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An introduction to ArcGIS Desktop Add-ins

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Feedback link: www.esri.com/sessionevals

ArcGIS Desktop Add-Ins

*A new way to customize and extend
ArcGIS Desktop applications.*

- Easier to build
- Easy to share
- More secure
- Support for .NET, Java,
and Python



Supported Add-In Types

- **Buttons**
- **Tools**
- **Combo Boxes**
- **Multi-Items**
- **Menus**
- **Context Menus**
- **Toolbars**
- **Tool Palettes**
- **Dockable Windows**
- **Application Extensions**
- **Editor Extensions**
- **Editor Construction Tools (10.1)**
- **Server Object Extensions (10.1)**

Supported Development Environments for Add-Ins

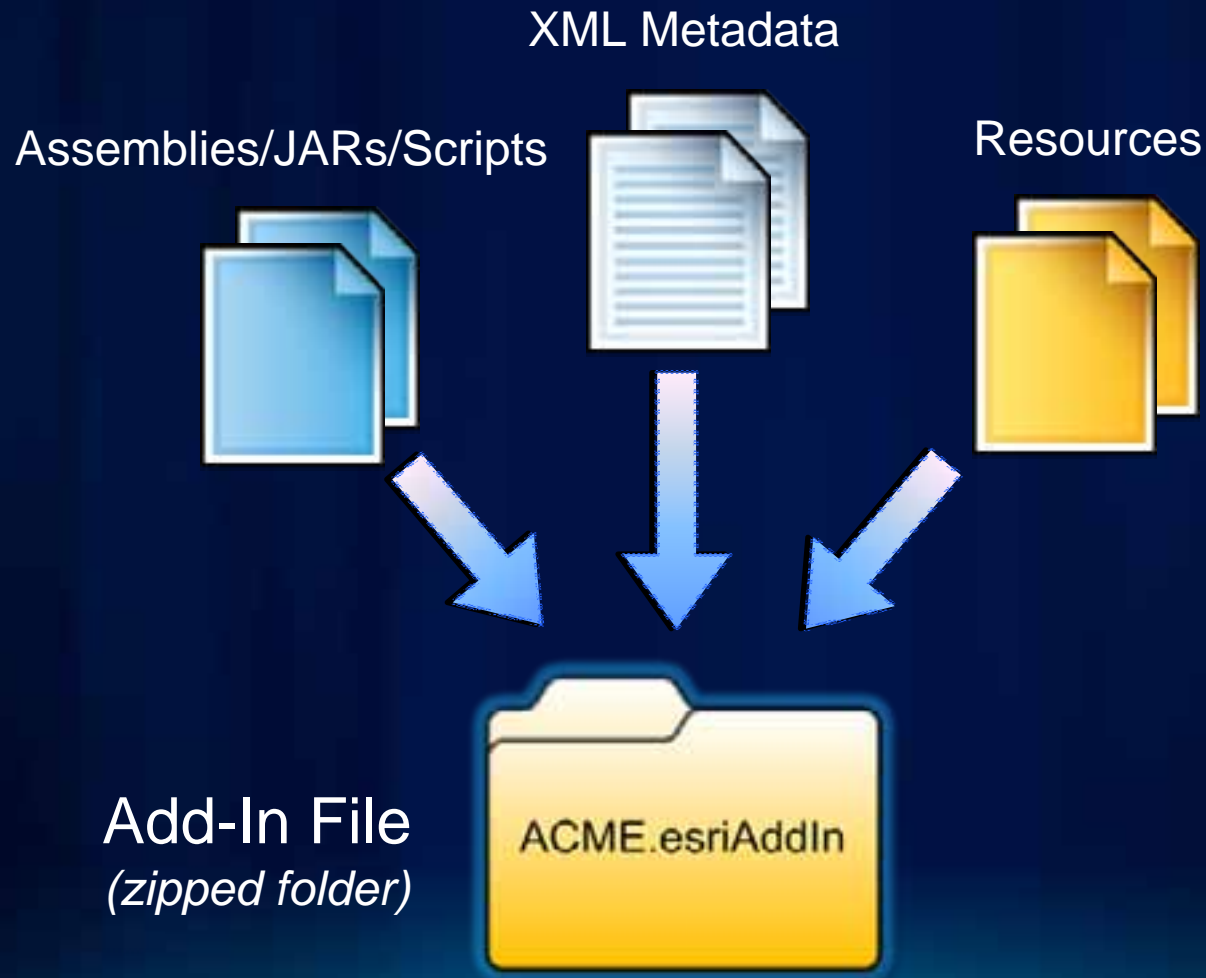
- **Visual Studio 2008 / 2010**
- **Visual C# 2008 / 2010 Express Edition**
- **Visual Basic 2008 / 2010 Express Edition**
- **Eclipse IDE for Java Developers**

Supports .NET 3.5 & 4.0

Quick Demo – Example Add-In



Add-In File Anatomy



Anatomy - Declarative Aspects

- ID
- Target
- Author
- Version
- Command
- Web
- Description
- Caption
- Tool
- Help

ArcGIS Add-Ins Wizard

Available Add-in Components


Select an Add-in component to be added to the project and modify its properties.

Add-in Components

- Button
- Tool
- Construction Tool
- Combo Box
- Multi-Item
- Extension
- Editor Extension
- Dockable Window

Class Name: ArcGISAddin1

Caption: My Button

Image:  

Category: Add-In Controls

On Demand: ☒

Tooltip: Add-in command tooltip.

Description: Add-in command generated by Visual Studio project wizard.

Use File Source: ☒

F1 Help: ☐

Source:

Topic ID:

Previous Next Finish Cancel

sition

Anatomy - Declarative Aspects (xml)

```
<AddIn language="CLR"
        library="SampleAddIn.dll"
        namespace="AddInSample">
  <ArcMap>
    <Commands>
      <Button id="ACME_AddInSample_Button1"
              class="ArcGISAddin1"
              tip="Add-in command tooltip."
              message="Add-in command generated by..."
              caption="My Button"
              category="Add-In Controls"
              image="Images\Blue.png" />
    </Commands>
  </ArcMap>
</AddIn>
```


Coding Add-Ins – An Add-In Button

```
public class SimpleButton : Button
{
    protected override void OnClick()
    {
        MessageBox.Show("Hello World");
    }
}
```

Anatomy – Managed COM Button

```
namespace ArcMapClassLibrary1
{
    /// <summary>
    /// Summary description for Command1.
    /// </summary>
    [Guid("dfab35ef-96f7-456b-9162-42d36f7a9e57")]
    [ClassInterface(ClassInterfaceType.None)]
    [ProgId("ArcMapClassLibrary1.Command1")]
    public sealed class Command1 : BaseCommand
    {
        #region COM Registration Function(s)
        [ComRegisterFunction()]
        [ComVisible(false)]
        static void RegisterFunction(Type registerType)
        {
            // Required for ArcGIS Component Category Registrar support
            ArcGISCategoryRegistration(registerType);

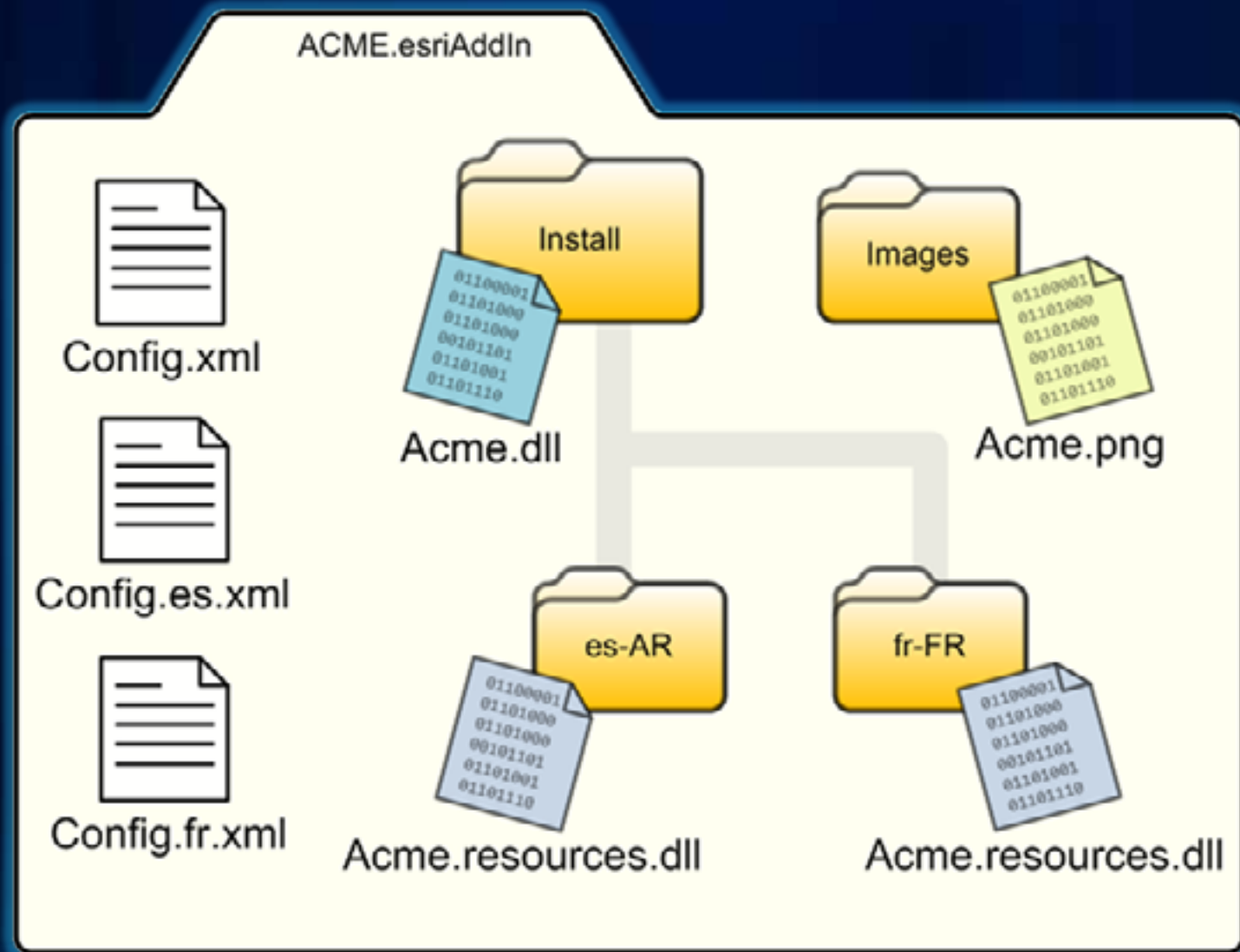
            //
            // TODO: Add any COM registration code here
            //
        }

        [ComUnregisterFunction()]
        [ComVisible(false)]
        static void UnregisterFunction(Type registerType)
        {
            // Required for ArcGIS Component Category Registrar support
            ArcGISCategoryUnregistration(registerType);

            //
            // TODO: Add any COM unregistration code here
            //
        }

        #region ArcGIS Component Category Registrar generated code
        /// <summary>
        /// Required method for ArcGIS Component Category registration -
        /// Do not modify the contents of this method with the code editor.
        /// </summary>
```

Anatomy – Resources & Localization



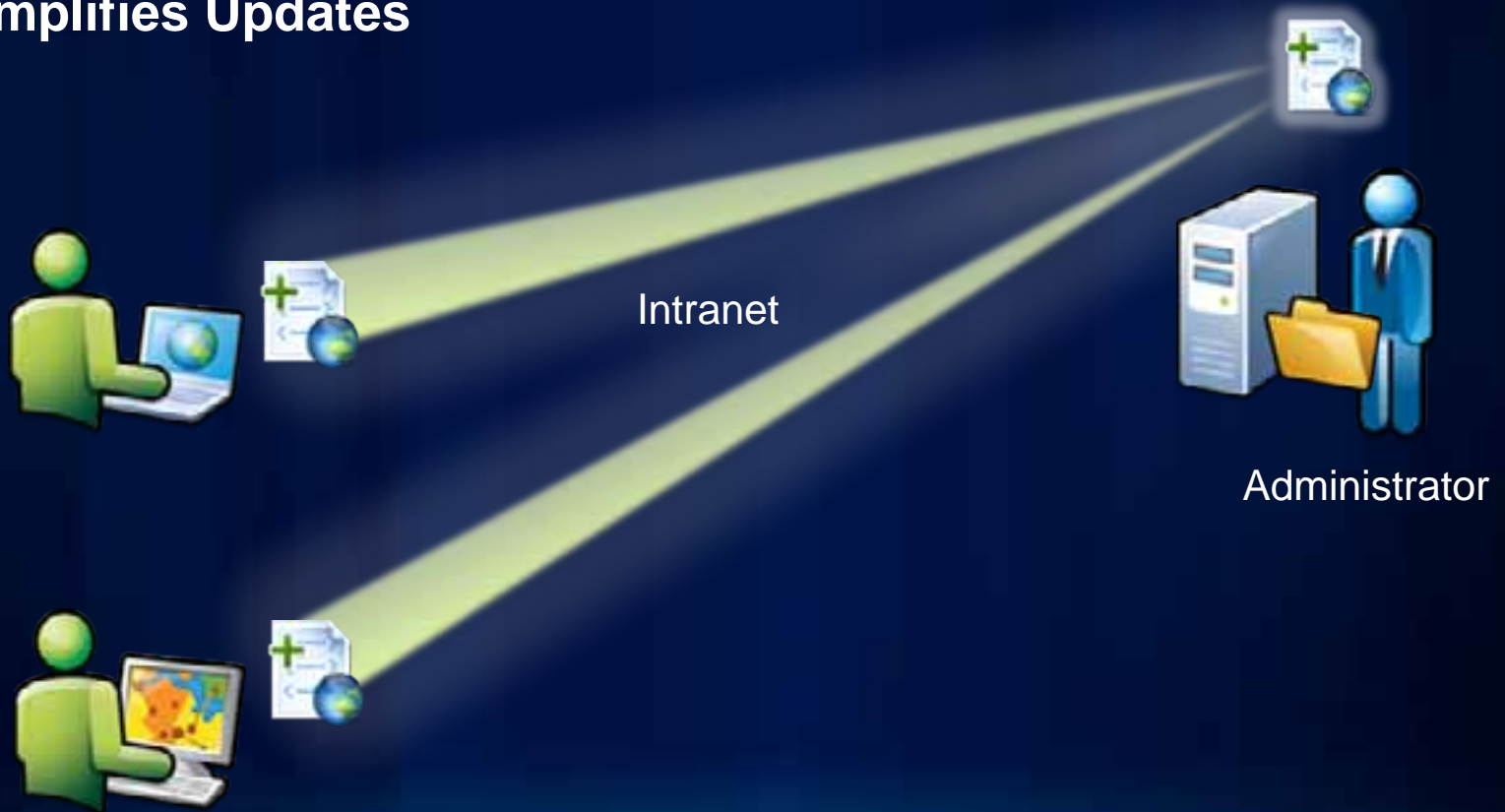
Add-In File Discovery & Sharing



- Add-In files are automatically discovered in well-known folders and incorporated into the Desktop applications at runtime.
 - Well-known folders are located:
 - Under the user's document folder (default)
 - e.g. C:\Users\<username>\Documents\ArcGIS\AddIns\Desktop10.0
 - On network shares within the enterprise

Add-In File Discovery & Sharing

- Administered network shares
- Simplifies Updates



Managing Add-Ins - Installation Utility

- Double-click “Install”
- Customize - Add From File
- XCOPY
- Security



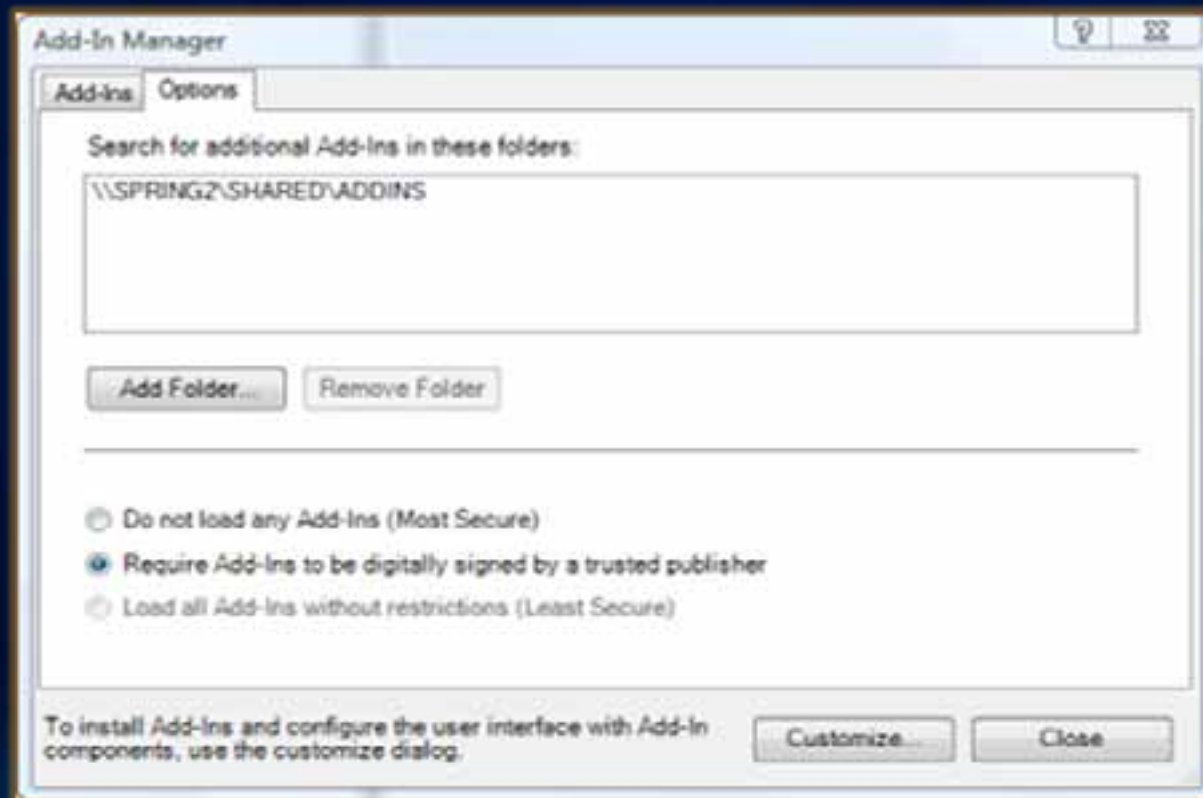
Managing Add-Ins – Add-In Manager Dialog

- Shows detailed information on all installed Add-Ins
- Deleting Add-Ins
- Mine vs. Shared



Managing Add-Ins – Sharing & Security

- Custom search folders
- Security Settings



Managing Add-Ins – Administrator Security Settings

- **Security Codes**

- 0 - Load all.
- 1 - Load signed only.
- 2 - Load ESRI only.
- 3 - Load from administrator folders only.
- 4 - Do not Load any Add-Ins.

- **Admin Registry Keys**

- **HKLM \ SOFTWARE \ ESRI \ Desktop10.0 \ Settings**
 - **BlockAddIns**
 - **AdminAddInLock**
- **HKLM \ SOFTWARE \ ESRI \ Desktop10.0 \ Settings \ AddInFolders**

Digitally Signing Add-Ins

- **ESRISignAddin Utility**
- **Trust**
 - Source Traceability
- **Validity**
 - Tampering



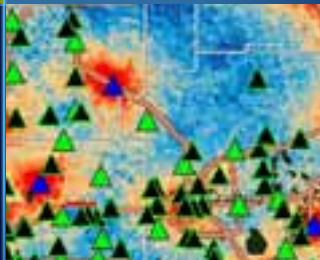
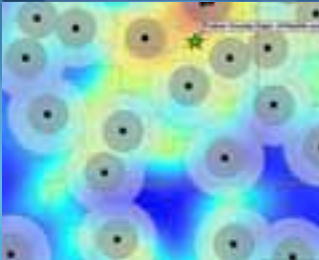
Add-In Limitations

- **More restrictive set of extensibility points**
- **Limited ability to expose your own API**
- **Registration Limitations:**
 - **Can't register COM objects**
 - **Can't register assemblies in the GAC**

DeKalb County Board

Fulton County Dept. of Health and Wellness/District 3, Unit 2, 04/10/10

Demo – Managing Add-Ins





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