CEDRA-Avenue Wraps™   Software

INSTALLATION INSTRUCTIONS

CEDRA-Avenue Wraps™

Step 1:

The **CEDRA Avenue Wraps**™ software requires approximately fifteen (15) megabytes of disk space and will operate under **Windows NT**®**, Windows 2000**® **and Windows XP**®. One top level directory, whose default name is **CEDRA**, will be created. Should the user wish to use a different name, the user can do so. Within the **CEDRA** directory a file called *readme.txt*, which describes the contents of the **CEDRA Avenue Wraps** distribution directory, will appear. This file should be read prior to working with the **CEDRA Avenue Wraps** software.

It is assumed in this installation discussion, that the "**C:**" partition will be used to contain the software. If this is not the case, it is possible to substitute the appropriate drive identifier when performing the installation. It is also assumed that the individual installing the software is somewhat familiar with **PC** terminology, has a working knowledge of the **PC** and the available text editors that are installed on the **PC**, and is somewhat familiar with **ArcGIS**®.

The **CEDRA Avenue Wraps** software supports the **ArcGIS 8.x** and **9.x** platforms. The user should verify which version of **ArcGIS** is being used at this time.

The **CEDRA Avenue Wraps** software consists of a single CD and contains the software in a compressed file format. An installation program will decompress the compressed file and install the **CEDRA Avenue Wraps** software in the desired directory. Prior to installing the software, a partition on the **PC** should be found that contains the necessary amount of free disk space, fifteen (15) megabytes.

Step 2:

The contents of the **CEDRA Avenue Wraps** software can now be extracted and stored onto the **PC**. The CD should now be inserted into the appropriate drive.

Step 3:

Select the **Start** button from the task bar followed by selecting the **Run...** menu item.

Step 4:

The **CEDRA** software installation program can be invoked by typing:

D:SETUP   (ArcGIS 8.x Version)

or

D:SETUP9   (ArcGIS 9.x Version)

If the CD drive identifier is something other than D, the user should make the appropriate substitution in the above command. Note that there are two installation programs on the CD, one for the **ArcGIS 8.x** platform and one for the **9.x** platform. The user should execute only one of the installation programs. It is not possible to execute both programs on the same PC.

The installation program will then pose a series of screens guiding the user through the installation process. Once the final screen has been displayed, the program will decompress the compressed file, and store the files in the appropriate directory location. After the file has been decompressed, the user can invoke **ArcMap** and reference the **Avenue Wraps** ActiveX DLL.

How to Use the CEDRA Avenue Wraps Software:

This version of the **CEDRA Avenue Wraps** software is available as an ActiveX DLL. Once the installation program has finished, within the **CEDRA Avenue Wraps** distribution directory there will appear a file called *avwraps.dll*. This is the ActiveX DLL that can be referenced by the user in either (a) an **ArcMap** document file or (b) a **VB** project file.

In working with the **CEDRA Avenue Wraps** software, the developer can: (a) use the ActiveX DLL file, *avwraps.dll*, as is or (b) modify the **CEDRA Avenue Wraps** software in order to create a new custom ActiveX DLL. Depending upon the developer's requirements the appropriate mode of operation can be determined. Note, if the **CEDRA Avenue Wraps** software is to be modified, the developer will need to use Visual Basic 6 and modify the *avwraps.vbp* file, located in the *dll* folder within the **CEDRA Avenue Wraps** distribution directory. Once the VB project file has been modified, a new ActiveX DLL can be built. In so doing, the developer is able to customize the **CEDRA Avenue Wraps** software to meet the developer's specific requirements.

Getting Started:

The first step in using the **CEDRA Avenue Wraps** software is to reference the Avenue Wraps DLL file, *avwraps.dll*, in your ArcMap document file or your VB project file. After installing the **CEDRA Avenue Wraps** software, within the distribution directory, there will be a file called *avwraps.dll*. This file has been registered with Windows as an ActiveX DLL and is ready for referencing. This should be the file that is selected in Step 6 below (provided that the **CEDRA Avenue Wraps** software is not to be modified by the user).

If the user wishes to modify the **CEDRA Avenue Wraps** software, the VB project file, *avwraps.vbp*, can be modified to create a new DLL version of the **CEDRA Avenue Wraps** software. The avwraps.vbp project file can be found in the *dll* folder within the **CEDRA Avenue Wraps** distribution directory. After the modifications have been made and the DLL built, this file can be selected in Step 6 below.

The following steps below describe how to reference the *avwraps.dll* file in a new **ArcMap** document file.

➤**1**   **Invoke** the **ArcMap** program.

➤**2**   Accept the default selection to create a new empty map, and **click** at the **OK** button.

➤**3**   **Click** at the **T̲ools** menu and then at the **M̲acros** and **V̲isual Basic Editor** sub-menus.

➤**4**   **Click** at the **Tools** menu and then at the **References...** sub-menu.

➤**5**   **Click** at the **Browse** button to display the Add Reference file dialog box.

➤**6**   **Navigate** to the directory in which the avwraps.dll file is located.

➤**7**   **Click** at the name of the **avwraps.dll** file.

➤**8**   **Click** at the **Open** button.

➤**9**   **Click** at the **OK** button to confirm.

➤**10**   **Click** in the square containing the plus (+) character to the left of the folder called ArcMap Objects under the Project group in the Project window.

➤ **11**   **Double-click** on the ThisDocument module name.

➤ **12**   **Scroll** down in the Object drop-down list and select the MxDocument name.

➤ **13**   **Scroll** down in the Procedure drop-down list and select the OpenDocument name.

➤ **14**   **Insert** the line **Call avInit(Application)** in the OpenDocument procedure.

➤ **15**   **Click** the **Run Sub/UserForm tool** to execute the subroutine. This will initialize the Avenue Wraps global variables. The avwraps.dll has now been referenced in the VBA application, and all of the Avenue Wraps are now available to the developer. The user can now create new modules and begin to convert existing Avenue code or develop new code using the Avenue Wraps "wraparounds".

Note that any time a new module is inserted in the ArcMap document file, the OpenDocument procedure will need to be re-executed. The OpenDocument procedure is a good location to perform any initialization that may be required.

The following steps below describe how to reference the *avwraps.dll* file in a new **VB** project file.

➤ **1**   **Invoke** Visual Basic Version 6.0.

➤ **2**   **Select** the **New** tab, followed by **clicking** on the **Active X DLL** icon and then **select** the **Open** button.

➤ **3**   **Select** the **Project** menu and the **References...** sub menu item.

➤ **4**   **Click** at the **Browse...** button to display the Add Reference file dialog box.

➤ **5**   **Navigate** to the directory in which the avwraps.dll file is located.

➤ **6**   **Click** at the name of the **avwraps.dll** file.

➤ **7**   **Click** at the **Open** button.

➤ **8**   **Click** in the square to the left of the CEDRA Avenue Wraps reference name.

➤ **9**   **Click** at the **OK** button to close the Add Reference file dialog box.

Sample Data:

In addition to the ActiveX DLL file, seven VBA modules and two shapefiles are included containing sample code and data, which illustrate the use of the **CEDRA Avenue Wraps**. These samples include:

Module1.bas   Sample illustrating how to process graphics and symbols, the graphics that are created are based upon an arbitrary coordinate system.

Module2.bas   Sample illustrating how to process feature geometry. This is done by using the first selected feature in a polygon theme.

Module3.bas   Sample illustrating how to create a Shapefile and add a feature to it. The sample will also show how an operation can be defined.

Module4.bas   Sample illustrating how to perform various shape editing operations. This sample requires seven polygon features and one polyline feature be selected prior to executing this macro. The first selected polygon and the selected polyline features will be used in a split operation. The remaining selected polygons will be used to demonstrate (a) merging, (b) intersecting and (c) unioning operations. The shapefiles **L_0pg** and **L_0pl**, which are included in the distribution set (under the DATA folder within the distribution directory), can be added to **ArcMap** and used in this sample.

Module5.bas   Sample illustrating how to create, add records, populate and summarize a table.

Module6.bas   Sample illustrating how to create a new shapefile that has a default spatial reference and three attributes using a name that the user enters in a file dialog box. The shapefile is to contain Polyline features and will be added to the map once it has been created.

Module7.bas   Sample illustrating how to create various types of message boxes.

How to Import and Execute a Sample:

➤**1**   **Perform** Steps 1 through 15 under the Getting Started section of how to reference the *avwraps.dll* file in a new ArcMap document file.

➤**2**   **Click** at the **Tools** menu and then at the **Macros** and **Visual Basic Editor** sub-menus.

➤**3**   **Click** at the plus sign, +, to the left of the **Project** label in the project window to expand the project document.

➤**4**   **Click** at the **File** menu and then at the **Import File...** sub-menu.

➤**5**   **Navigate** to CEDRA Avenue Wraps distribution directory, **click** on the desired sample module file name, and then **click** the **Open** button.

➤**6**   **Click** at the plus sign, +, to the left of the **Modules** label in the project window to expand the module document.

➤**7**   **Scroll** down the list of modules and find the sample module file that was imported. Once found, double-click on the name of the module to open the module.

➤**8**   **Click** at the Run Sub/UserForm tool (▶) to execute the sample code.

       Note that with the Module4.bas sample, the L_0pg and L_0pl shapefiles will need to be loaded prior to performing this exercise.

CEDRA-ArcView3-Tools Toolbar

As an extra, and totally optional to the user, the CEDRA-ArcView3-Tools toolbar is included with the **CEDRA Avenue Wraps**™ software. This toolbar contains eleven tools, as shown in Figure 1, which facilitate the interaction between the user and ArcMap. Users who have experience with ArcView® GIS will recognize these tools and appreciate their presence in migrating their applications from ArcView® GIS to ArcGIS.

Switch the Selection Set
Open Theme Table
Delete Selected Features
Make All Themes Invisible
Make All Themes Visible
Zoom To Selected In Active Layers
Zoom To Active Theme(s)
Zoom To Full Extent
UnSelect Features From Active Layers
Select Features From Active Layers
Identify Features From Active Layers
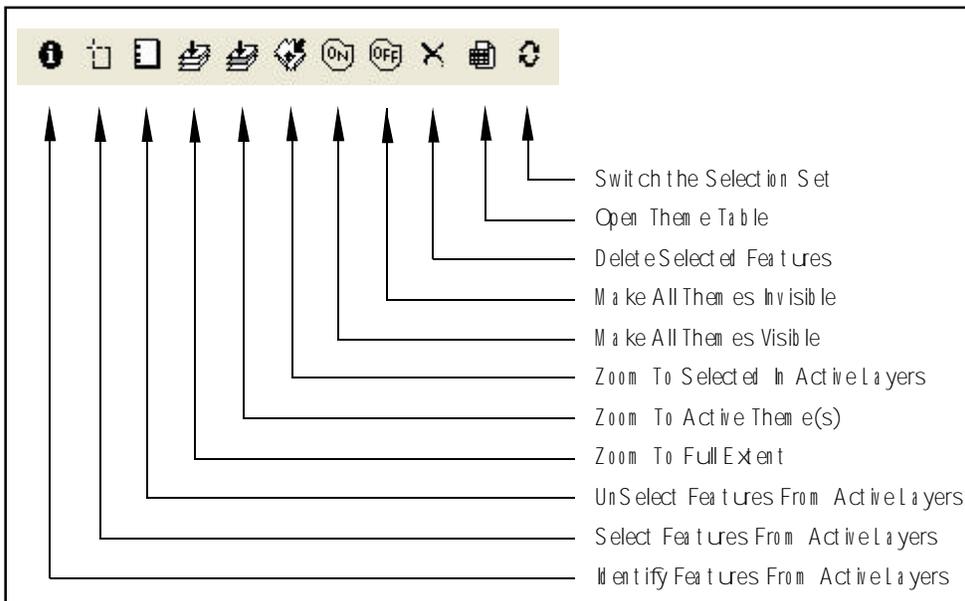
Figure 1 - CEDRA-ArcView3-Tools

The CEDRA-ArcView3-Tools toolbar contains tools which enable the user to reduce the number of "clicks" that are needed to identify and select features

Presented below is a comparison of how the CEDRA-ArcView3-Tools operate versus their ArcMap counterpart. The tools are described in a left to right fashion beginning with the left-most tool, Identify Features From Active Layers. Note that the CEDRA Approach tries to "streamline" the operation of the tool for which it was designed for.

1. **Identify Features**

    This tool is used to list or identify the attributes that are associated with a selected feature.

    CEDRA Approach

    ◗   Select the layer(s) in the Table of Contents.

    ◗   Pick the CEDRA-ArcView3-Tools Identify Features tool.

    ◗   Select the feature in the map to be identified.

    ArcMap Approach

    ◗   Pick the Selection menu item.

    ◗   Pick the Set Selectable Layers sub menu item.

▶ Click in the square to the left of the layer(s) that are to be made selectable.
▶ Click the Close button.
▶ Pick the ArcMap Identify tool.
▶ Select the feature in the map to be identified.

2. Select Features

This tool is used to select a feature or group of features in the map.

CEDRA Approach

▶ Select the layer(s) in the Table of Contents.
▶ Pick the CEDRA-ArcView3-Tools Select Features tool.
▶ Select the feature(s) by making a pick or dragging a rectangle in the map.

ArcMap Approach

▶ Pick the Selection menu item.
▶ Pick the Set Selectable Layers sub menu item.
▶ Click in the square to the left of the layer(s) that are to be made selectable.
▶ Click the Close button.
▶ Pick the ArcMap Select Features tool.
▶ Select the feature(s) by making a pick or dragging a rectangle in the map.

3. Clear Selected Features

This tool is used to clear the selection set for the active or selected layers in the map. This tool will also handle tables in addition to layers.

CEDRA Approach

▶ Select the layer(s) in the Table of Contents.
▶ Click this tool to clear the selection set for the active or selected layers in the map.

ArcMap Approach

▶ Right-click on the name of the layer in the Table of Contents.
▶ Pick the Selection command.
▶ Pick the Clear Selected Features command.
▶ Repeat the above three steps for each layer to be processed.

4. Zoom to Full Extent

This tool is used to zoom to the full extent of the map. There is no difference between the CEDRA and ArcMap tools which provide this functionality. This tool is only provided because the icon is familiar to ArcView GIS users.

CEDRA Approach

▶ Click this tool to zoom to the full extent of the map.

ArcMap Approach

▶ Click the ArcMap Full Extent button to zoom to the full extent of the map.

5. Zoom to Active

This tool is used to zoom to the extent of the active or selected layers in the map.

CEDRA Approach

◗ Select the layer(s) in the Table of Contents.

◗ Click this tool to zoom to the extent of the active or selected layers in the map.

ArcMap Approach

◗ Select the layer(s) in the Table of Contents.

◗ Right-click on one of the active or selected layers and select the Zoom to Layer command.

6. Zoom to Selected

This tool is used to zoom to the extent of the selected features in the active or selected layers in the map.

CEDRA Approach

◗ Select the feature(s) to be processed.

◗ Click this tool to zoom to the extent of the selected features in the active or selected layers in the map.

ArcMap Approach

◗ Select the feature(s) to be processed.

◗ Pick the Selection menu item.

◗ Pick the Zoom to Selected Features sub menu item.

7. Turn All Themes On

This tool is used to make all layers in the map visible.

CEDRA Approach

◗ Click this tool to make all layers in the map visible.

ArcMap Approach

◗ As of this writing there is no equivalent for this tool in ArcMap.

8. Turn All Themes Off

This tool is used to make all layers in the map invisible.

CEDRA Approach

◗ Click this tool to make all layers invisible.

ArcMap Approach

◗ As of this writing there is no equivalent for this tool in ArcMap.

9. Delete Selected Features

This tool is used to delete the selected feature(s) in the map.

CEDRA Approach

◗ Select the feature(s) to be processed.

◗ Click this tool to delete the selected feature(s) from the map.

ArcMap Approach

◗ Select the feature(s) to be processed.

◗ Pick the Editor button.

◗ Click Start Editing command. If more than one dataset is present, select the dataset to be edited.

◗ Click the Delete key on the keyboard.

10. Open Theme Table

This tool is used to open the attribute table for the active or selected layers in the map. This tool will also handle tables in addition to layers.

CEDRA Approach

◗ Select the layer(s) in the Table of Contents.

◗ Click this tool to open the attribute table for the active or selected layers in the map.

ArcMap Approach

◗ Right-click on the name of the layer in the Table of Contents.

◗ Pick the Open Attribute Table command.

◗ Repeat the above two steps for each layer to be processed.

11. Switch the Selection Set

This tool is used to switch or reverse the selection set for the active or selected layers in the map. That is to say, whatever is selected will become deselected and what was not selected will become selected. If the layer contains no selected features, then all features in the layer will be made selected, providing a quick way of selecting all features in a layer. This tool will also handle tables in addition to layers.

CEDRA Approach

◗ Select the layer(s) in the Table of Contents.

◗ Click this tool to switch or reverse the selection set for the active or selected layers in the map.

ArcMap Approach

◗ Right-click on the name of the layer in the Table of Contents.

◗ Pick the Selection command.

◗ Pick the Switch Selection command.

◗ Repeat the above three steps for each layer to be processed.