



Developing a Custom ArcReader Application with ArcGIS Publisher

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Introduction

- ArcGIS Publisher allows developers to create custom ArcReader applications.
- Application can be installed on any computer that has ArcGIS, ArcReader or ArcGIS Engine.
- Custom applications created with ArcReader Control can be freely distributed.
- ArcReader Control provides a set of components that are easy to use, allowing rapid application development.



Benefits

- Create easy to use GIS applications
- Customize applications to users' needs
- Applications created with ArcReader Control can be freely distributed after buying the ArcGIS Publisher extension—est. \$2,000.
- ArcReader Control can access ArcSDE.



Getting Started

- Building Your Map Document
 - Using relative paths will make your ArcReader application more portable.
 - Any ESRI supported data format of ArcReader can be used in your map document.
 - Data can reside on ArcSDE for easy access to users.

The Map Project Used for Public Works ArcReader Browser
Contains over 100 GIS Layers.



Working With Publisher



- Published Map Settings
 - When publishing a map for use with an ArcReader application it's important to set the published map settings.
 - Failure to set published map settings correctly will result in your application being unable to view the published map.



Working With Publisher

➤ Published Map Settings

Uncheck this so the PMF file will work with the ArcReader Control.

Checking this will allow you to open the PMF in ArcMap.

Publisher Settings

Contents | **Functionality** | Security | Application | Other

ArcReader

Check this box if the published map can only be used in ArcReader. No other software or customized ArcReader applications will be able to open the map.

☐ Open in ArcReader only

Custom ArcReader

These settings can be used to allow access to advanced functionality when the published map is opened by a custom ArcReader application. Checked functionality will be available when the map is opened in a custom application.

☒ Allow custom searches on features

☒ Allow custom attribute queries

ArcGIS Applications

Check this box to open the published map in any appropriate ArcGIS application.

☒ Unrestricted access to contents of Published Map

OK Cancel

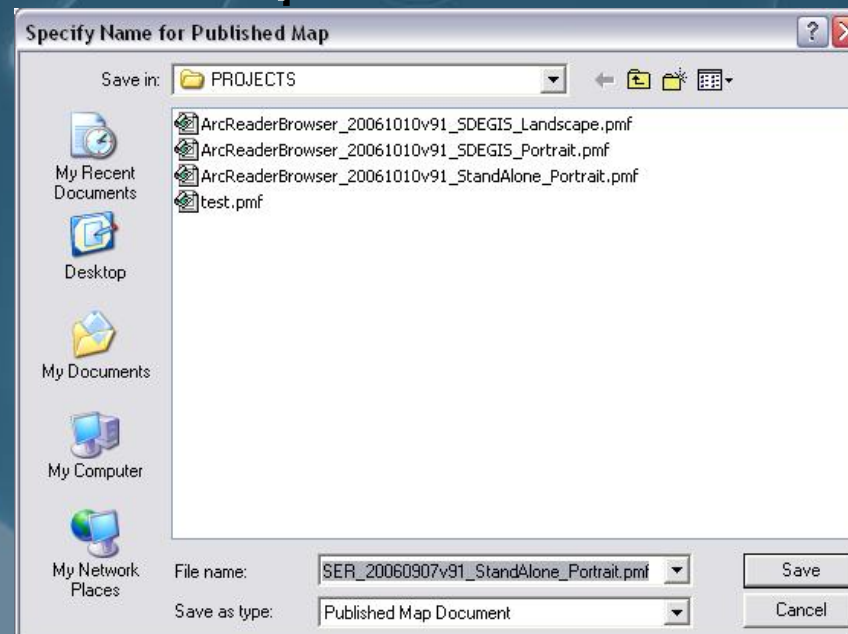
5/22/2007



Working With Publisher



- Publish Map
 - Use the Publish Map tool on the toolbar
 - Saves Your map as a Published Map Document





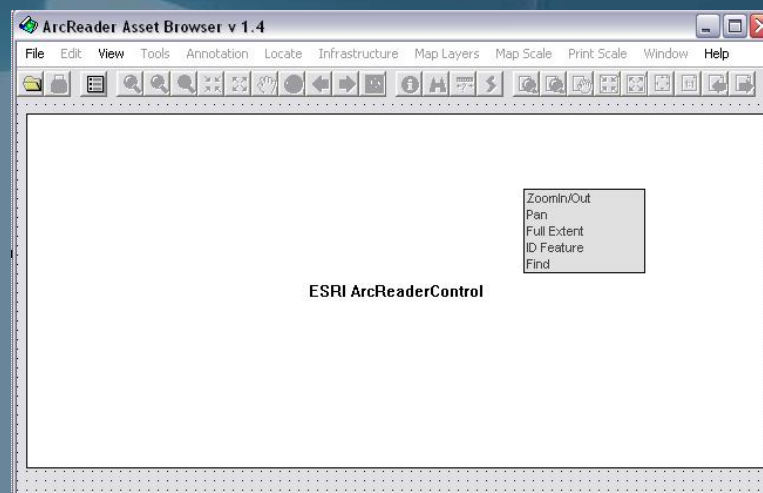
Working With ArcReader Control

- ArcReader Control Overview
 - Add ArcReader Control to a Windows Form
 - Set Properties for Control
 - Take Advantage of Existing Tools
 - Create Custom Tools and Features
 - Add Windows ToolBar Control to Form
 - Add Windows Images List to Form

Working With ArcReader Control

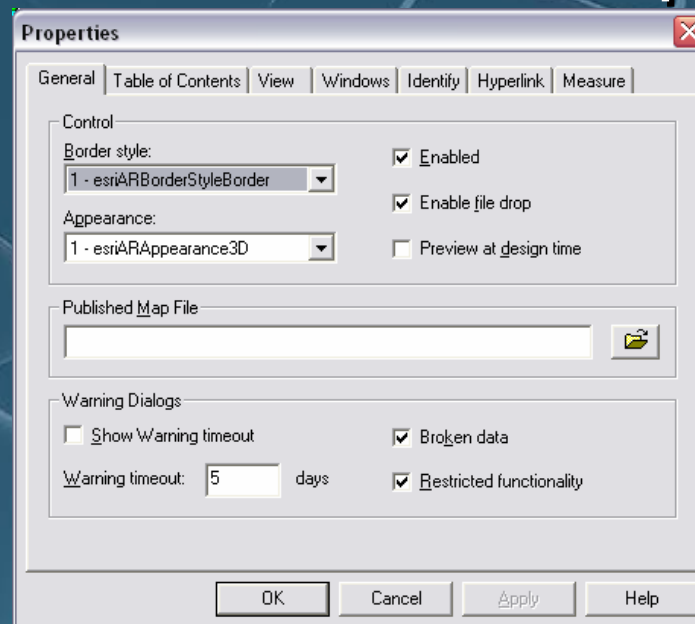
- **AxArcReader Control**
 - Adding the AxArcReaderControl to your toolbox is different in each development environment but note that the AxArcReader Control is different from the AxReader Control that is available with ArcGIS Engine

AxReader Control
not available with
ArcGIS 9.2



Working With ArcReader Control

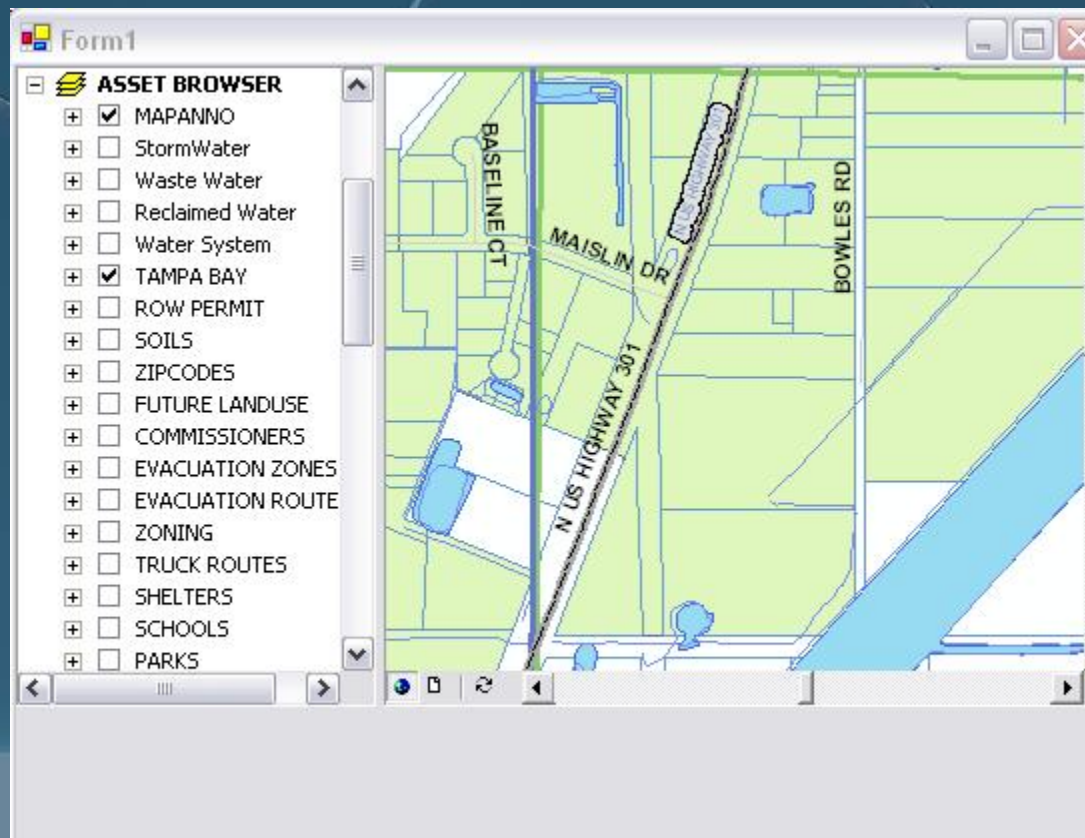
➤ AxArcReader Control Properties



The Properties for the ArcReader Control will allow you to change the look and feel of you application. You can pre-load a PMF file into your application if you choose.

Working With ArcReader Control

If you pre-loaded a PMF file into your application you can now run your code to see what the ArcReader Control looks like.





ArcReader Control Tools

➤ AxArcReader Built-In Tools

➤ Map

- ZoomIn, ZoomOut, Pan
- Identify, Identify using Layer
- Measure
- HyperLink

➤ Layout

- ZoomIn, ZoomOut, Pan

Zoom In

Sample Code: `AxArcReaderControl1.CurrentARTool = esriARToolMapZoomIn`

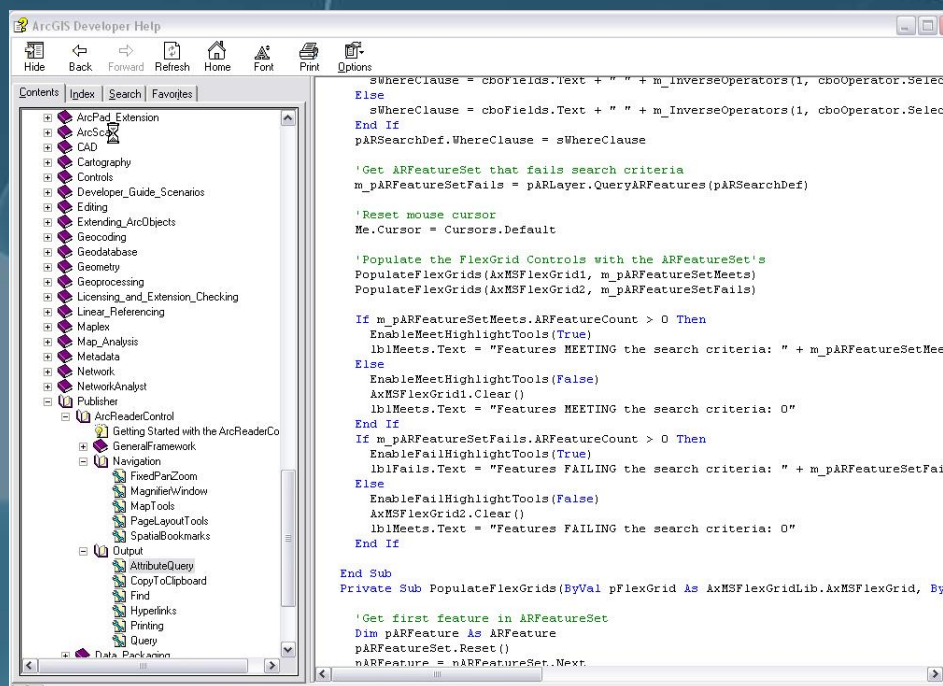
Zoom Out

Sample Code: `AxArcReaderControl1.CurrentARTool = esriARToolMapZoomOut`



ArcReader Control Samples

- Using AxArcReader Samples
 - ArcGIS Developer Help (provides code samples)
 - Samples
 - Publisher





ArcReader Control Samples

- **ESRI DEVELOPER NETWORK**
 - <http://edn.esri.com/index.cfm?fa=codeExch.gateway>
- **ArcGIS Developer Help**
 - `..\Program Files\ArcGIS\DeveloperKit\samples\Publisher`

ESRI Code Sample

GeneralFramework

- Document Properties
- Drag Rectangle
- Load Document
- Scroll Bars
- Status Bar

Navigation

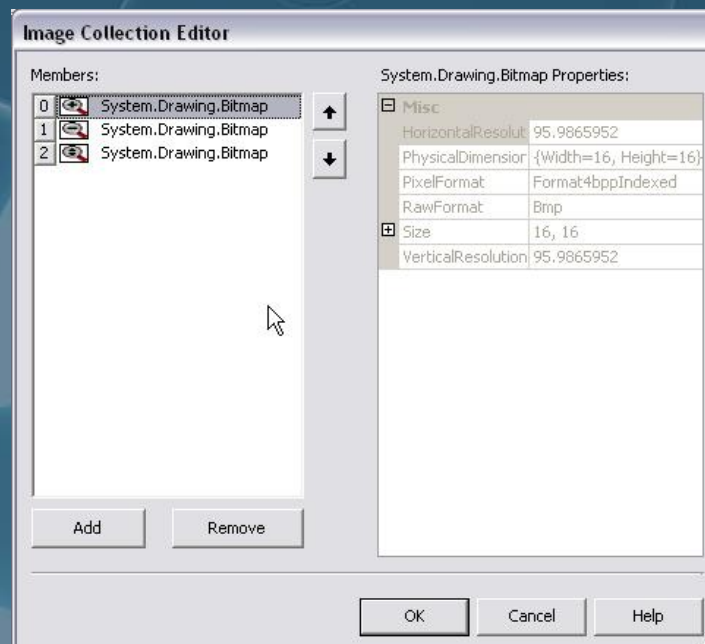
- Fixed Pan Zoom
- Magnifier Window
- Map Tools
- Page Layout Tools
- Spatial Bookmarks

Output

- Attribute Query
- Copy To Clipboard
- Find
- Printing
- Query

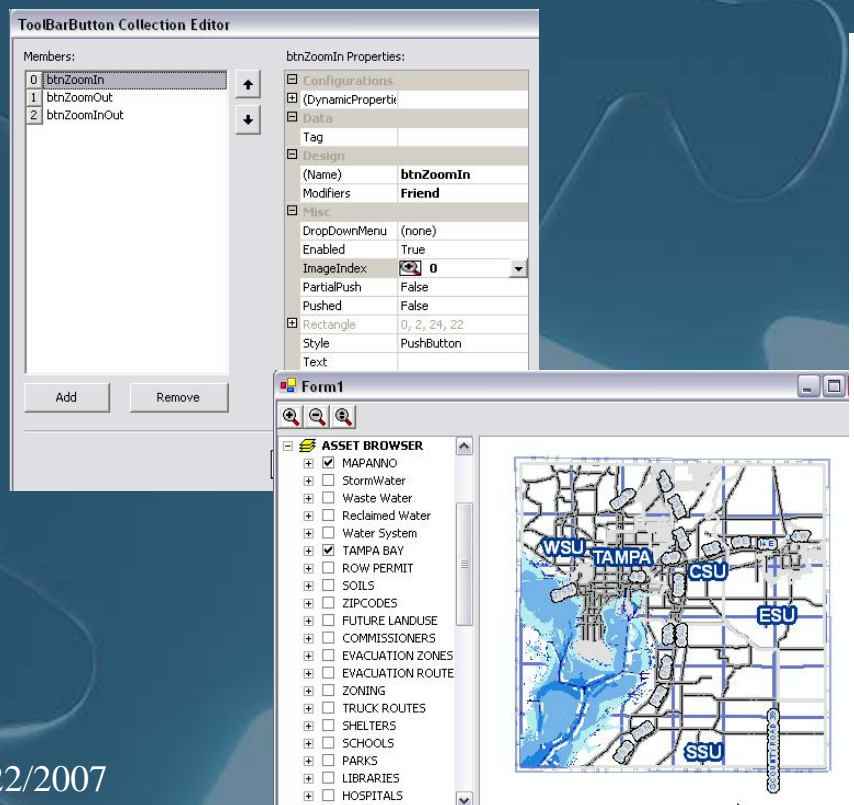
Add Tools to ArcReader Application

- Add Windows Toolbar Control to Form
- Add Windows ImageList Control to Form
- Set Toolbar Controls ImageList
- Add Images to ImageList Control
 - Note: ..\Program Files\ArcGIS\Bin\Icons contains some common BMP files of ArcGIS tools.



Add Tools to ArcReader Application

- Add Buttons to ToolBar Control
- Set Image for New Buttons
- Add Code to Toolbar Button Click Event



```
Private Sub ToolBar1_ButtonClick(ByVal sender As System.Object, ByVal e As  
    ' Evaluate the Button property to determine which button was clicked.  
    Select Case ToolBar1.Buttons.IndexOf(e.Button)  
  
        ' ZoomIn  
        Case 0  
            Me.AxArcReaderControl1.CurrentARTool = esriARToolMapZoomIn  
  
        ' ZoomOut  
        Case 1  
            Me.AxArcReaderControl1.CurrentARTool = esriARToolMapZoomOut  
  
        ' ZoomInOut  
        Case 2  
            Me.AxArcReaderControl1.CurrentARTool = esriARToolMapZoomInOut  
  
    End Select  
End Sub
```




Locate AsBuilt

Select A Search Option Enter AsBuilt Name

Asbuilt Name: Find AsBuilt

Asbuilt ID	TRIS	Asbuilt Nam
1845	321918	BAYOU PAS
1222	321909	BAYOU PAS

Map showing street grid with labels: 14TH AVE SE, 24TH ST SE, 24TH ST SE.

View AsBuilt Info Zoom To AsBuilt View AsBuilt

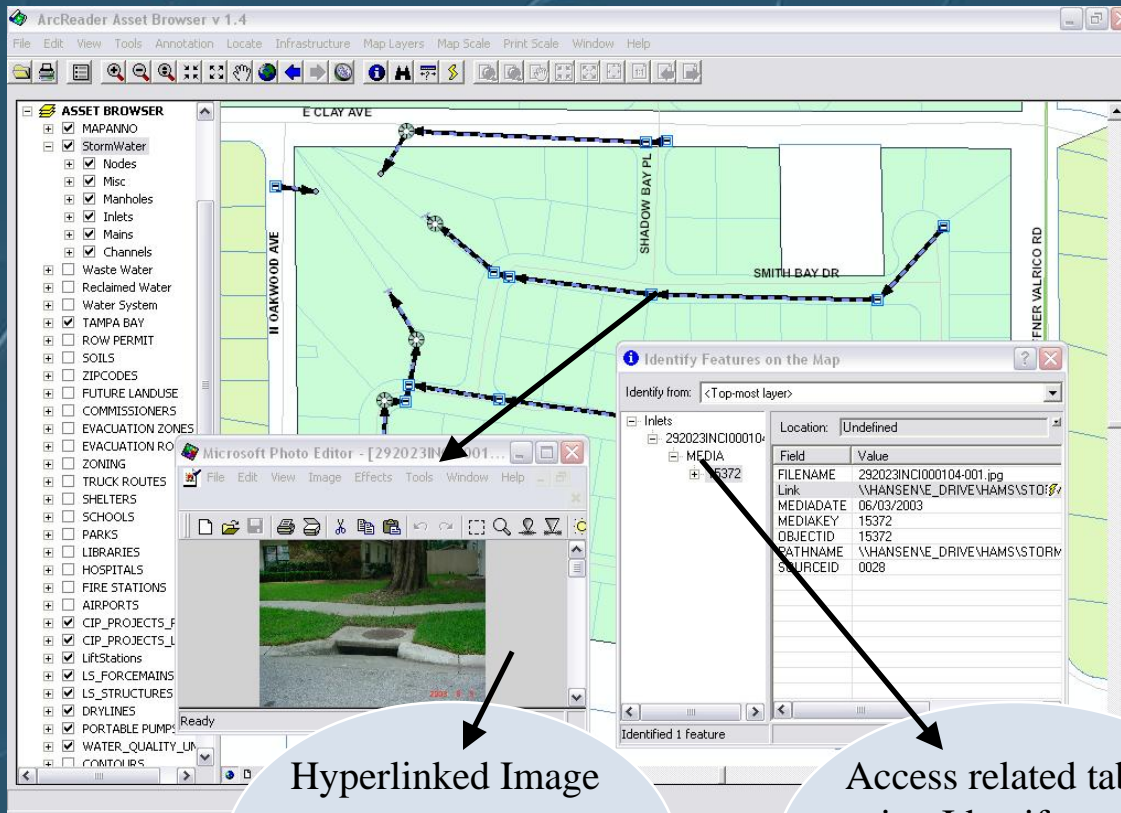
Flash Flicker

The screenshot displays a GIS application interface. At the top, a menu bar includes 'File', 'Map Layers', 'Map Scale', 'Print Scale', and 'Help'. Below the menu is a toolbar with various icons for map navigation and analysis. On the left, a sidebar lists map layers with checkboxes: MAJOR ROADS, ROADS, SUBDIVIS_AS_BUILTS, TMD UNITS, MITIGATION SITES, HCNOMITAREAS, TR, HYDROL, HRDROA, WATERSHEDS, CITIES, TRS, PARCELS, SUBDIVS, TWP, AERIALS2004, and TWP_ANNO. The 'View As Built' button is highlighted in the top left. The main map area shows a residential area with a green grid overlay. Roads labeled include BAYOU PASS DR, 14TH AVE SE, UNITY VILLAGE DR, DE LIGHTFUL DR, PLEASURE RUN DR, PLEASANT VIEW AVE, and DOROTHY DUKE LN. A black arrow points from the 'View As Built' button to the map. The bottom status bar shows coordinates 632,683.95, 1,255,759.44 Feet and a scale of 1:4,432.

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Gateway of *Information*



Hyperlinked Image

A Picture is worth a thousand words!!

Access related tables using Identify tool

Table stores path to image.

The Public Works Stormwater Geodatabase uses a table along with relationships to provide easy access to photos.

Using a table allows multiple images to be linked to one feature.



Issues

- Resizing application with large PMF would lock application
 - Turned AxAreader Control visible to false when resizing
- Needed a way to allow users to change the map title and print date in the layout view
 - Used dataframes and Event Themes along with database connection to allow user to customize layout.
- Needed a way for users to add text to map
 - Used Event Themes along with database connection to allow user to customize text on map



Demo

Public Works ArcReader Browser Demo



Conclusion

- Creating a custom ArcReader application can allow you to provide GIS to more users.
- Developing with the ArcReader Control is cost effective.
- Using custom tools can make accessing information from GIS fast and easy.
- Getting started with the AxArcReader Control is quick and easy.