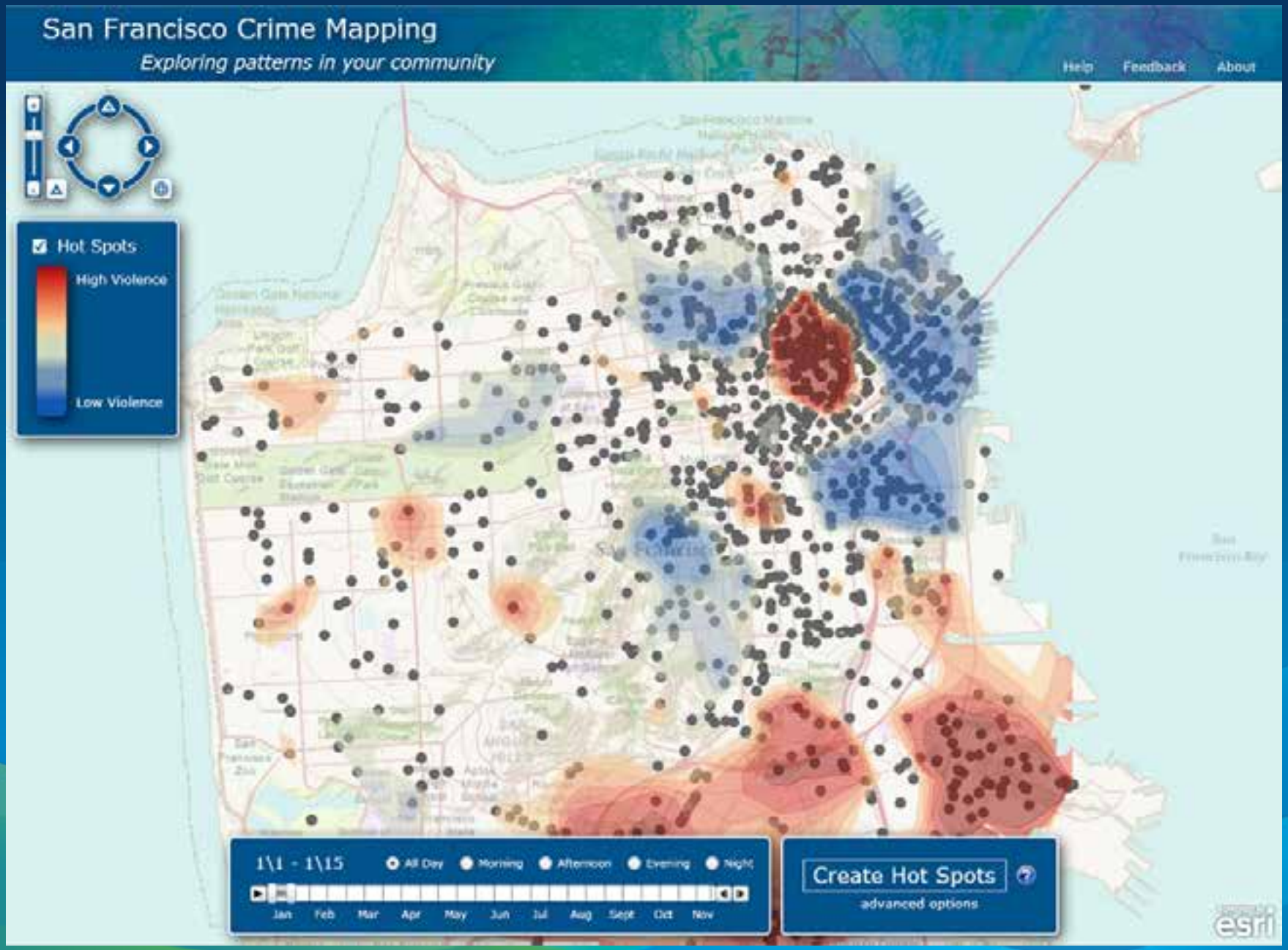
PHP

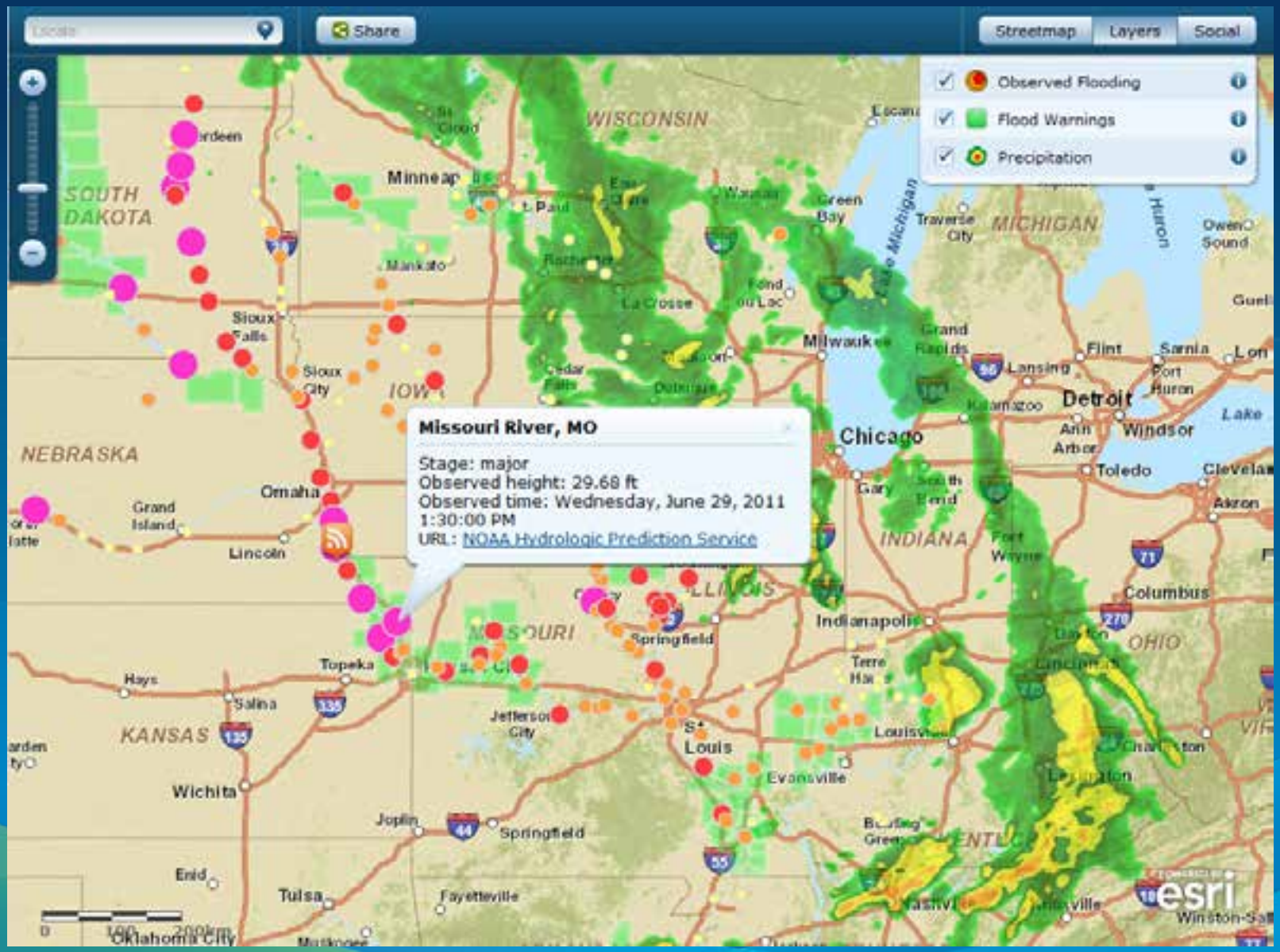
JavaScript

Google Earth

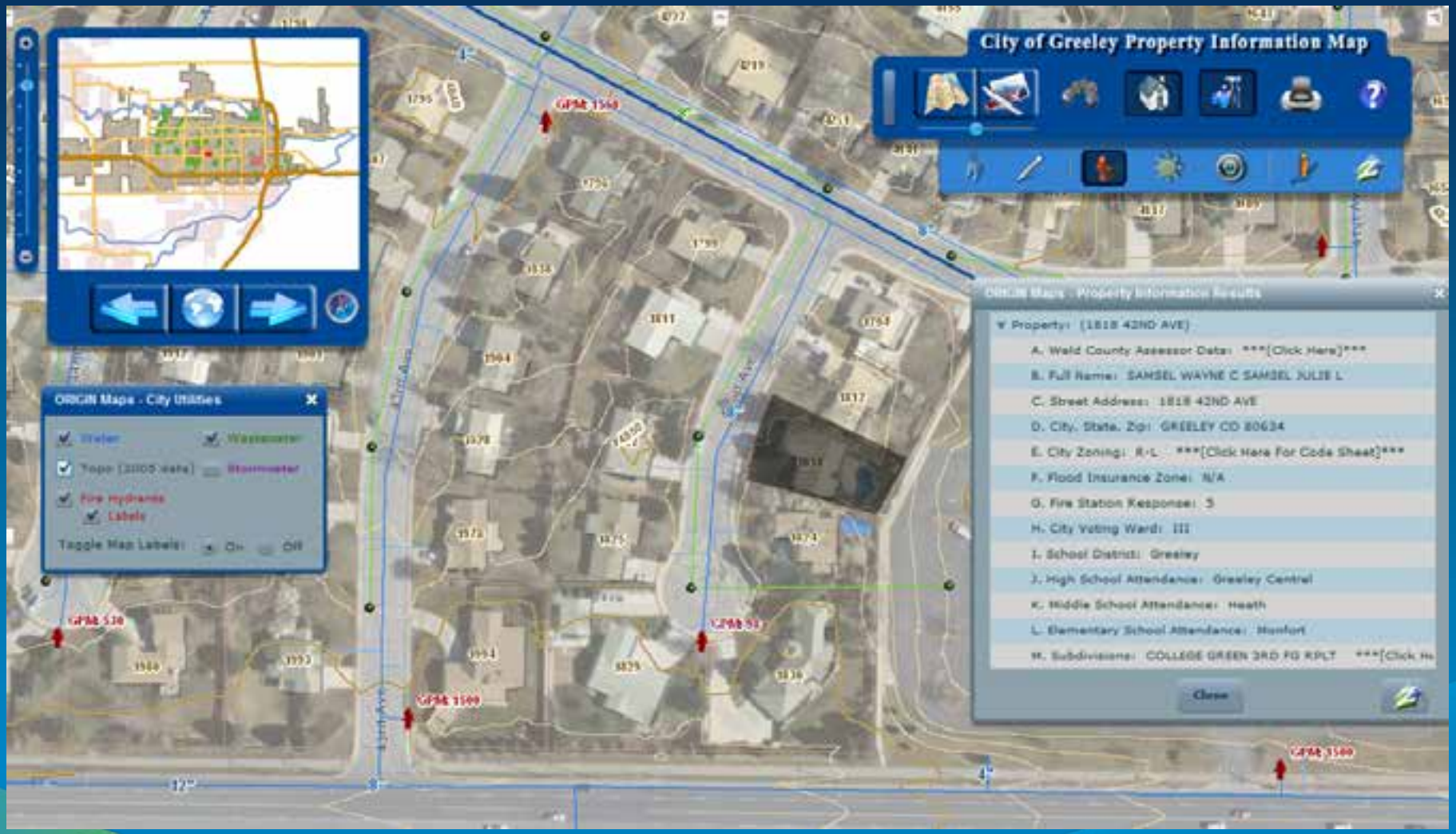
Open Street Map

OpenLayers

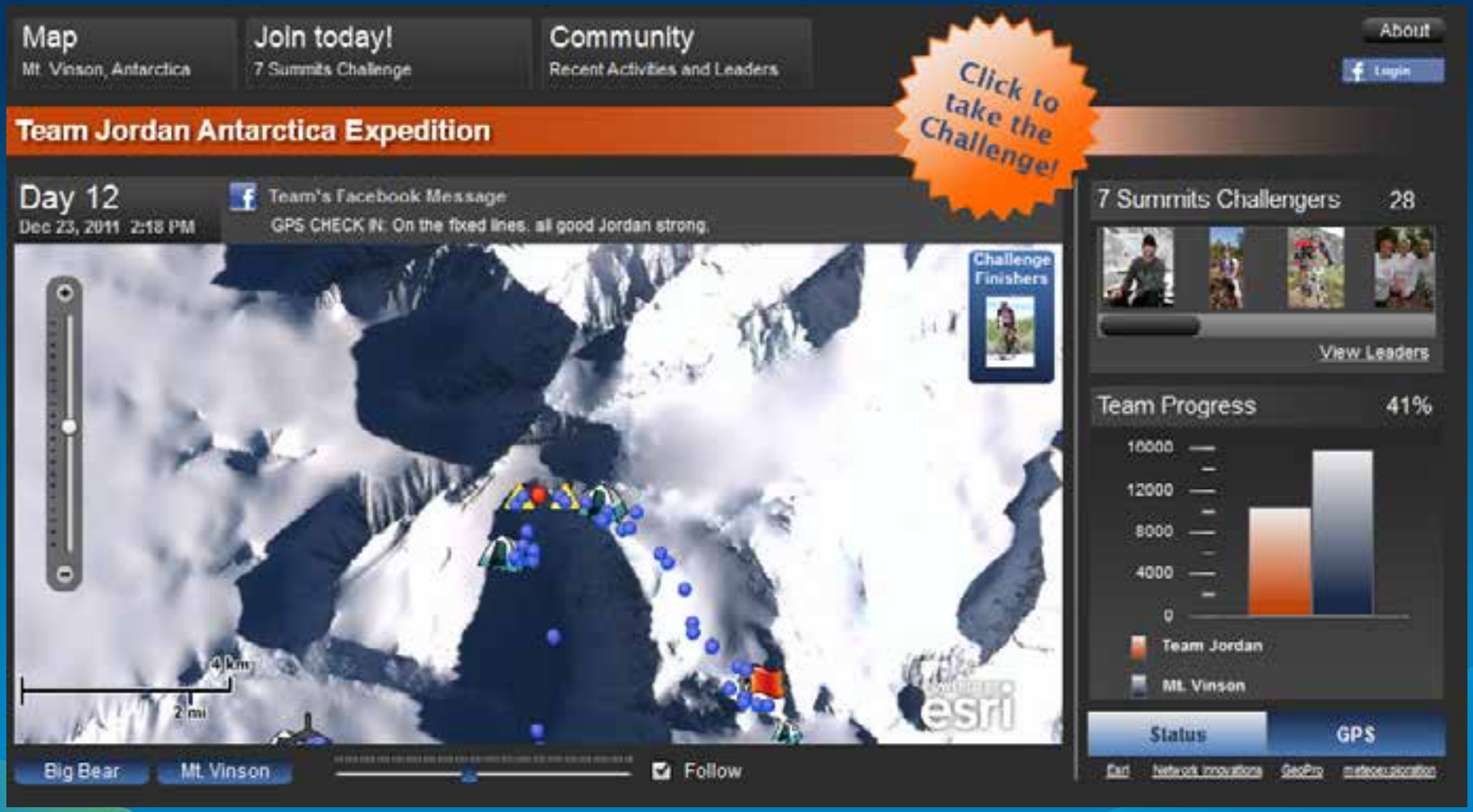

San Francisco Crime Mapping
Exploring patterns in your community
Help
Feedback
About
Hot Spots
High Violence
Low Violence
1\1 - 1\15
All Day
Morning
Afternoon
Evening
Night
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sept
Oct
Nov
Create Hot Spots
advanced options
esri



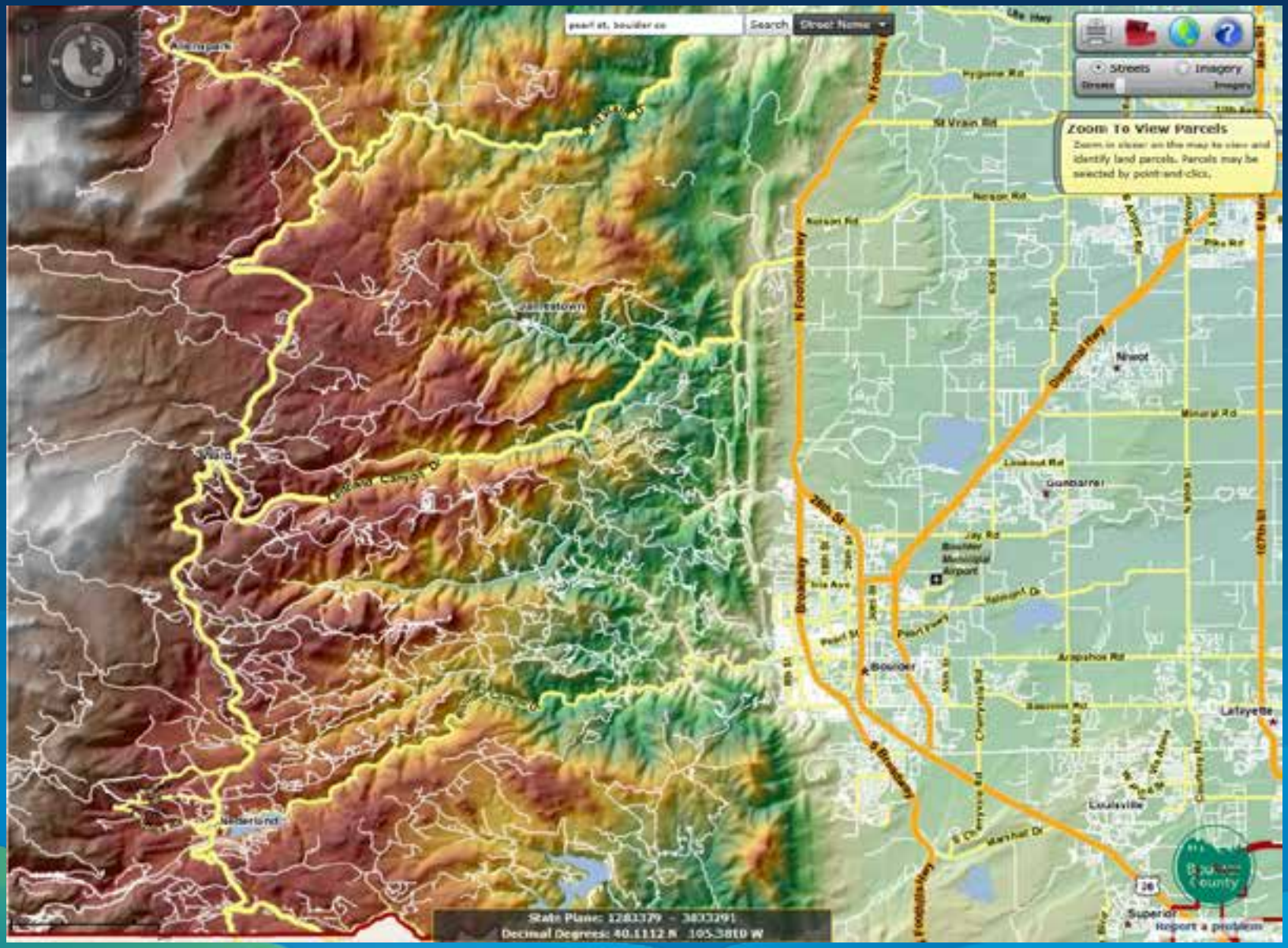
http://www.esri.com/services/disaster-response/floods/latest-news-map.html



http://gis.greeleygov.com/origin/propinfo.html

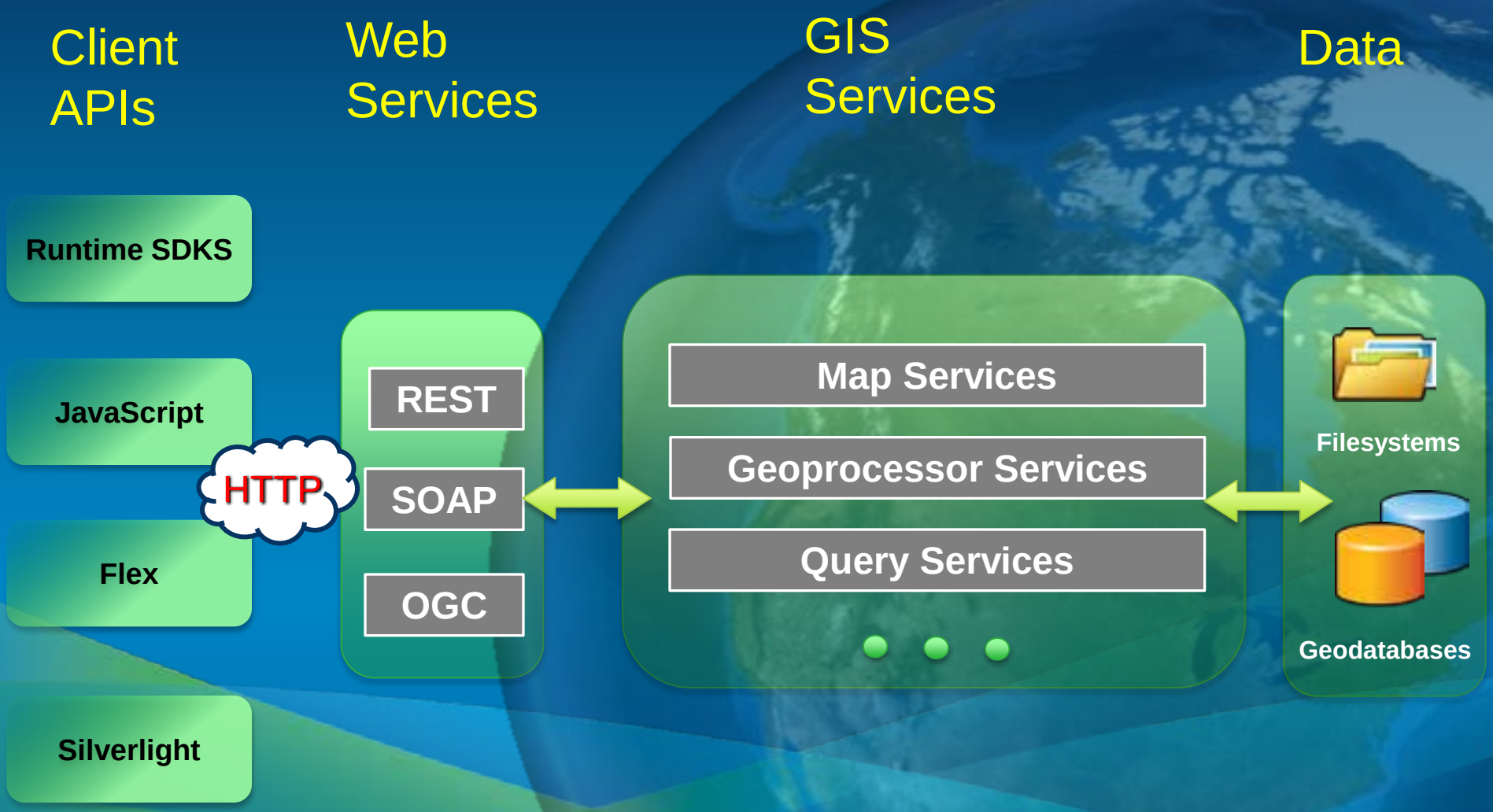


http://edn1.esri.com/antarctica



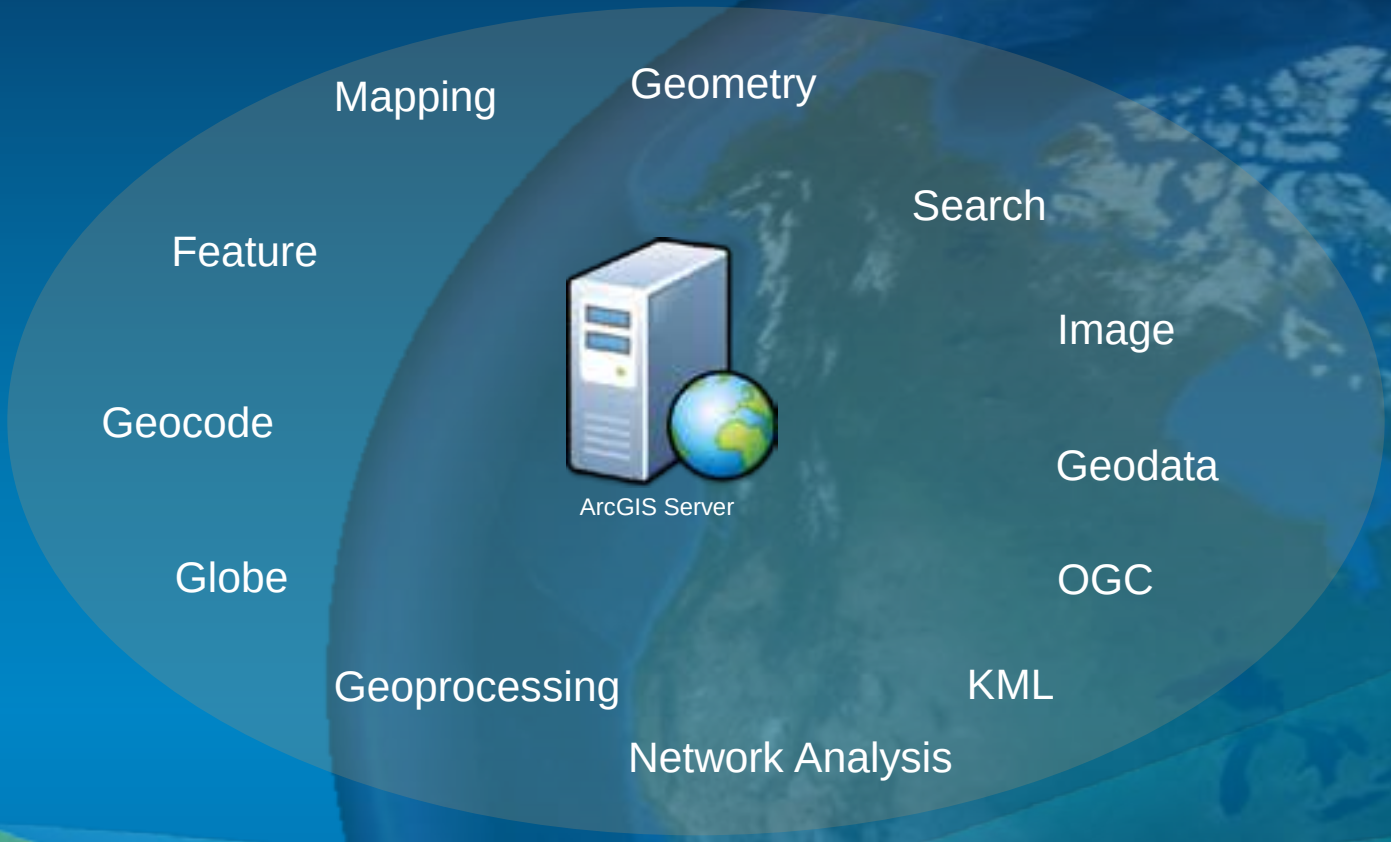
http://maps.bouldercounty.org/boco/emapping/

ArcGIS Server - Architecture



What is a GIS Service?

ArcGIS Server – GIS Services



How do I get my data into an app? Web Services!

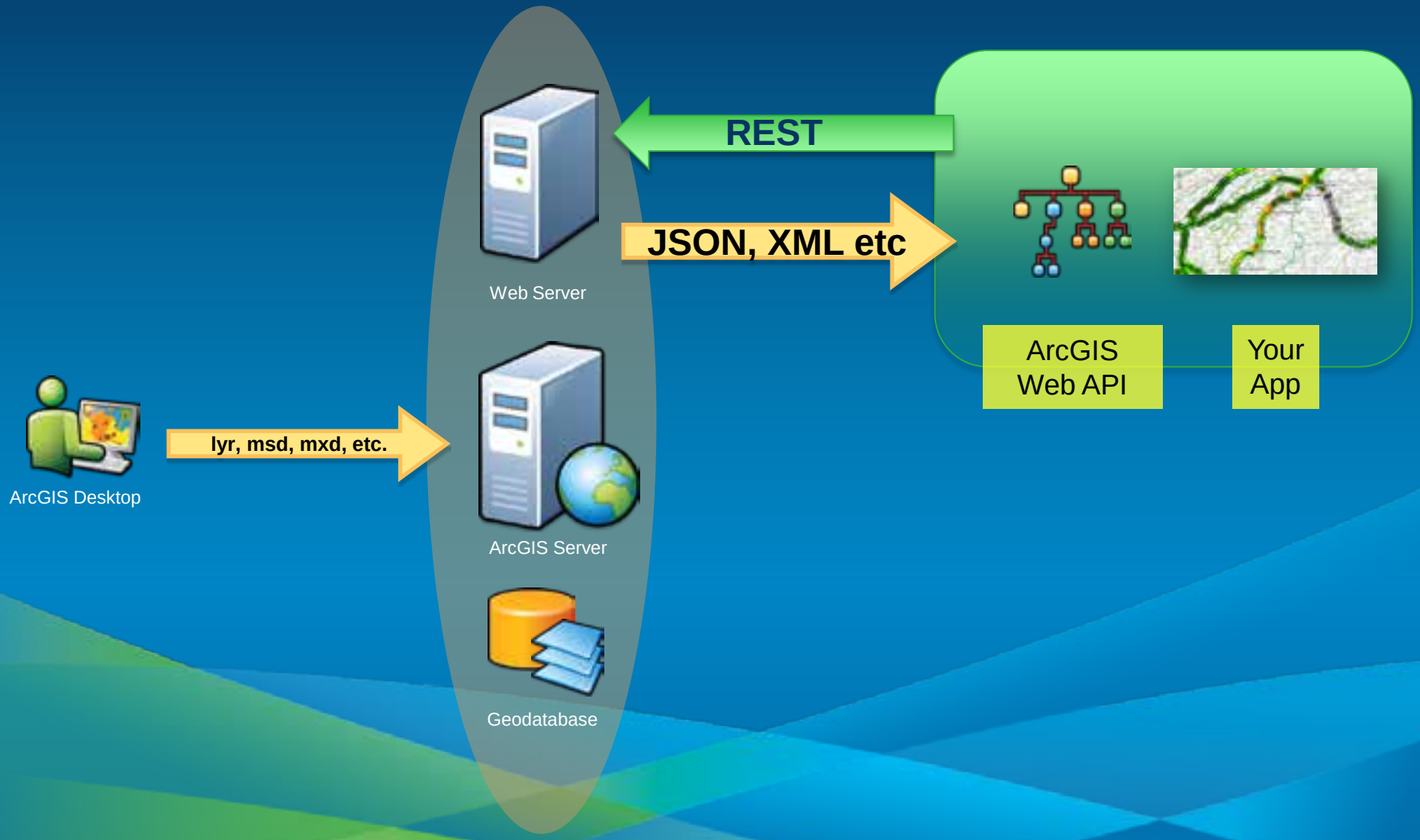
REST

SOAP

OGC

*Image from Microsoft Clip Art

Example ArcGIS REST API Architecture



Example REST API usage

URL-based requests (GET or POST)

Format works with all client-side application languages

http://sampleserver1.arcgisonline.com/ArcGIS/rest/services/Specialty/ESRI_StateCityHighway_USA/MapServer/export?bbox=-127.8,15.4,-63.5,60.5&f=pjson

ArcGIS REST Services Directory

ArcGIS Services Directory

Home > World_Topo_Map (MapServer) Help | API Reference

World_Topo_Map (MapServer)

View In: ArcMap ArcGIS Explorer ArcGIS JavaScript Google Earth ArcGIS.com Map Bing Maps (terms of use) Google Maps (terms of use)

View Footprint In: Google Earth

Service Description: This map is designed to be used as a basemap by GIS professionals and as a reference map by anyone. The map includes administrative boundaries, cities, water features, physiographic features, parks, landmarks, highways, roads, railways, and airports overlaid on land cover and shaded relief imagery for added context. The map provides coverage for the world down to a scale of ~1:72k. Coverage is provided down to ~1:4k for the following areas: Australia and New Zealand; Europe; Canada; Mexico; the continental United States and Hawaii; parts of southern Africa including Botswana, Lesotho, Namibia, South Africa, and Swaziland; and parts of South America including Argentina, Brazil, Chile, Columbia, and Venezuela. Coverage down to ~1:1k and ~1:2k is available in select urban areas. This basemap was compiled from a variety of best available sources from several data providers, including the U.S. Geological Survey (USGS), U.S. Environmental Protection Agency (EPA) , U.S. National Park Service (NPS), Food and Agriculture Organization of the United Nations (FAO), Department of Natural Resources Canada (NRCAN), GeoBase, Agriculture and Agri-Food Canada, DeLorme, NAVTEQ, TomTom (select countries in Eastern Europe and select European island nations), and Esri. For more information on this map, visit us online.

Map Name: Layers

Legend

All Layers and Tables

Layers:

- Topographic Info (0)
  - Elevation (m) (1)
  - Elevation (ft) (2)
  - Slope (3)
  - Aspect (4)
- Places Info (5)
  - Place Names (Country Level) (6)
  - Place Names (State Level) (7)
  - Place Names (County Level) (8)
  - Place Names (City Level) (9)
- Citations (10)

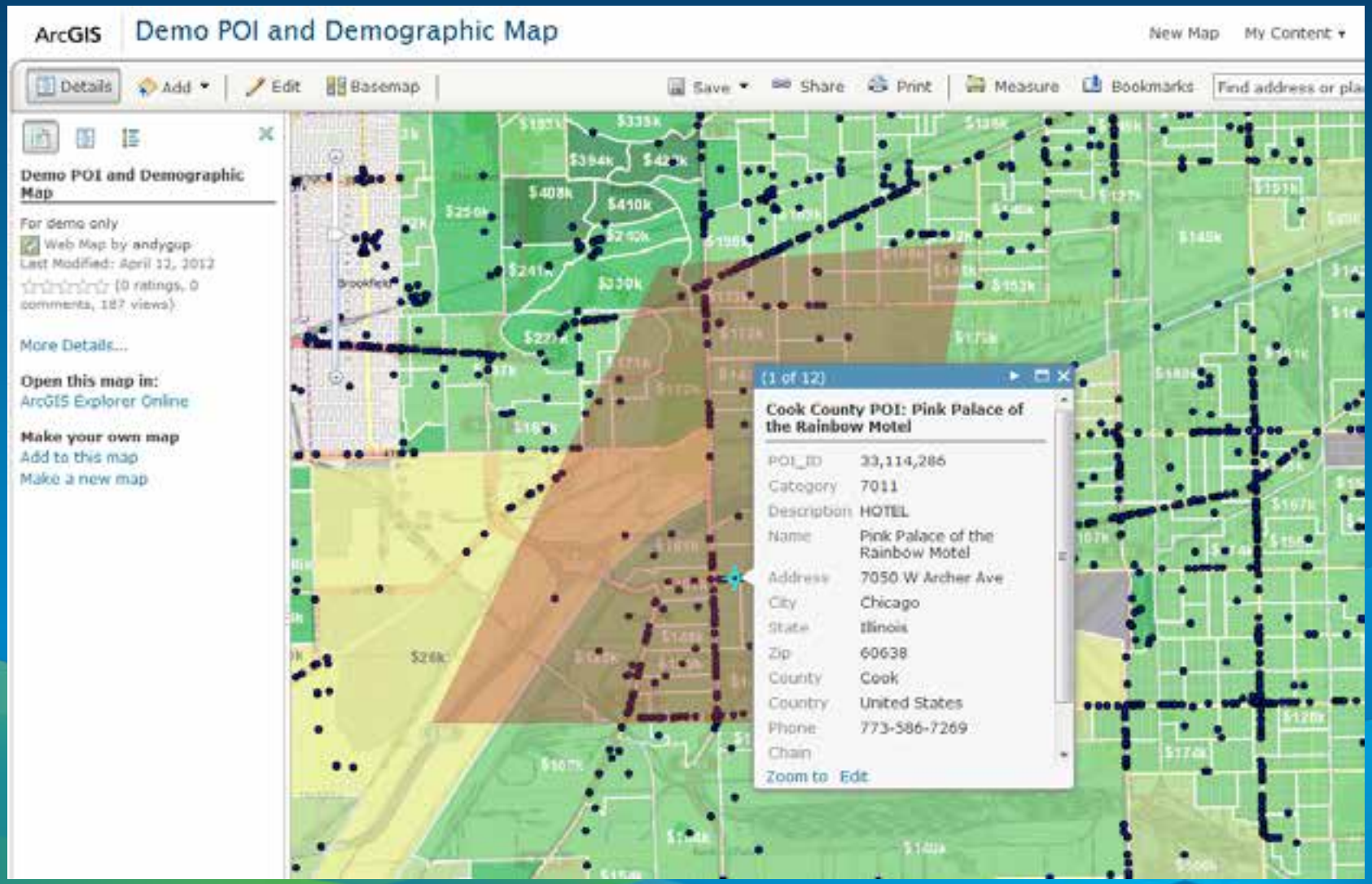
Tables:

http://server.arcgisonline.com/ArcGIS/rest/services/World_Topo_Map/MapServer

ArcGIS Online

- Viewer
- Templates
- ArcGIS Portal API

ArcGIS.com Map Viewer



Configurable Templates

- ArcGIS.com Configurable Templates
- Create maps using online tools
- Download template to your web server
- Config files
- Modify code directly

Basic Template Configuration – index.html

```
function init() {

    //get the localization strings
    i18n = dojo.i18n.getLocalization("esriTemplate", "template");
    console.log(i18n);
    configOptions = {
      //The ID for the map from ArcGIS.com
      webmap: "dbd1c6d52f4e447f8c01d14a691a70fe",
```

Web Map ID

ArcGIS Portal API

ArcGIS Portal API

Table of Contents

FRAMES | NO FRAMES

Overview

ArcGIS Online is Esri's Software as a Service offering that represents GIS as a Service. **ArcGIS Portal** is software technology from Esri that custom deploy either on premise or in the cloud. Both products allow users and organizations to author and share maps and data via a portal that suppo groups and sharing.

The **ArcGIS Portal API** is a core REST API supported by both ArcGIS Online and ArcGIS Portal that allows application developers to work with users and content within a portal. The ArcGIS Portal REST API when used in conjunction with the ArcGIS Web and ArcGIS Device/Runtime APIs, allows de to build web, device, and desktop applications that support sharing and collaboration using web maps. Organizational developers can also use thes build custom applications for their users. Aspects of the ArcGIS Portal REST API are integrated into the object models of the Web and Device client A full surface of the ArcGIS Portal API is available via REST.

Concepts

Portals allow users and organizations to publish and share content over the web.

A **Portal** may have users who are unaffiliated with an organization or users who are part of an organization.

A Portal has **Users**, **Groups** and **Content**.

Users sign in to the portal and create and share conten. The system supports different types of items including :

- **maps** - web maps that can be displayed on all supported platforms (web, mobile and desktop)
- **layers** - feature, map and image services that can be added as layers in web maps
- **applications** - web and mobile applications whose content is provided by web maps
- **tools** - geocoding, routing and other task based services that can be used by applications
- **datafiles** - files that can be uploaded, stored and downloaded and in certain cases activated to create services (map layers)

Users can choose to keep content *Private* to themselves or *Shared* with other users via Groups or *Public* and accessible to everyone.

Users can create and join Groups. Users can share items with Groups. This makes the items visible to and accessible by the other members of the G

A Portal may contain multiple **Organizations**.

A user of the Portal (and of the REST API) sees the view of the Portal that applies to their organization. This view includes the users, groups and ite belong to the organization and have been shared with the accessing user. This view may also include users, groups and items that are external to t organization and have been shared with the accessing user.

An organization has users in different roles including administrators, publishers and information workers.

Administrators can add users to their organizations and have access to all content within the organization.

http://www.arcgis.com/apidocs/rest/

ArcGIS Resource Center

ArcGIS API for JavaScript

Home | Concepts | Samples | API Reference | Forums | Code Gallery

- Map Configuration
- HTML5
- Widgets
- Layers
- Feature Layers
- Layouts
- Bing Maps
- Time
- Graphics
- Renderers
- Editing
- Query Task
- Find and Identify
- Address Matching
- Geoprocessing
- Network Analyst
- Toolbars
- Geometry Service
- Image Services
- Mobile
- Web Maps
- Portal
  - Web Map Viewer
  - Item Gallery
  - Add Shapefile
  - Get Group Id

Web Map Viewer

View live sample

Description

This sample demonstrates how to use the ArcGIS Portal API, added at version 2.8, to view web maps from the ArcG in this case ArcGIS.com, using the Portal class. Once the portal has loaded query for the 'Community Basemap' gro the top rated maps.

```
var params = {
  q: 'title:Community Basemaps AND owner:esri'
};
portal.queryGroups(params).then(function(response){
    var group = response.results[0];
     var queryParams ={
      q:'type:"Web Map" -type:"Web Mapping Application"',
      sortField:'created',
      sortOrder:'desc',
      num:5
    };
    group.queryItems(queryParams).forEach(loadMap);
});
```

Note that when we query the group we can use the forEach function to loop through each of the items in the resul

Code

```
<!DOCTYPE html>
<html>
<head>
  <meta http-equiv="Content-Type" content="text/html; charset=utf-8">
  <meta http-equiv="X-UA-Compatible" content="IE=7,IE=9" />
  <!--The viewport meta tag is used to improve the presentation and behavior
  of the samples on iOS devices-->
  <meta name="viewport" content="initial-scale=1, maximum-scale=1,user-scalable=no" />
  <title>Web Map Viewer</title>
```

In the browser: ArcGIS Web APIs

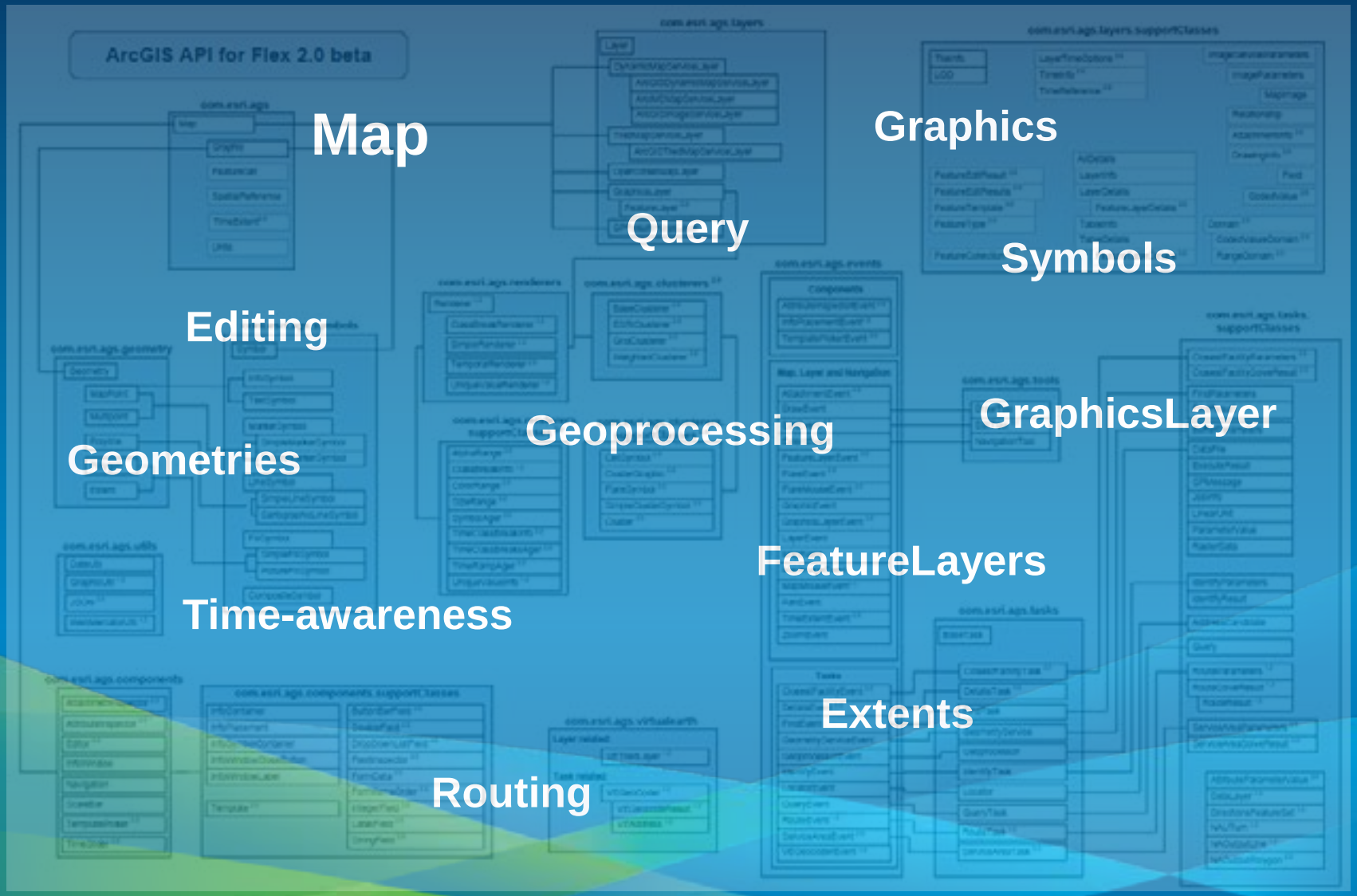
JavaScript

JavaScript Compact (mobile)

Apache Flex

Microsoft Silverlight

ArcGIS Web API capabilities include……



Why use the Web APIs?

Let’s you focus on rapid application development!

map.addLayer(basemap)

vs.

http://sampleserver1.arcgisonline.com/ArcGIS/rest/services/Specialty/ESRI_StateCityHighway_USA/MapServer/export?bbox=-127.8,15.4,-63.5,60.5&f=pjson

REST

Why use the Web APIs?

```
<div id="mapDiv" style="width:800px;
    height:600px; border:1px solid #000;">
</div>
```

vs.

JSON

dojo.io.script.jsonp_dojoIoScript2._jsonpCallback({"serviceDescription":"","mapName":"Layers","description":"","copyrightText":"","layers":[{"id":0,"name":"arcgis2.DBO.custinfo","parentLayerId":-1,"defaultVisibility":true,"subLayerIds":null},{"id":1,"name":"arcgis2.DBO.DenverCO_CensusTracts","parentLayerId":-1,"defaultVisibility":true,"subLayerIds":null}],"tables":[],"spatialReference":{"wkid":4326},"singleFusedMapCache":false,"initialExtent":{"xmin":-105.170917848995,"ymin":39.5124265894988,"xmax":-104.556422044239,"ymax":40.0144928617289,"spatialReference":{"wkid":4326}},"fullExtent":{"xmin":-105.13659819355,"ymin":39.55113300385,"xmax":-104.57486577945,"ymax":39.9313831191501,"spatialReference":{"wkid":4326}},"units":"esriDecimalDegrees","supportedImageFormatTypes":"PNG24,PNG,JPG,DIB,TIFF,EMF,PS,PDF,GIF,SVG,SVGZ,AI,BMP","documentInfo":{"Title":"","Author":"","Comments":"","Subject":"","Category":"","Keywords":"","Credits":""},"capabilities":"Map,Query,Data"});

API “Syntax”

JavaScript (.js)

```
queryTask.execute(query,queryTaskComplete,queryTaskError);
```

Silverlight (C#.NET)

```
queryTask.ExecuteCompleted += QueryTask_ExecuteCompleted;
```

Flex (ActionScript)

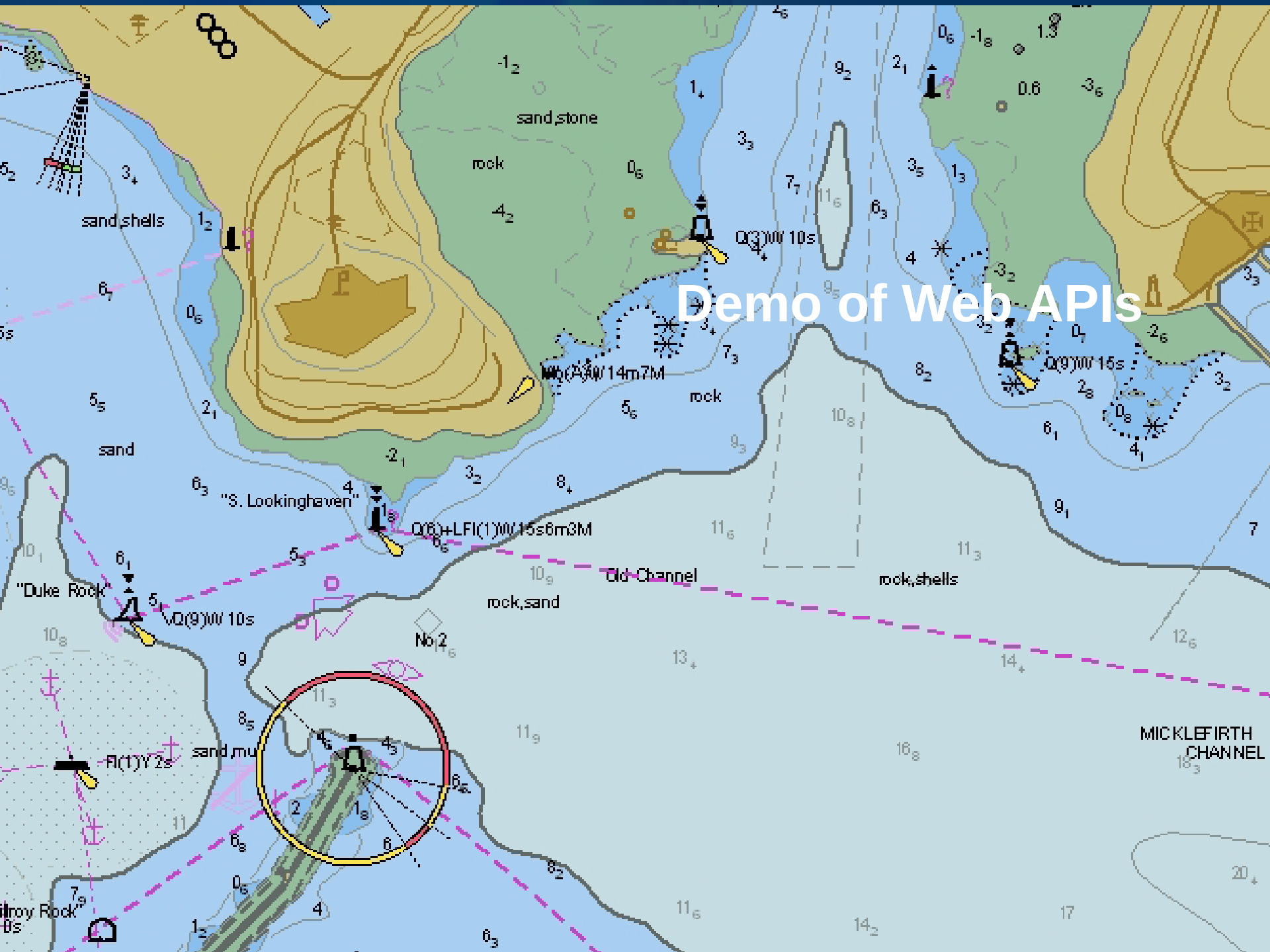
```
queryTask.execute(query, new AsyncResponder(onResult, onFault));
```

API Patterns

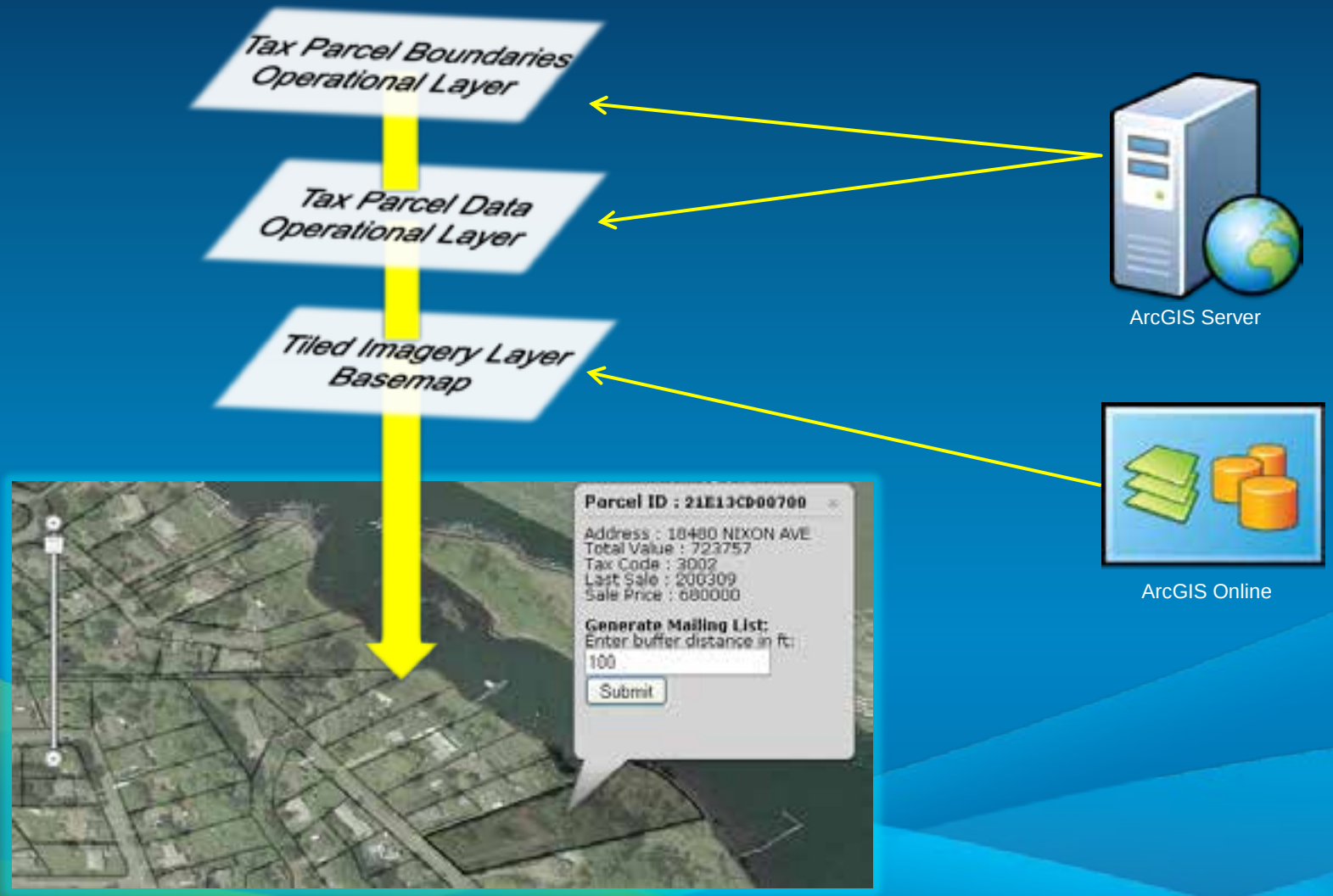
JavaScript (.js) Example

1
```
var queryTask = new esri.tasks.QueryTask(“http://someserver/arcgis/...”);
```
2
```
dojo.connect(queryTask, "onComplete", doSomething);
```
3
```
query = new esri.tasks.Query();
  query.spatialRelationship = esri.tasks.Query.SPATIAL_REL_INTERSECTS;
```
4
```
queryTask.execute(query);
```
5
```
function doSomething(event){

};…
```


Demo of Web APIs
sand,stone
rock
sand,shells
Q(3)W 10s
Mo(A)W 14m7M
Q(9)W 15s
rock
sand
"S. Lookinghaven"
Q(6)+LFl(1)W 15s6m3M
"Duke Rock"
Q(9)W 10s
Old Channel
rock,sand
rock,shells
No 2
Fl(1)Y 2s
sand,mu
MICKLEFIRTH
CHANNEL

Framework for Integrating Multiple Services



Want an out-of-the-box we solution?

ArcGIS.com Web Map Viewer

ArcGIS Viewer for Flex (Source on Github)

ArcGIS Viewer for Flex Application Builder

ArcGIS API for Silverlight Toolkit (Source on Github)

ArcGIS API for Silverlight Template Gallery

Devices

- Intro
  - Trends
  - Overview
- ArcGIS Runtime for Smartphones and Tablets
  - iOS
  - Windows Phone
  - Android
- ArcGIS Runtime for Desktop Devices
  - WPF
  - Java
- Wrap up
  - Q and A

Apps and SDKs

Windows Mobile	Windows/	Windows Phone 7	iOS	Android	Linux
Apps • .ArcGIS	**Apps** • ArcGIS • ArcGIS Explorer	**Apps** • ArcGIS	**Apps** • ArcGIS for iOS	**Apps** • ArcGIS	
Runtime SDK • .NET CF	**Runtime SDKs** • WPF, Java	**Runtime SDK** • Silverlight	**Runtime SDK** • Objective C	**Runtime SDK** • Java	**Runtime SDK** • Java

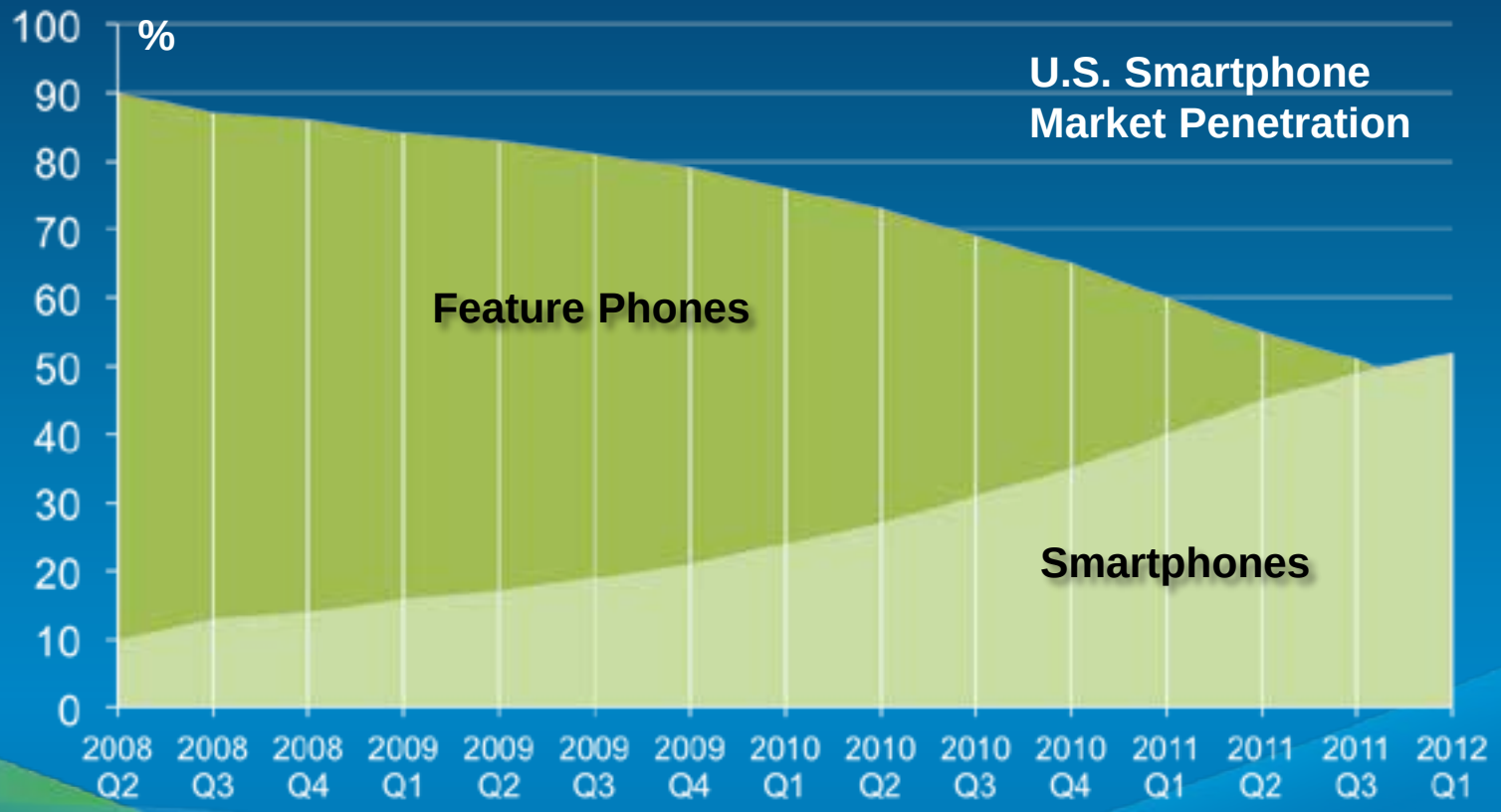
Available on the App Store

for Windows Phone 7

Available at amazon appstore for Android

ANDROID APP ON Google play

Mobile Trends = Greater access to GIS



Source: The Nielson Company

ArcGIS Runtime SDKs

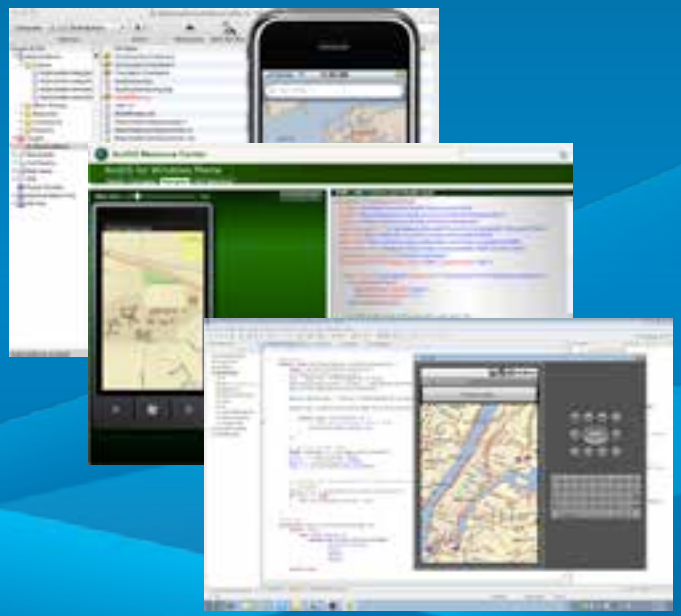
iOS, Android, Windows Phone

- Native developer toolkit
- Build focused mapping applications
- Embed ArcGIS in to existing apps
- Leverage the ArcGIS system
- Designed for touch-screen phones
- One handed use

Eclipse

XCode

Visual Studio



ArcGIS API for iOS

Native Objective C/Cocoa API

REST–Based

Requires Mac

ArcGIS for iOS on iTunes

ArcGIS for Windows Phone

C#/Silverlight API

Visual Studio 2010 Integration

REST-based

ArcGIS for WindowsPhone on Marketplace

ArcGIS API for Android

Native Java API

Eclipse IDE - Windows, Mac OS X (Intel), Linux

Runs on many devices

REST-based

ArcGIS for Android on Google Play

ArcGIS on Rugged Devices

Windows and Windows Mobile Devices

- Designed for harsh field conditions
- One handed/vehicle-mounted use
- Occasionally connected workflows
- High accuracy data collection
  - GPS integration
  - Laser integration
- Replace Paper Surveys
  - Intelligent forms
  - Barcode integration

Water Facilities Mapping

Asset Maintenance/Inspection

First Responders

Land Management

ArcGIS Mobile SDK

.NET API (C#, VB.NET, WPF)

Windows Mobile (notebooks/tablets)

Pocket PC/.NET Compact Framework

Connected or Disconnected

ArcPad

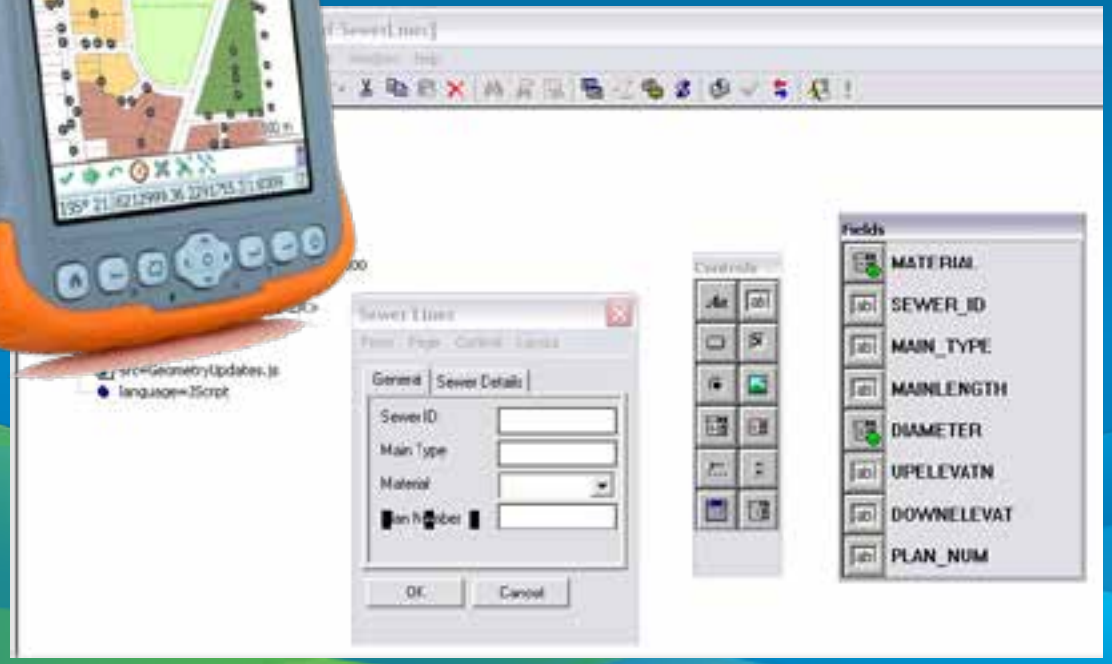
.NET and XML based

Windows Mobile

High accuracy

Field data collection

Disconnected Use



Special considerations for mobile!

Touch-based workflows

Different OS Versions

Various Screens

Inconsistent internet

Battery life

Multiple form factors

Slower connections

Slower CPU

Memory constraints

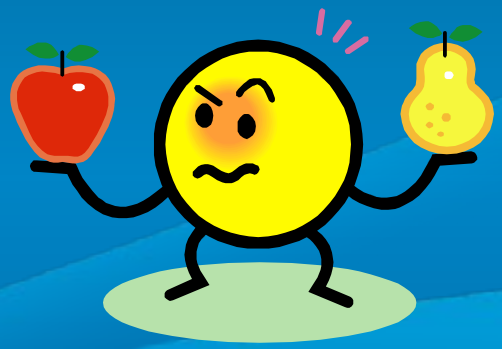
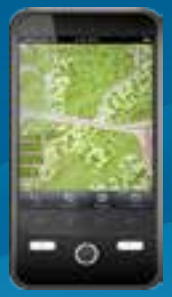


*Image from Microsoft Clip Art

Apps and SDKs

Windows Mobile	Windows/	Windows Phone 7	iOS	Android	Linux
Apps • .ArcGIS	**Apps** • ArcGIS • ArcGIS Explorer	**Apps** • ArcGIS	**Apps** • ArcGIS for iOS	**Apps** • ArcGIS	
Runtime SDK • .NET CF	**Runtime SDKs** • WPF, Java	**Runtime SDK** • Silverlight	**Runtime SDK** • Objective C	**Runtime SDK** • Java	**Runtime SDK** • Java
					

resources.arcgis.com

ArcGIS API for Silverlight

Adding MapTips

ArcGIS API for Silverlight

By adding MapTips to your ArcGIS API for Silverlight applications, you can display information about graphic features when you hover the pointer over them. With the ArcGIS API for Silverlight, you can easily data-bind MapTips so that the information displayed is always based on the attributes of the current graphic.

The XAML view of the main Grid in an application with MapTips enabled on a feature layer (which is a type of graphics layer) is shown below. The application displays states with a population density of more than 150 people per square mile. For each state, a MapTip showing the state's name and population density is displayed. This topic explains how the MapTips shown here are specified. It is assumed that you are familiar with how to create maps, feature layers, and symbols.

Note: No managed .NET code (that is, code-behind) is required other than what is automatically generated when you create a Silverlight project.

```
<Grid x:Name="LayoutRoot" Background="White" >
  <Grid.Resources>
    <esri:SimpleFillSymbol x:Key="MyFillSymbol" Fill="#66FF0000" BorderBrush="Red" BorderThickr
    <esri:SimpleRenderer x:Key="MySimpleRenderer" Symbol="{StaticResource MyFillSymbol}" />
  </Grid.Resources>

  <esri:Map x:Name="MyMap" Extent="-130,10,-70,60" >
    <esri:Map.Layers>
      <esri:ArcGISTiledMapServiceLayer ID="StreetMapLayer"
        Url="http://server.arcgisonline.com/ArcGIS/rest/services/ESRI_StreetMap_World_2D/MapSer
      <esri:FeatureLayer ID="MyFeatureLayer"
        Url="http://sampleserver1.arcgisonline.com/ArcGIS/rest/services/Demographics/ESRI_Censu
        Where="POP07_SQMI > 150" Renderer="{StaticResource MySimpleRenderer}" >
        <esri:FeatureLayer.OutFields>
          <sys:String>STATE_NAME</sys:String>
          <sys:String>POP07_SQMI</sys:String>
        </esri:FeatureLayer.OutFields>
        <esri:FeatureLayer.MapTip>
        <esri:TemplateMapTip OutFields>
          <sys:string>POP07_SQMI</sys:string>
          <sys:string>STATE_NAME</sys:string>
        <esri:TemplateMapTip OutFields>
        Where="POP07_SQMI > 150" Renderer="{StaticResource MySimpleRenderer}" >
      <esri:FeatureLayer ID="MyFeatureLayer"
        Url="http://sampleserver1.arcgisonline.com/ArcGIS/rest/services/Demographics/ESRI_Censu
      <esri:ArcGISTiledMapServiceLayer ID="StreetMapLayer"
    <esri:ppb release>
  <esri:Map x:Name="MyMap" Extent="-130,10,-70,60" >
```

ArcGIS Resources

ArcGIS Online | Sign In | esri

Home | Communities | Help | Blogs | Forums | Videos

Search the ArcGIS Blog

Category Archives: *ArcGIS Online*

iOS and Android App Updates

by Jeff Shaner on July 19, 2012

Just in time for the Esri UC 2012, we have updated our iOS application and Android application and they are available now for download on Apple's App Store, Google Play, and the Amazon App Store for Android. Continue reading →

Posted in ArcGIS Online, Mobile, Uncategorized | 3 Comments

The San Diego Story Map

by Bern Szukalski on July 18, 2012

If you're heading to the 2012 Esri International User Conference in San Diego, here's a map you just can't do without. It's an interactive guide to San Diego produced by Esri's Lee Bock, in collaboration with Rupert Essinger (whose San Diego … Continue reading →

Posted in ArcGIS Online | Tagged map stories, Story Maps | Leave a comment

Thematic Atlas Sample App Now Available

by Wes Jones on July 18, 2012

The Esri Thematic Atlas Sample App is a configurable web application that uses a collection of intelligent web maps with text, graphics, and images to talk about our world. The sample application allows the author to organize maps into groups … Continue reading →

This Blog

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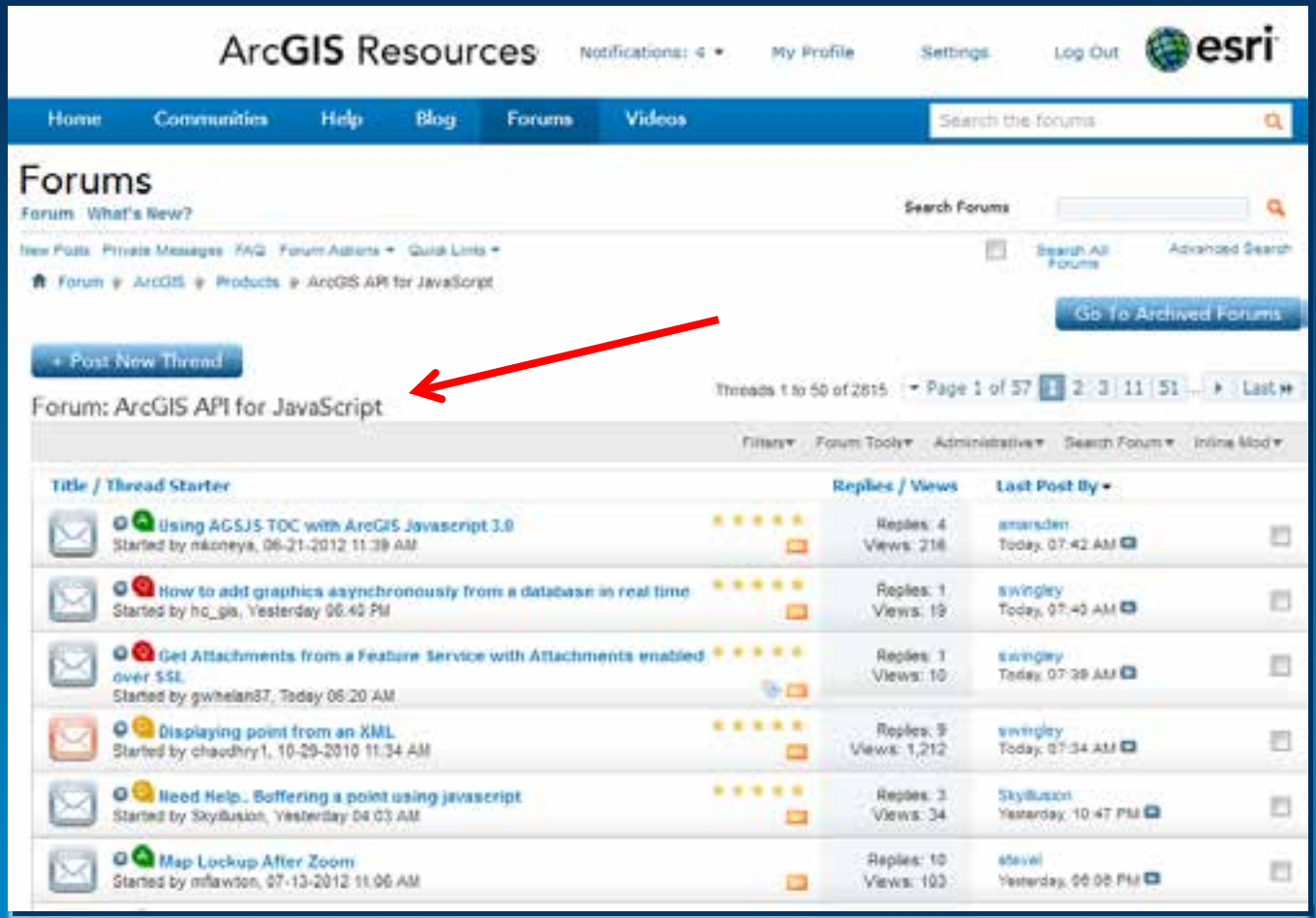
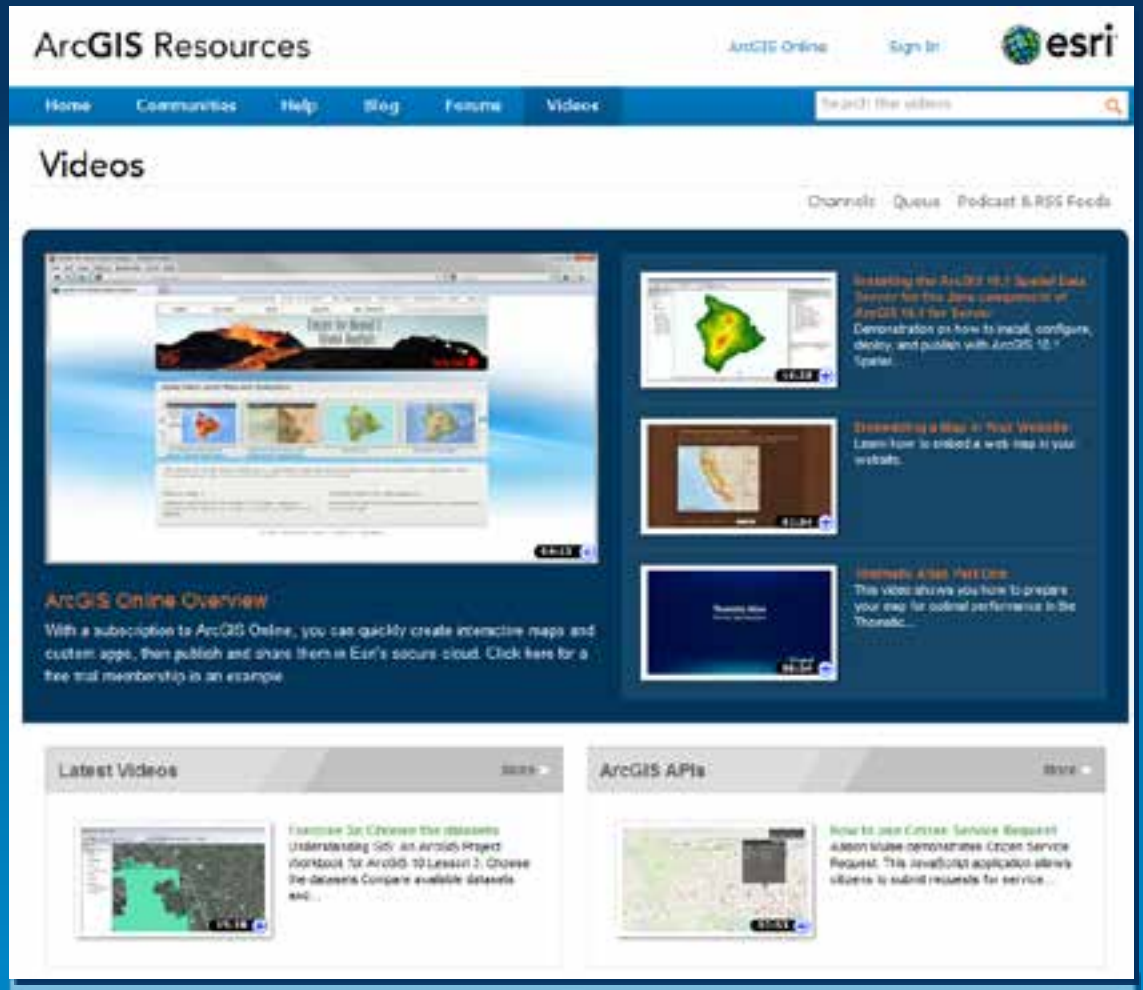
- Mobile (104)
- Mapping (360)
- Analysis & Geoprocessing (144)
- Services (574)
- Web (96)
- Geodata (155)
- 3D GIS (66)
- Imagery (147)
- Python (16)

blogs.esri.com/esri/arcgis



forums.arcgis.com



video.arcgis.com

Under Consideration

Implemented

ideas.arcgis.com

www.arcgis.com

ArcGIS | GALLERY | MAP | GROUPS | MY CONTENT | Find maps, applications and more...

Featured Maps and Apps from the ArcGIS Community

Maps | Web Apps | Mobile Apps


Yakima Transit iBus Widget

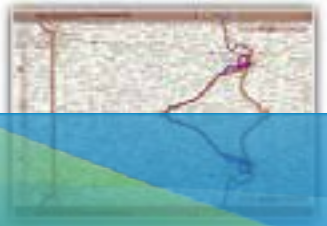

City of Yakima Postcard Public Notifications


Changes: The Lower Columbia River Then and Now


Environmental Justice (EJ) within the Greater Philadelphia


Flood Watch Marlborough


Save The Rain!



Search for more Web apps or click below to find the:

- Highest Rated
- Most Recent
- Most Viewed

What is a Web app?

Create your own app using the ArcGIS API for:

- JavaScript
- Flex
- Silverlight

Esri Developer Network (EDN)

- Annual Subscription
  - Standard or Advanced

- Developer license
- ArcGIS platform
  - products, extensions
  - desktop, server, web, mobile
  - full functionality - it's everything

- Design, prototype, test, build
- Defer production costs until deployment

Esri Developer Network

EDN Subscription

Esri Developer Network (EDN) is available through an annual subscription and provides a cost-effective way to license Esri ArcGIS products and tools.

- Learn more about EDN
- EDN License Activation and Renewal
- Manage my 9x EDN subscription
- Manage my 10x EDN subscription

Resource Center

The ArcGIS Resource Center contains the integrated support and community resources to help you be successful.

- ArcGIS Resource Center
- Developer resources for ArcGIS version 9.2 and prior

Developer Community

Interact and share resources with developers around the World.

- Esri Developer Summit
- Esri Dev Meet Ups

Blogs
Ideas
Forums
GIS Wiki
Facebook
YouTube
LinkedIn
Delicious

edn.esri.com

training.arcgis.com

Training | Catalog | My Training

Using HTML5 with ArcGIS

Format: Training Seminar
Duration: 60 minutes
Price: Free
Authored by Esri

Overview | Software | Prerequisites

Description

he web is continuously evolving. HTML5 (inclu

Web Workers

CORS and buffering polygons

- Cross-Origin Resource Sharing (CORS)

Web Storage

- Stores key/value pairs

CSS3 Transforms

- Change the position of an

```
.tileDiv {
    height: 100px; width:
    transform: translate(
        rotate(45deg);
}
```

HTML + CSS3 + JavaScript

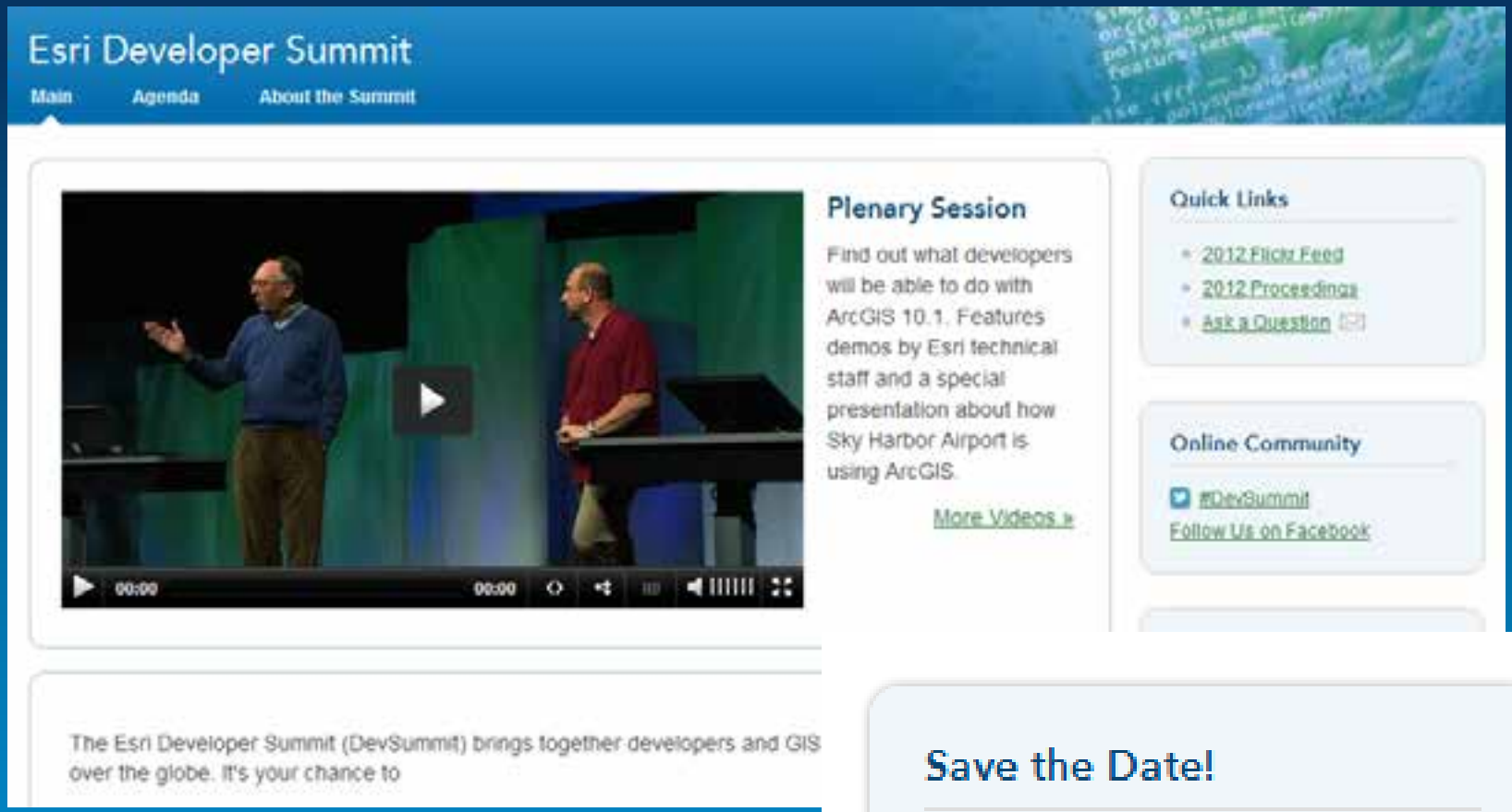
Geolocation API

- Provides user's approximate location
- Opt-in only!

```
navigator.geolocation.getCurrentPosition(
    zoomToLocation, locationError
);

watchId = navigator.geolocation.watchPosition(
    updateLocation, locationError
);
```

support.esri.com



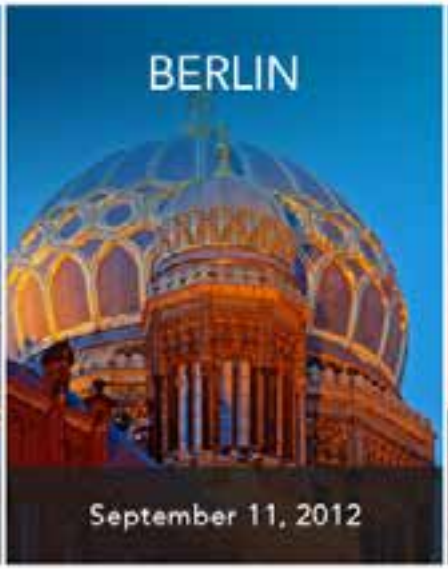
Save the Date!

Next year's DevSummit will take place March 25-28, 2013.

esri.com/DevSummit

Esri Developer Summit in Europe

Main | About the Conference



Registration coming so

Quick Links

- About the Conference
- Past DevSummit Proceedings
- Ask a Question

Online Community

#devsummit

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The Esri Developer Summit (DevSummit) brings together developers and GIS professionals from all over Europe. It's your chance to:

- Become more effective at building web and mobile mapping applications
- Meet Esri development staff and network with local developers

"A mind-blowing even
that will provide you

esri.com/devsummiteurope

Dev Meet Ups

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Page Discussion Read Edit View history

JavaScript

Not to be confused with Java (programming language).

For the use of JavaScript on wiki.gis.com, see wiki.gis.com JavaScript.

JavaScript is a scripting language used to enable programmatic access to objects within both the client application and other applications. It is primarily used in the form of client-side JavaScript, implemented as an integrated component of the web browser, allowing the development of enhanced user interfaces and dynamic websites. JavaScript is a dialect of the ECMAScript standard and is characterized as a dynamic, weakly typed, prototype-based language with first-class functions. JavaScript was influenced by many languages and was designed to look like Java, but to be easier for non-programmers to work with.

Contents [hide]

Paradigm	
Appeared in	
Designed by	
Developer	
Latest release	
Typing discipline	
Major implementations	
Dialects	
Influenced by	
Influenced	

wiki.GIS.com

stackoverflow

Questions | Tags | Users | Badges | Unanswered | Ask Question

Top Questions

interesting | 231 featured | hot | week | month

votes	answers	views	question	tags	last activity	asked by	rep
0	0	1	MySQL query - Getting people out that arent in another table?	mysql, sql	24s ago	Beginner	579
0	0	2	SIGABRT when cvReleaseImage	c++, opencv, ubuntu-10.10	31s ago	EnneKappa	27
0	0	9	Java Servlet questions	java, homework, servlets	34s ago	RMT	2,166
0	1 answer	6	CUDA: Max of array, how to prevent write collisions?	cuda	37s ago	Eric	2,669
0	0	2	Re-running workflow state in wf 4.0 state machine	activity, workflow, workflow-foundation-4, statemachine	48s ago	Han KRK	32
0	0	2	How can I add an AppleScript menu to my menubar?	objective-c, cocoa, menu, applescript	53s ago	WTP	8,647
0	0	2	RMI usage of client policy file	java, security, rmi, policy	54s ago	WorstCase	5
			how to display embed and data in razor?				

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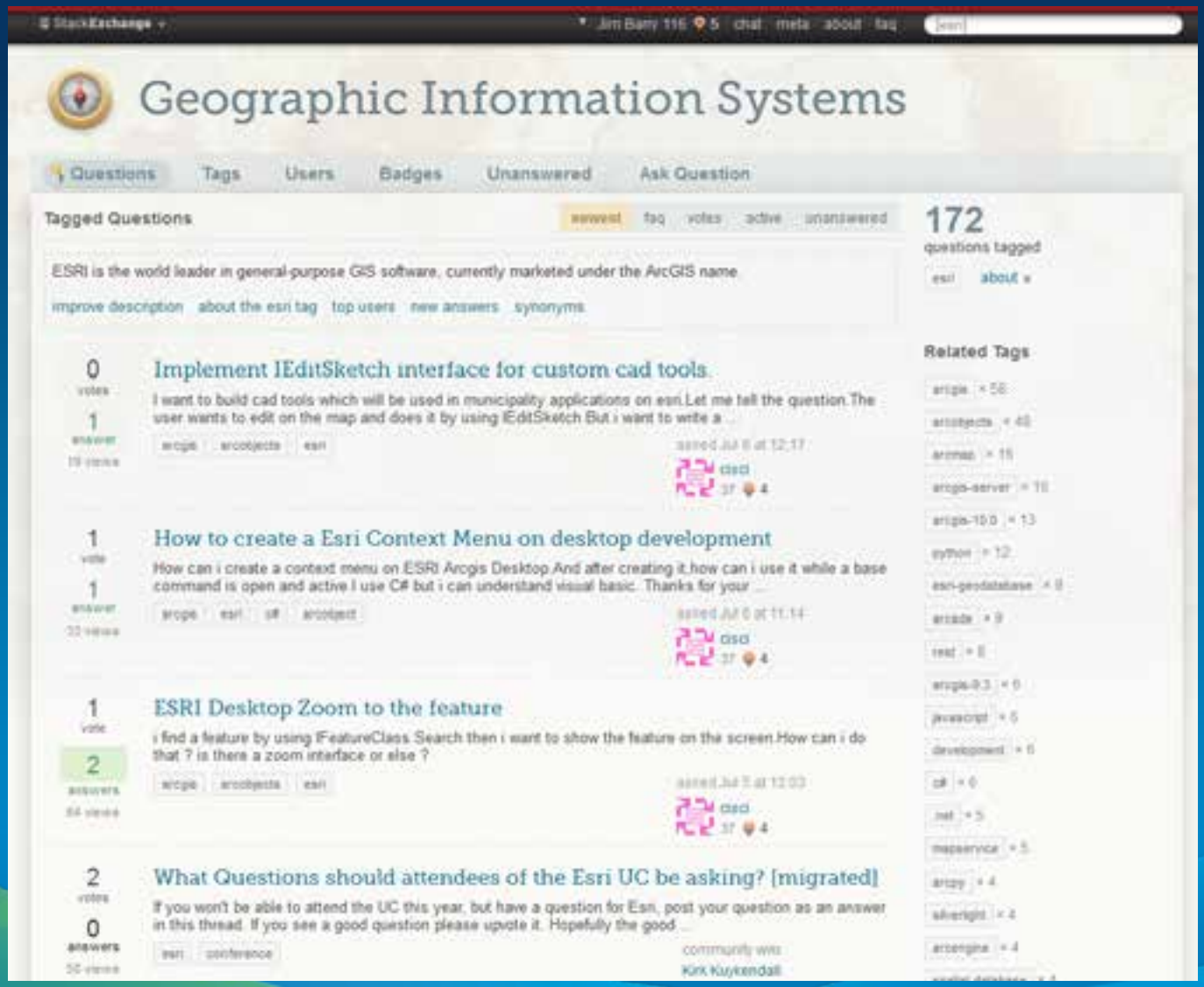
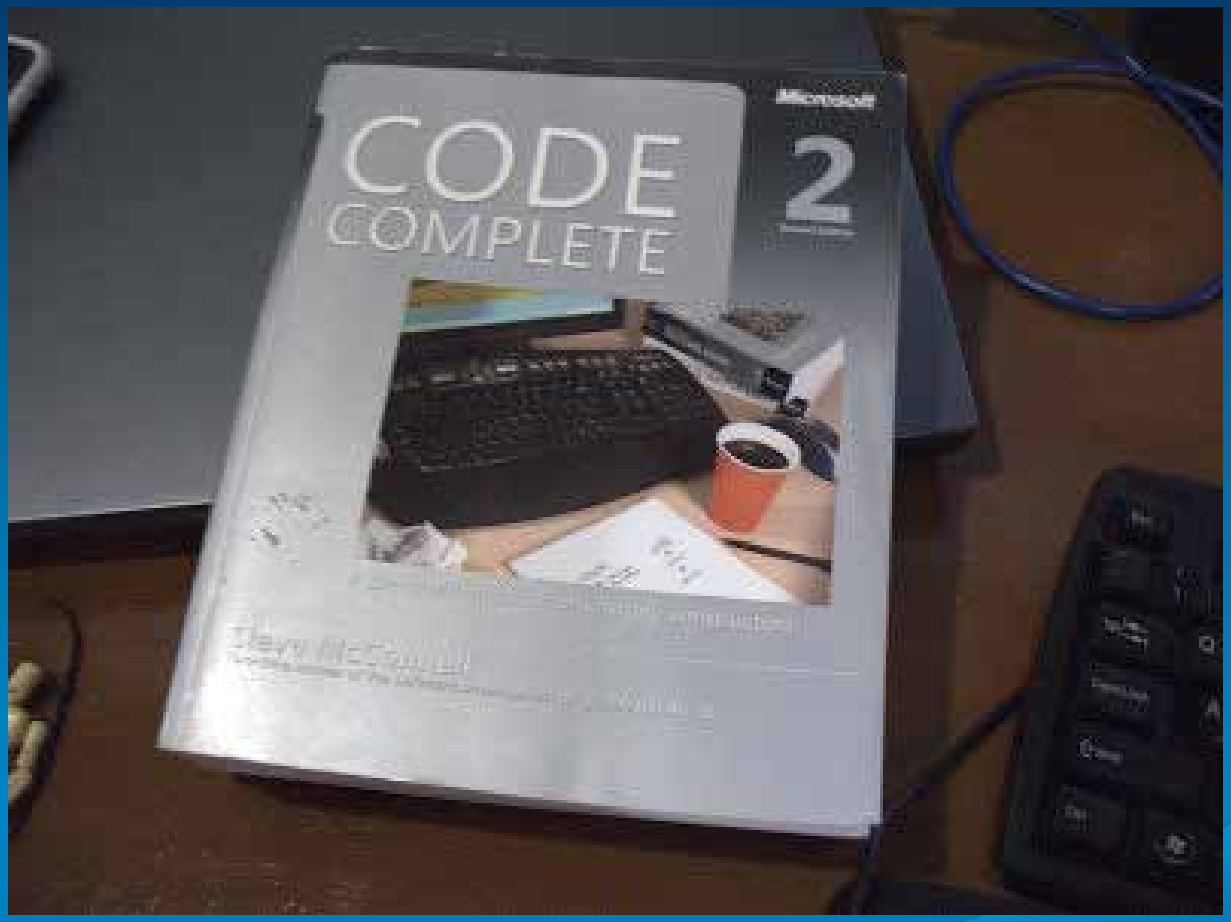


gis.stackexchange.com


Microsoft
CODE
COMPLETE
2

Welcome to the Esri User Conference!

- Developer Track
  - 30 sessions, meetings
- Product Islands
  - Meet the engineers and developers
  - Demo Theaters
- Tech Support Island
  - Discuss good ideas, solve tough problems

New Developer Activities at the UC

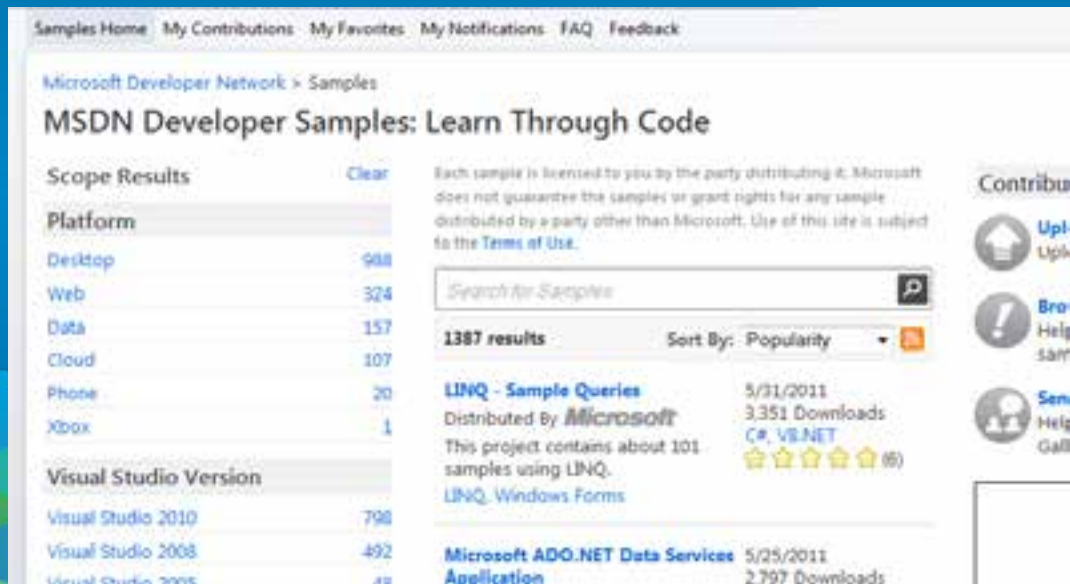
- **Hackers' Sandbox**
  - **Tuesday – Thursday 8:30am – 12pm (Hall F)**
- **UX Design Summit**
  - **Tuesday 1:00pm – 5pm (Ballroom 20)**
- **Speed Geeking**
  - **Tuesday 6:30pm – 8:30pm (Ballroom 20)**
- ~~**Dev Meet Up**~~
  - ~~**Wednesday 5:30pm – 9pm**~~
  - ~~**Registration Required**~~

***sold out**, find one near you:*

esri.com/devmeetup

How to get started with Microsoft Visual Studio

- Express editions are free
  - VB, C#, substantial capabilities
  - online training, beginner's books
- MS site
  - tutorials, videos, sample code



Visual Studio Community

vbforums.com

xtremevbtalk.com

python™

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FrontPage

FrontPage
RecentChanges
FindPage
HelpContents

Page
- Immutable Page
- Info
- Attachments
- More Actions:

User
- Login

http://www.python.org/about/gettingstarted/

The Python Wiki

Python is a great object-oriented, interpreted, and interactive programming language. It is often compared (favorably of course) to Lisp, Tcl, Perl, Ruby, C#, Visual Basic, Visual Fox Pro, Scheme or Java... and it's much more fun.

Python combines remarkable power with very clear syntax. It has modules, classes, exceptions, very high level dynamic data types, and dynamic typing. There are interfaces to many system calls and libraries, as well as to various windowing systems. New built-in modules are easily written in C or C++ (or other languages, depending on the chosen implementation). Python is also usable as an extension language for applications written in other languages that need easy-to-use scripting or automation interfaces.

Getting Started

Beginners Guide	Documentation
Links to tutorials, courses and resources	Learning materials, topic guides and links to central resources
Beginner Errors	Python Books
Some common pitfalls of beginners	Books about Python plus reviews
Asking for Help	Python Audio Materials
Questions asked by beginners, answered here	A mixture of introductory and topical material
Languages	Python Implementations
Resources written in languages other than English	Different software which runs programs in the Python language
See also the documentation category for all known documentation-related pages	

Events, Courses, Conferences, Community

- Python Conferences - information about the Python conference scene
- Python Events - covers conferences, training courses and more
- Local User Groups - find a Python group near you
- Participating in the Community - where people using and producing Python get together

Python Software

Getting Started With Adobe Flex

IDE: Flash Builder

ArcGIS API for Flex: resources.arcgis.com

Flash Player (debug): Flash Player Support Center

Online Resources: help.adobe.com

Training: Flex.org, Adobe Video Training

Community: actionscript.org

Getting Started with JavaScript

IDE (free!): Notepad++, Aptana

ArcGIS API for JavaScript: resources.arcgis.com

Online Resources : dojotoolkit.org

Tutorials: w3schools.com

Community: dojotoolkit.org/community

Getting Started with Silverlight (Web)

IDE: Visual Studio Express (free!)

ArcGIS API for Microsoft Silverlight: help.arcgis.com

Silverlight SDK: silverlight.net/getting started

Online Resources : MSDN.microsoft.com

Community: silverlight.net/community

Getting Started with Android

IDE: Eclipse

ArcGIS API for Android: resources.arcigs.com

Online Resources: developer.android.com

Community: developer.android.com

Misc: Mobile device for testing!

Getting Started with iOS

IDE, SDK: Xcode 4 + iOS 6 SDK

ArcGIS API for iOS: resources.arcgis.com

Online Resources: iOS Developer Library

Community: developer.apple.com

Misc: Mobile device for testing

Getting Started with Windows Phone

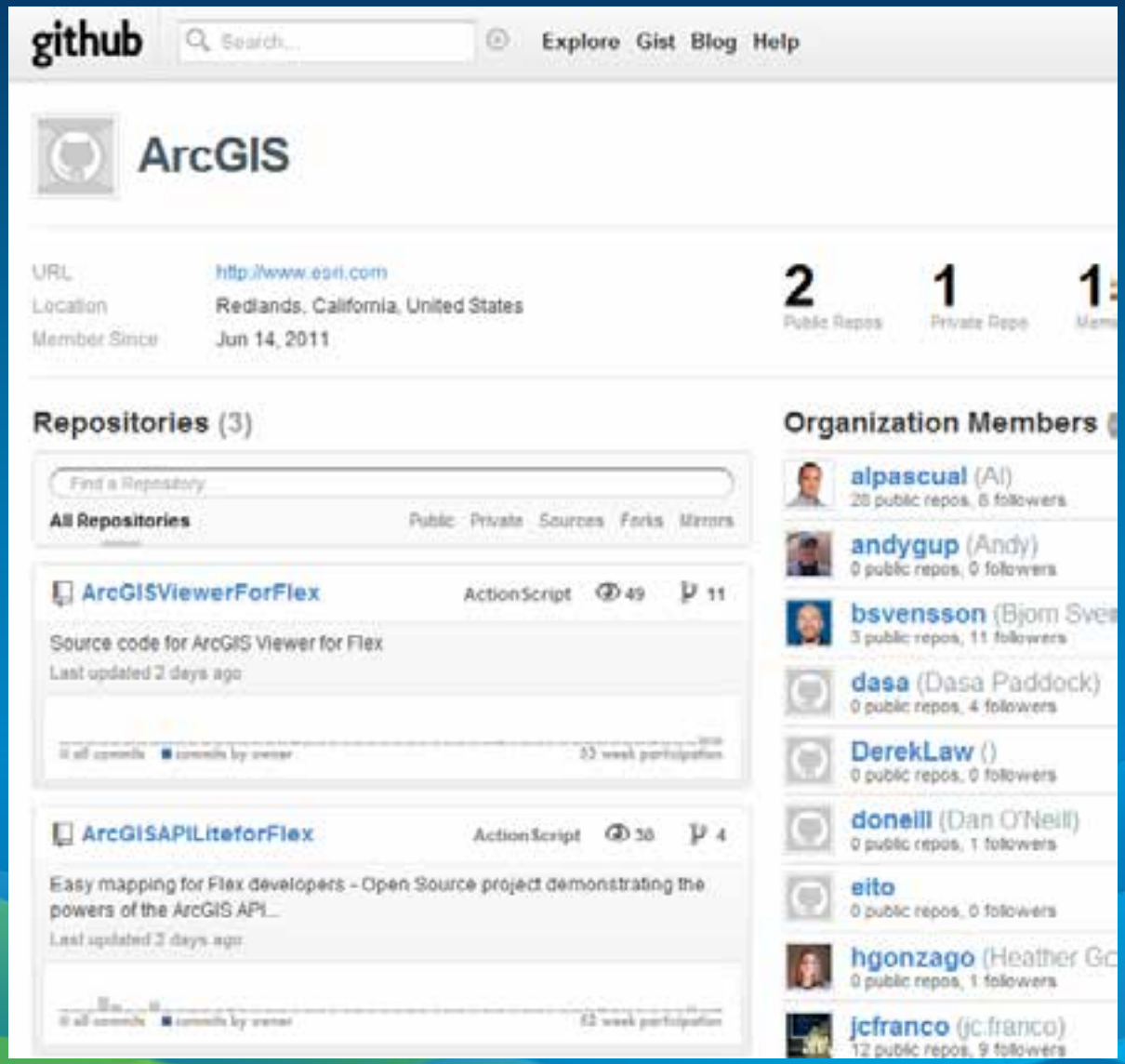
IDE: Visual Studio Express (free!)

ArcGIS for Windows Phone: resources.arcgis.com

Online Resources/Community: App Hub

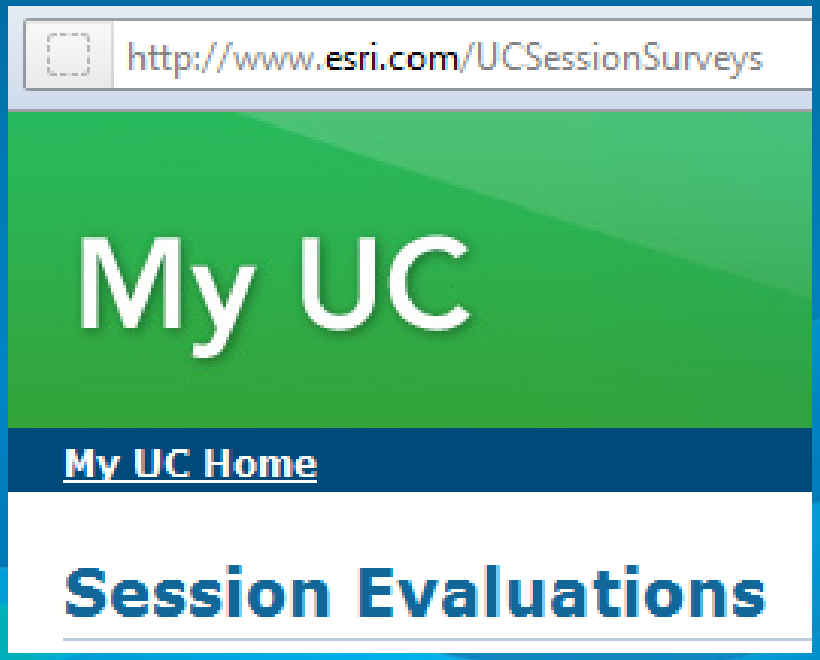
Misc: Mobile device for testing

Open Source Initiatives –



Session Survey

- esri.com/**ucsessionsurveys**
- Session ID: Tue 625; Wed 747



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