Table of Contents

1 Introduction

1.1 Using this Guide
1.2 System Requirements
1.3 Installation
1.4 Register

2 Getting Started

3 Load WCS Layer

4 Load WFS Layer

5 Load WMS Layer

6 Add Data to Personal Geodatabase

6.1 Create Personal Geodatabase in ArcCatalog
6.2 Add Data to Personal Geodatabase
6.3 Access Data from Personal Geodatabase
## Table of Figures

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-1</td>
<td>Successful Installation Dialog</td>
<td>1</td>
</tr>
<tr>
<td>2-1</td>
<td>Customize Dialog</td>
<td>2</td>
</tr>
<tr>
<td>2-2</td>
<td>OGC Toolbar Display</td>
<td>3</td>
</tr>
<tr>
<td>3-1</td>
<td>CSW Server URL Input Dialog</td>
<td>3</td>
</tr>
<tr>
<td>3-2</td>
<td>Properties Setting for Target Dataset Search Dialog</td>
<td>4</td>
</tr>
<tr>
<td>3-3</td>
<td>Available WCS Datasets List Dialog</td>
<td>4</td>
</tr>
<tr>
<td>3-4</td>
<td>Original Dataset Display</td>
<td>5</td>
</tr>
<tr>
<td>3-5</td>
<td>Customizing Dataset by WCS Request</td>
<td>6</td>
</tr>
<tr>
<td>3-6</td>
<td>Custom Dataset Display</td>
<td>6</td>
</tr>
<tr>
<td>4-1</td>
<td>WFS Server URL Input Selection Dialog</td>
<td>7</td>
</tr>
<tr>
<td>4-2</td>
<td>CSW Server URL Input Dialog</td>
<td>7</td>
</tr>
<tr>
<td>4-3</td>
<td>WFS Server List Dialog</td>
<td>8</td>
</tr>
<tr>
<td>4-4</td>
<td>WFS Server URL Input Dialog</td>
<td>8</td>
</tr>
<tr>
<td>4-5</td>
<td>WFS Layers List Dialog</td>
<td>9</td>
</tr>
<tr>
<td>4-6</td>
<td>WFS Layer Display</td>
<td>9</td>
</tr>
<tr>
<td>5-1</td>
<td>WMS Server URL Input Selection Dialog</td>
<td>10</td>
</tr>
<tr>
<td>5-2</td>
<td>CSW Server URL Input Dialog</td>
<td>10</td>
</tr>
<tr>
<td>5-3</td>
<td>WMS Server List Dialog</td>
<td>11</td>
</tr>
<tr>
<td>5-4</td>
<td>WMS Server URL Input Dialog</td>
<td>11</td>
</tr>
<tr>
<td>5-5</td>
<td>WMS Layers List Dialog</td>
<td>12</td>
</tr>
<tr>
<td>5-6</td>
<td>WMS Layer Display</td>
<td>13</td>
</tr>
<tr>
<td>6-1</td>
<td>Add Data to Personal Geodatabase</td>
<td>13</td>
</tr>
<tr>
<td>6-2</td>
<td>Access Data from Personal Geodatabase</td>
<td>14</td>
</tr>
</tbody>
</table>
1 Introduction

1.1 Using this Guide

This guide helps user learn how to install ArcGIS Framework Extension, access the up-to-date, accurate, consistent Framework data, and use these data in ArcGIS software of Environmental Systems Research Institute, Inc. (ESRI).

1.2 System Requirements

- Operating System: Windows XP (Server Pack 2) or Vista
- ArcGIS software 9.1 or higher version
- Microsoft .NET compact Framework 2.0

1.3 Installation

You could download the install program from http://csiss.gmu.edu/products/setup.exe and http://csiss.gmu.edu/products/setup.msi to the same directory in the local disk, and run setup.exe to install ArcGIS Framework Extension. The default installation directory will be the location of ArcGIS. If it is successfully installed, Figure 1-1 will be shown.

![Figure 1-1 Successful Installation Dialog](image)

1.4 Register
Firstly, you need to run `GetUserInfo.exe` and send the user information to us by e-mail, you will get `key.ini`, then you should replace the original `key.ini` with it. The default installation directory will be the location of ArcGIS.

2 Getting Started

After installing ArcGIS Framework Extension successfully, run ArcMap, OGC toolbar would be displayed in Toolbars list of Customize Dialog as shown in Figure 2-1. You could enable OGC toolbar by checking it as shown in Figure 2-2, then Click button.

![Figure 2-1 Customize Dialog](image_url)
3 Load WCS Layer

Click on the toolbar, **CSW Server URL Input Dialog** will be shown as Figure 3-1, the default URL is [http://geobrain.laits.gmu.edu:81/LAITSCSF2/discovery](http://geobrain.laits.gmu.edu:81/LAITSCSF2/discovery), which is developed and deployed by Center for Spatial Information Science and System (CSISS), George Mason University. Click **OK** button to continue.

Properties Setting for Target Dataset Search Dialog will be shown as Figure 3-2, in this dialog:
- **CRS**: Name of spatial reference system, the default CRS is **WGS84 Lat/Lon**, as seen in Figure 4-4.
- **West, South, East, North**: Minx, Miny, Maxx and Maxy of geospatial bounding box. You can input the customized bounding box, as seen in Figure 4-4.
- **Date and Time**: You can specify date and time in this dialog.
- **Other Attributes**: You can specify other attributes for target dataset as well in this dialog.
After setting the properties for data selection, click **OK** to send query request, and the result datasets which meet the query conditions within the specified bounding box will be shown as Figure 3-3.
- **Display Original Dataset:** You could check the parent node in the tree to retrieve the original dataset (for example, p015r033_7k20011005_z18_mm61.tif), as seen in Figure 3-3, then click [Load] button, the original dataset will be shown as Figure 3-4.

![Figure 3-4 Original Dataset Display](image)

- **Display Custom Dataset:** To display custom dataset, you could check the child node in the tree (for example, Subdataset1), as seen in Figure 3-5, then customize the selected dataset. You could select the bounding box among the dataset bounding box, the specified bounding box and the intersection of above two, and specify parameters of **Width/Height**, or **Resolution on X/Y**. After setting these parameters, click [Load] button to submit them. Custom dataset will be shown in ArcMap as Figure 3-6.
Figure 3-5 Customizing Dataset by WCS Request

Figure 3-6 Custom Dataset Display
4 Load WFS Layer

Click on the toolbar, WFS Server Selection Dialog will be shown as Figure 4-1. You could either select available WFS server from CSW list or input WFS server URL directly, then click button.

![Figure 4-1 WFS Server URL Input Selection Dialog](image1.png)

- **Select WFS from CSW List: CSW Input Dialog** will be shown as Figure 4-2. Enter CSW URL (i.e. http://geobrain.laits.gmu.edu:8099/LAITSCSF2/discovery), and click button to continue.

![Figure 4-2 CSW Server URL Input Dialog](image2.png)

The available WFS server URL would be displayed as Figure 4-3. You could select the target WFS server (such as http://laits.gmu.edu:8099/geoserver/wfs), and click button to continue.
Figure 4-3 WFS Server List Dialog

- **Input WFS URL:** WFS Input Dialog will be shown as Figure 4-4. Enter WFS Server URL (take http://frameworkwfs.usgs.gov/framework/wfs/wfs.cgi as an example), and click [OK] button to continue.

Figure 4-4 WFS Server URL Input Dialog

The available layers in the specified WFS server would be displayed as Figure 4-5. You could select the target layers (for example, gubs:GovermentalUnitCE), specify SRS and input the values of the bounding box. Click [Load] button to submit the request.
The layer returned from the WFS server will be shown as Figure 4-6.
5 Load WMS Layer

Click \( \text{WMS} \) on the toolbar, **WMS Server Selection Dialog** will be shown as Error! Reference source not found.. You could either select available WMS server from CSW list or input WMS URL directly, then click \( \text{OK} \) button.

![WMS Server Selection Dialog](image)

**Figure 5-1 WMS Server URL Input Selection Dialog**

- **Select WMS from CSW List**: CSW Input Dialog will be shown as Figure 5-2. Enter CSW URL (i.e. \[http://www.geodata.gov/aimscsw/csw2.0\]), and click \( \text{OK} \) button to continue.

![CSW Input Dialog](image)

**Figure 5-2 CSW Server URL Input Dialog**

The available WMS server URL would be displayed as Figure 5-3. You could select the target WMS server (such as \[http://nsidc.org/cgi-bin/atlas_north\]), and click \( \text{Select} \) button to continue.
**Input WMS URL:** The WMS Input Dialog will be shown as Figure 5-4. Enter WMS server URL (take http://geoint.lmic.state.mn.us/cgi-bin/mapserv483?map=/home/httpd/html/cap/gubs.map as an example), and click OK button to continue.

The available layers in the specified WMS server would be displayed as Figure 5-5. You could select the target layers by checking them (for example, MCD2003), specify the bounding box, select SRS and Output Format. Click Load button to submit the request.
Figure 5-5 WMS Layers List Dialog

The gif file returned from the WMS server will be shown as Error! Reference source not found..
6  Add Data to Personal Geodatabase

6.1  Create Personal Geodatabase in ArcCatalog

6.2  Add Data to Personal Geodatabase

Firstly, you should load WCS WFS or WMS data with ArcGIS Framework Extension, then select some layer and export it to the specified geodatabase, as seen Error! Reference source not found., click to finish this operation.

6.3  Access Data from Personal Geodatabase

You could access the exported data from the above geodatabase, as displayed in Error! Reference source not found.2.
Figure 6-2 Access Data from Personal Geodatabase