ArcGIS Viewer for Silverlight
An Introduction

Rich Zwaap
Agenda

- Background
- Product overview
- Getting started and installation
- Viewer application builder
- Extensibility kit
- Road ahead
ArcGIS 10.1

- Online
- Desktop
- Server
- Mobile
- Developer
- Solutions
Review: ArcGIS Server – Web protocols

Support industry standards

- Its GIS services can be accessed via
  - Representational State Transfer (REST)
  - Simple Object Access Protocol (SOAP)
  - Keyhole Markup Language (KML)
  - Open Geospatial Consortium (OGC)
Review: ArcGIS Server – Services Directory

View of ArcGIS Server REST endpoint

- ArcGIS Services Directory exposes REST API
  - [http://<machine_name>/ArcGIS/rest](http://<machine_name>/ArcGIS/rest)
Review: Data Content in a Web Map

*Common design pattern*

- **Base Maps**
  - Geographic frame of reference
  - Contain static data

- **Operational layers**
  - Information overlays that end users interact with
  - Contain dynamic data

- **Operational layers display on top of Base Maps**
Building Web Clients

- **Web Mapping APIs**
  - ArcGIS API for JavaScript
  - ArcGIS API for Flex
  - ArcGIS API for Silverlight
- Provide a comprehensive framework for creating GIS enabled Web mapping applications
- Primarily geared towards developers

- **ArcGIS Server Manager – Web Mapping Application**
  - Deprecated post ArcGIS 10
ArcGIS Viewer for Silverlight

Currently at version 1.0.1

- Configurable *ready-to-deploy* Web client
  - Built with ArcGIS API for Silverlight
- **Easily and quickly** create and implement GIS Web mapping applications
- **No programming or editing configuration files**
  - Ideal for novice Web application creators
- Set of core tools and functionality
ArcGIS Viewer for Silverlight Overview

- Web browser-based application
  - Hosted on-premise

- Consists of 3 components:
  1. Configurable Viewer
  2. Application Builder
  3. Extensibility Kit

- 32-bit and 64-bit OS versions
- Localized versions available
Resource Center Site

http://links.esri.com/silverlightviewer

• Download, documentation, user forums, samples
Easy installation and setup

1. ArcGIS Viewer for Microsoft Silverlight
2. Operating System: Windows 7 Enterprise (64 bit)
3. Application Builder
   - Name: SILBuilder
   - Web Site: Default Web Site (80)

4. Additional applications:
   - ArcGIS Viewer for Microsoft Silverlight
   - Help documentation
Demo

Installation and setup
Working with Application Builder

• Create new Web mapping application based on:
  1. **New map** (from scratch)
  2. **Existing Web Map** (from ArcGIS Online)
     - ArcGIS Online login supported

• Configure
  - Data content
  - Functionality
  - Look and feel
Application Builder User Interface

WYSIWYG user experience

Configuration Tools

Settings

About

Toggle

Home

Deploy

App Preview

Getting started help panel (interactive)
Application Builder contains Web App

Web Application preview

Web App main toolbar

Data content manager

Web App data content
Previewing the Web App

• Use Toggle button to view application preview
Application Builder workflow

- Interactively create Web apps → **WYSIWYG experience**
  - Map content
  - Tools
  - Look and feel

- Deploy configured Viewer applications
Map Tab

- Specify the data content in the Web application
Demo

Add and configure map content
Tools Tab

- Specify the functionality of the application
Tools List

- Map contents with legend
- Geoprocessing
- Filter layer
- Zoom to layer
- Select features
- Basemap gallery
- Attribute table
- Feature editing and attachments
- Search for places
- Print
Demo

Define functionality in application
Layout Tab

- Specify the “look and feel” of the Web application
Demo
Define look and feel
Application Builder workflow review

1. New map or Web Map
2. Configure:
   - Data content
   - Functionality
   - Look & feel
3. Deploy Application

Non-linear workflow
Application Builder supports dynamic workflows

- Deployed Web applications can be easily modified
- All properties can be changed
- **Save As** and **copy site** functionality
Demo
Copy and modify deployed site
Application Builder summary

- Configure custom Web applications
  - Set data, tools, and appearance to meet requirements
  - WYSIWYG UI
  - Flexible workflow

- Easy to deploy new apps

- Can modify and copy existing apps

- Optional “Getting started” help
Extending the Viewer

• Application Builder does a lot
  - Map configuration
  - Standard tools
  - Look and feel
  - Branding (title, logo, etc)

• Add-ins enable specific workflows
  - “Add-in” → code module containing functionality
    - Compiled as Silverlight packages (.xap files)
  - Seamlessly plug-in to App Builder configuration
    - Encourages reusability
Add-Ins – Extensibility Points

Several ways to customize:

1. **Tools** → functionality initiated by tool on toolbar
2. **Behaviors** → non-UI logic
3. **Layouts** → custom application “look and feel”
4. **Controls** → UI integrated into application
Add-Ins – Required Software

- Microsoft Visual Studio 2010 SP1
- Microsoft Expression Blend 4 SDK
- Microsoft Silverlight 4 Toolkit
- **ArcGIS Extensibility SDK for Silverlight 2.4**
  - Visual Studio 2010 template provided
Add-Ins – Development

- Develop using the Extensibility API
  - Included in the Extensibility SDK

- **ESRI.ArcGIS.Client.Extensibility** assembly
  - Lightweight API for Viewer
  - Provides access to map, selected layer, and pop-up
  - Method to easily show UI in dialogs
  - Hooks to store and load add-in configuration

- Use the Visual Studio Template to start

- Any Silverlight library can be referenced
Demo
Extending the Viewer with an Add-In
Road Ahead

- **Next release coming soon!**
  - Version 3.0
  - Expected Q3

- **Improvements**
  - Printing using 10.1 print service
  - Search is configurable
    - Specify other locator services
  - Measure tool
  - Bookmarks
Demo
Enhancements for 3.0
Road Ahead – Beyond 3.0

- Add capabilities from the Flex Viewer and ArcGIS Manager Web Mapping Application
  - Query Tool
  - Get Related Records

- Surface new Server capabilities
  - Editor tracking
  - Ownership-based access

- Develop using the Extensibility API
  - Make it better by using it ourselves
  - Share the source code with you
Summary

- Configurable *ready-to-deploy* Web client

- Interactively create Web apps → **WYSIWYG experience**, easy to deploy

- **No programming or editing configuration files**

- Can be extended with the Extensibility SDK

- Next version coming soon!
Related UC sessions

• **ArcGIS Viewer for Silverlight – Advanced Topics**
  - Thurs 1:30 PM Room 6E

• **ArcGIS API for Silverlight – Advanced Topics**
  - Thurs 1:30 PM Room 31A

• **Creating Web Applications with ArcGIS**
  - Fri 9:00 AM Room 8
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