INTRODUCTION

Welcome to the ArcGIS Diagrammer user guide.

ArcGIS Diagrammer is a productivity tool for GIS professionals to create, edit or analyze geodatabase schema. Schema is presented as editable graphics in an environment familiar to users of Microsoft Visual Studio 2005. Essentially ArcGIS Diagrammer is a visual editor for ESRI’s Xml Workspace Document which are created by ArcCatalog, the management application in the ArcGIS Desktop product suite.

The first few chapters of this guide detail the installation and un-installation of ArcGIS Diagrammer. However the most useful part of this guide is the chapter entitled getting started. This chapter contains two easy to follow tutorials and is strongly recommended for new users.

Enjoy!
HOW TO INSTALL

DOWNLOADING THE SETUP PROGRAMS

ArcGIS Diagrammer can be downloaded from ESRI’s ArcScripts website. Please read all the terms and conditions before downloading this or any other code/application from the site.


If you have received this application from an alternative source or are a current user, please check the ArcScripts website regularly for updates.

RUNNING THE SETUP PROGRAM

Listed below is a step-by-step installation guide for ArcGIS Diagrammer.

Start the Microsoft Windows Explorer application. Navigate to the folder containing the zip file downloaded from the ArcScripts website. Extract ESRI.ArcGIS.Diagrammer.Setup.2007xxxx.msi from the Zip file and double click on ESRI.ArcGIS.Diagrammer.Setup.2007xxxx.msi to start the installer. When the installer will first display a splash screen. Press Next >

The next dialog will display a welcome message. Press Next >

The next dialog displays a detailed license agreement. Read through the agreement, if you agree with the statement click I Agree and then click Next >.
Following the license agreement, a dialog will display a prompt with the installation folder, by default this is:
C:\Program Files\ArcGIS Diagrammer

If you prefer to install the application on another drive (or folder) then enter a new installation folder or click the Browse button to navigate to a folder. The Disk Cost… button will display the amount of space required to install this application. Click Next > to continue to the next dialog.

Finally, the installation wizard will display a confirmation message prior to commencing the installation. Click Next > to start the installation.

During the installation process the installation wizard will display a progress bar. At anytime the installation process can be cancelled by clicking the Cancel button however this is strongly not recommended. If you would like to cancel the installation we recommend that you first let the install complete and then follow the uninstall procedure detailed in the following section.
On successful completion of the install this final dialog will appear. Click **Close** to dismiss dialog.
HOW TO UNINSTALL

UNINSTALLING ARCGIS DIAGRAMMER

Diagrammer can be uninstalled using the Add or Remove Programs dialog available from the Windows Control Panel. Launch the Windows Control Panel. Click **Start > Control Panel** as illustrated below.

Start the Add or Remove Programs dialog. Click the **Add or Remove Programs** item.

When the following dialog appears click **Remove a program**.
From the Add or Remove Program dialog select **ArcGIS Diagrammer** as illustrated below.

Click **Remove**. A dialog box will appear confirming that you want to remove ArcGIS Diagrammer. Click **Yes**.

The uninstall process will take just a few seconds, during which the following progress dialog will be visible.
INSTALLATION REQUIREMENTS

OPERATING SYSTEM
ArcGIS Diagrammer supports the same platform as ArcGIS Desktop 9.2, this includes the following:
- Microsoft Windows 2000 SP3 (or later)
- Microsoft Windows 2003 Server SP1 or SP2
- Microsoft Windows 2003 Server Terminal Services SP1 (with limitations)
- Microsoft Windows XP Home Edition SP1 or SP2 (with limitations)
- Microsoft Windows XP Professional Edition 64-bit (with limitations)
- Microsoft Windows Vista 32-bit (with limitations)
- Microsoft Windows Vista 64-bit (with limitations & limitations)

MICROSOFT .NET FRAMEWORK

ESRI SOFTWARE
ArcGIS Diagrammer requires ArcGIS Desktop 9.2. Please ensure that you have the latest service pack installed. For a list of the latest services packs please click here.

LICENSING
To read this user guide you must have already installed ArcGIS Diagrammer and accepted the license agreement presented in the setup program. A copy accepted license agreement is located within the "license" subfolder of the installation folder. ArcGIS Diagrammer has a runtime dependency of either ArcGIS Engine or ArcGIS Desktop. The Engine (or Desktop) product must installed and licensed.

ArcGIS Diagrammer uses the following third party components.
1) ERM Diagram 4.1
   Crainiate Software
   http://www.crainiate.net/products/erm4/default.htm
2) SandDock
   Divelements
   http://www.divil.co.uk/net/controls/sanddock/
3) SandBar
   Divelements
   http://www.divil.co.uk/net/controls/sandbar/

These components can be used indirectly through ArcGIS Diagrammer without any cost to you as an end user. However you are legally compelled to purchase a developer license(s) if you reference these components directly. This includes modifications to the core ArcGIS Diagrammer assemblies. Please contact Crainiate Software or Divelements for more information on licensing.

STORAGE REQUIREMENT
The installation size of ArcGIS Diagrammer is approximately 10MB.

SOURCE CODE
The source code for ArcGIS Diagrammer is located in the “Source” sub-folder in the installation folder.
POST INSTALLATION REQUIREMENTS

ESRI .NET ASSEMBLIES

ArcGIS Diagrammer requires the ESRI .Net assemblies to be installed in the Global Assembly Cache (or GAC). If you installed the Microsoft .Net Framework 2.0 prior to installing ArcGIS 9.2 then the ESRI assemblies will have been automatically installed in the GAC.

If the .Net Framework was installed after ArcGIS then you must following the steps below to install the ESRI assemblies into the GAC. You may also use the following the steps to verify the installation of the ESRI assemblies.

Display the Add or Remove Programs dialog from the Windows Control Panel (see How to Uninstall above for details), select ArcGIS Desktop from the list of installed programs.

Click the Change button to launch the installer. At this point you may be asked for the source media or access to a network folder that was used to install ArcGIS Desktop.

Select Modify and then click Next >. The following dialog will appear listing all the currently installed components of ArcGIS 9.
Click on .NET Support and select **Will be installed on local hard drive.**

Click **Next >**

At the confirmation prompt click **Next >** again. As the new files are installed the following progress dialog will appear. If necessary, the installation can be cancelled by clicking the **Cancel** button, but this is strongly not recommended.
When the installation is complete the following dialog is displayed.

Finally, click Finish to dismiss the dialog.
GETTING STARTED

INTRODUCTION

This chapter will step through two exercises. The first exercise will use ArcGIS Diagrammer (AD) to design a simple geodatabase. The second exercise will start by analyzing an existing schema of an existing geodatabase, make a few modifications and then load the edited schema to a new geodatabase.

Ultimately the goal of these exercises is to demonstrate AD’s usefulness and ease of use.

EXERCISE ONE: DESIGNING A GEODATABASE

Prior to AD there were two ways of authoring geodatabase schema, designers could use ArcCatalog or third party CASE tools like IBM’s Rational Rose or Microsoft’s Visio.

ArcCatalog is a very focused application for schema creation. But is, of course, non-graphical making a design collaboration and validation difficult. For complex designs, schema creation with ArcCatalog would be very time consuming.

CASE tools allow designers to create industry standard UML diagrams but had performance issues with complex designs. Additionally, some geodatabase objects like topology datasets and annotation feature classes were not supported.

In this exercise you will discover a third method of schema creation.

Let’s commence this exercise by starting AD from the windows start menu. On computer with Windows XP click Start > All Programs > ArcGIS > ArcGIS Diagrammer > ArcGIS Diagrammer as shown below.

AD will start without any diagrams loaded. To create a new empty diagram click File > New.
A new tab will be added to the AD application with the name *Untitled*, this is the default name for new diagrams.

In the Palette window scroll down until you see the Feature Dataset item. As you place your cursor over this and other items a brief description will appear in a balloon tooltip.

Drag the Feature Dataset item from the palette and drop it into the diagram.
The drag and drop operation added a new feature dataset called Empty to the diagram. By default, datasets added from the palette will have a WGS84 spatial reference.

To change the name of the feature dataset select it by clicking it with the left mouse button.

In the Properties window highlight the text Empty next to the (Name) properties in the Dataset category.

Type World and then press Enter to update the feature dataset.
Scroll up the list of geodatabase objects in the Palette window and locate the Polygon item under the FeatureClasses category.

Drag and drop the Polygon item into the diagram.

Similarly add a Raster Dataset and Raster Band to the diagram as shown below.
Next we need to indicate some geodatabase structure. Namely, the feature class needs to be associated with the feature dataset and the raster band to the raster dataset. To associate objects AD must be switched to Link Mode.

Click Tools > Link Mode.

To link the feature class to the feature dataset start by dragging a link from the center of the feature dataset to the center of the feature class.
Likewise, link the raster band to the raster dataset by dragging a link from the center of the raster dataset to the center of the raster band.

Before continuing let’s restoring the normal interaction mode by clicking **Tools > Normal Mode**.
Returning to the Palette, drag and drop a coded value domain to the diagram.

In a previous step you renamed the feature dataset from Empty to World. This time rename the newly added domain to Language. Start by selecting the domain by click it with the left mouse button. In the property window change the (Name) from Empty to Language.
We are going to use this coded value domain to host a list of language names and codes. New coded value domains added from the palette window have a sample coded value. Let’s start by modify the sample coded value and then move on to added additional coded values for other languages.

Select the first coded value item in Language domain.

In the properties window set code to **EN** and name to **English**.
To add other coded value items right click on the domain and select Add Coded Value Item. Repeat this so that there are two new blank coded value items.

Select the second coded value item in the Language domain.
Set the code and name for the second coded value item to **DE** and **German** respectively. Likewise, assign **ES/Spanish** to the third and last coded value item.

The easiest way to browse the objects in your diagram is to use the Catalog Window. If the catalog window is not visible then click **View > Catalog**. For performance considerations the catalog is not automatically updated when objects are removed, added, linked or unlinked. In the catalog window click the **Refresh** button as shown below.

The catalog window has three view types. The first and default view is similar to the tree structure displayed in ArcCatalog. However unlike ArcCatalog, this view lists domains and other geodatabase object that are not normal shown like subtypes.
Click the **Categorized view** button. This button groups all geodatabase objects based on type. This view allows you to quickly answer questions like “Does the geodatabase have a topology dataset?” or “How many geometric networks are there?”.

Lastly click the **Alphabetical view** button. This view arranges all geodatabase objects in an alphabetical order irrespective of the geodatabase hierarchy. This view allows you to efficiently locate objects that may be difficult to locate in the catalog view, for example, “Where is the subtype called ‘residential’?”.

**Hint:** If the alphabetical view contains hundreds or thousands of objects scrolling may be cumbersome. To quickly locate an object by name, type some or all of the object’s name into the window. This will automatically scroll the view to the named object.

Right clicking on any geodatabase object in any view will display a context menu with the items **Scroll** and **Flash**. Selecting scroll will cause the diagram to pan to the location of the selected object. Scroll will not affect the diagram zoom scale. Flash will cause the object in the diagram to flash yellow three times. To illustrate this, right click on the raster band called **Band_1** and select **Flash**.
Below is a screenshot demonstrating the flashing effect that you will see after selecting Flash.

So far you have added a domain, feature dataset, feature class, raster dataset, raster band and made some associations. Before continuing let’s validate the diagram. Validate is the process of scanning the diagram for errors and inconsistencies.

Click **Tools > Validate**.

If the Error List window is currently not display then click **View > Error List**. Please ensure that the Errors and Warnings buttons on the toolbar are depressed. Depressed buttons will be colored orange as pictured below.
You should see three errors and one warning displayed in the error list window. Over the next few pages we are going to locate and fix these errors.

Of the three errors, two have the description “Dataset name 'Empty' is duplicated”. Obviously there is a name conflict, let’s start by locating the offending objects. Select the two errors. To select more than one error use the CONTROL key. Right click over one of the selected errors and click Flash.

In the diagram you will see both the feature class and the raster dataset flash yellow. One of these objects must be renamed to avoid the naming conflict.
Select the feature class called Empty and change its (Name) to Countries.

Similarly, change the (Name) of the raster dataset from Empty to Temperature.
Refresh the list of errors by clicking Tools > Validate. Now, you only have one error and one warning. The error description is “Field [SHAPE_Length] is too long”. To find out what table or feature class the field belongs to, right click on the error and click Select.

The Countries feature class is selected in the diagram.

To check table and field names the validate command uses a database specific validator. In this exercise you will be ultimately applying the schema generated from this diagram to file geodatabase. So, let’s select a file geodatabase validator and re-validate the diagram.

Click the validator dropdown button on the error list window toolbar, select file geodatabase.
Revalidate the diagram by clicking **Tools > Validate**.

Now, we only have a single warning. All table and field names are valid for file geodatabases.

The warning description explains that the domain Language is not used. This is classified as a warning because it will not cause an error in the target geodatabase. For this reason, warnings can be ignored.

In this case, let’s create new field in the feature class Countries and assign the domain Languages to it. To create a new field on Countries, right click on the feature class and select **Add Field**.
Select the newly added field.

In the property window update the following properties.

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Name)</td>
<td>SpokenLanguage</td>
</tr>
<tr>
<td>AliasName</td>
<td>Spoken Language</td>
</tr>
<tr>
<td>DefaultValue</td>
<td>EN</td>
</tr>
<tr>
<td>Domain</td>
<td>Language</td>
</tr>
<tr>
<td>FieldType</td>
<td>esriFieldTypeString</td>
</tr>
<tr>
<td>Length</td>
<td>2</td>
</tr>
</tbody>
</table>

Notice that both the Domain and FieldType properties have dropdown menus. This helps eliminate typographical errors.
Once again, click Tools > Validate to verify that you have eliminated all errors and warnings.

With the three errors and warnings removed we can move on to creating an xml workspace document from this diagram.

Click **File > Save Untitled As**...
When the save as dialog appears, navigate to the C:\Temp folder and enter **World Data Model** as the output file name. Click **Save**.

Xml workspace documents can be loaded into new or existing geodatabase using ArcCatalog. In this exercise we will load the document into a new file geodatabase.

Click **Start > All Programs > ArcGIS > ArcCatalog** to start ArcCatalog.
In ArcCatalog, navigate to the C:\Temp folder as shown below. You will see the Xml file created in the previous step.

Create a new file geodatabase by clicking **File > New > File Geodatabase**.
Select the new file geodatabase in the ArcCatalog table of contents. Right click and select Import > XML Workspace Document.

Xml Workspace Documents can contain schema, data or both. When the Import Xml Workspace Document window appears click Schema Only to indicate that no data will be imported.

Enter the full file name of the Xml Workspace Document created by AD, for example, C:\Temp\World Data Model.xml.

Click Next >.
The next dialog will summarize the datasets and domains in the xml workspace document. Click Finish to start the schema loading process.

As the dataset and domains are loaded the following progress dialog will appear.
When the progress dialog disappears click **View > Refresh** in ArcCatalog to refresh the contents of the file geodatabase.

In the ArcCatalog, examine the geodatabase structure. Confirm that the Countries feature class was created in the World feature dataset.
Right click on the Countries feature class and select **Properties**. Click the **Fields** tab and **SpokenLanguage** field list. Verify that the alias, default value, domain and length are correct and identical to the properties assigned in AD.

Click **Cancel** to dismiss the Feature Class Properties window.

Returning to the AD application, click **File > Close**.
When prompted to close the current diagram without saving click **No**.

Congratulations. You have just designed a geodatabase using ArcGIS Diagrammer.
EXERCISE TWO: MODIFYING THE SCHEMA OF AN EXISTING GEODATABASE

In the previous exercise you started with a blank diagram and authored new geodatabase schema by adding items from the palette. In this exercise you will take the schema from an existing geodatabase, modify it in AD and then apply it to a new geodatabase.

This exercise assumes you have ArcTutor installed. The screenshots and instructions below are based on an ArcTutor installation folder of C:\Program Files\ArcGIS\ArcTutor, but this may be different on your computer.

In ArcCatalog navigate to the EditingWithArcGIS sub-folder in the ArcTutor installation folder.

Right click on the Montgomery_full.gdb geodatabase and select Export > XML Workspace Document.
When the Export XML Workspace Document window appears check **Schema Only** so that no data is exported. In the output XML file box, enter `C:\Temp\Montgomery.xml`. By default, metadata (if any) will be included in the xml workspace document.

Click **Next** to proceed to the next step.

The next dialog will summarize the geodatabase objects that will be exported to the XML file. By default, all geodatabase objects are selected for export. Click **Finish** to commence the export.
During the export operation the following progress dialog will appear.

When the export operation has completed the progress dialog will disappear. Returning to AD, select **File > Open** from the main menu.
An open file dialog will appear. Navigate to the C:\Temp folder and select the export XML workspace document Montgomery.xml. Click OK to load XML workspace document.

When AD has finished loading the XML workspace document a new tab will added to application. The initial title on the tab is taken from the filename of the source XML workspace document.

AD features a docking environment very similar to Microsoft Visual Studio 2005. Take some time to familiarize yourself. First click the pushpin icon on the Palette window, this collapses the window to the side of the application. Next, click and drag the Error List window, as you commence dragging you will see docking prompts appear around the application as shown below.

The docking prompts are drop targets for dragged windows. In the center of the application there are five docking prompts, drop the Error List window on the bottom prompt.
The Error List window will not be used in this exercise, for now, collapse the window to the bottom of the application by clicking the pushpin icon in the title bar.

Diagrams are often much larger than your screen. AD provides three ways to navigate diagrams, the first and most obvious is to use the scroll bars on the right and bottom of the diagram. The second way, shown below, is to click in the Overview window. If the Overview window is not displayed then click **View > Overview**. Clicking in the Overview window will center the diagram around the location without changing the diagram scale.
When the diagrams are large, objects in the Overview widnow may be difficult to recognize. The third and last way to navigate diagrams is to use the Catalog window. If the Catalog window is not displayed then click View > Catalog. This is easily the most efficient way to navigate your diagram. Let’s locate Parcel’s Non-Residential subtype. In the Catalog window, expand the Landbase feature dataset and Parcels feature class. Right click on Non-Residential and select Scroll.

The diagram will center around the Non-Residential subtype belonging to the Parcels feature class. Notice that it is selected in the diagram and its properties are displayed in the Properties window.
Next, let’s locate the domain called FittingType. In the Catalog window, right click on FittingType and select Scroll.

Until now we have been interacting with the main diagram. However AD allow the creation of additional sub-diagrams for analyzing or modifying complex objects. Domains, relationships, geometric networks and topology datasets all have sub-diagrams.

Right click on the FittingType domain and select Open Domain Diagram.
A new tab will be added to AD with the name of the selected domain in the title. A domain diagram is not editable, its primary use is to show what tables and/or feature classes are using the domain, if any.

By default, the diagram scale is 100% or actual size. Because the domain diagram is quite large let’s change the diagram scale to 50% so that more is visible. In the lower right hand corner of the application, click the left mouse button on the scale dropdown menu and select 50%.

Domain diagrams only displays objects fields and subtypes fields that directly reference the selected domain. By default, AD uses a hierarchical layouts for new diagrams. Click the Circular button on the Layout toolbar.
The shapes in the domain diagram will be displayed in a circular pattern as shown below. Feel free to experiment with the other layouts like Forced Direct and Orthogonal.

Close the domain diagram for FittingType by click the close button on the tab.

We have now returned to the main diagram. Next we want to make some changes to the Water_Net geometric network. It may take some time to locate the geometric network in the diagram so let’s use the catalog window. Click the Categorized button in the Catalog window.
The categorized view is great for finding geodatabase objects if you are unsure of the exact name or its location. Expand the Geometric Network node, we can see that this xml workspace document only has one geometric network called Water_Net. Right click on the geometric network and select Scroll. This will move the horizontal and vertical scrollbars so that the geometric network is located in the center of the application.

Right click on the geometric network and select Open Geometric Network Diagram.

A new geometric network diagram will be added to AD. The geometric network is located near the top of the diagram and its parent feature dataset at the bottom. All feature classes that belong to the feature dataset are located in the middle of the diagram. Participating feature classes will have a blue link.
connecting them to the geometric network. In the screenshot below we can see that LateralDiam does not participate in the geometric network.

With the left mouse button drag a box over the blue links to select them.

After selecting the links change the ShowLabels property in the property window to True.
The link labels will display the network ancillary role which can be either Normal or Source/Sink. Click the Montgomery tab to return to the main diagram. Right click on the Water_Net geometric network and select **Open Edge Edge Connectivity Diagram**.

The edge edge connectivity diagram allows the visualization and modification of edge edge connectivity rules. The from and to edge feature classes are positioned at the top and bottom of the diagram respectively. Each blue link represents an edge edge connectivity rule. Locate the rule that connects the Distmains feature class to the Hydrant Laterals subtype. Select the link (or rule) with your mouse, in the properties window change the **ShowLabels** property to **True**.
The rule label shows a list of valid junctions for this edge edge connectivity rule. There must always be at least one junction for a rule and one of which must be the default.

Now let's add a new edge edge connectivity rule. Click **Tools > Link** mode from the main menu.

In the diagram, click the **Distmains** with the left mouse button and drag to **Service Laterals** subtype.
When you release the left mouse button over Service Lateral a new connectivity rule will be added. Before continuing restore the interactive mode back to normal by clicking **Tools > Normal Mode** from the main menu.

Select the new connectivity in the diagram. Change the **ShowLabels** properties to **True**.
At present the new rule does not have any junctions defined. Click the ellipse button next to the JunctionSubtypes property as shown below.

The ellipse button will launch a generic collection editor dialog.

Click the Add button to add a new junction to the collection. For the Dataset Id property, click the dropdown menu and select Fittings.
Set the Subtype Code to **Tap**.

Click **OK** to update the junction collection.
There are two more properties that need to be updated. Set the DefaultJunctionId to Fittings and the DefaultJunctionSubtype to Tap.

To print the contents of the currently selected tab click File > Print. By default, AD uses the default printer and page size. To change either of these click File > Print Setup.

In the screenshot below, shows the printer setup dialog for changing printer properties.
However, in some cases you may want to export a diagram to an image for inclusion in a report or email message. To export a diagram click File > Export.

The default output image type is JPEG. To choose an alternative image type click the Save as type dropdown menu.
Sometimes it may be necessary to view two or more diagrams simultaneously. To commence a docking operation start dragging the tab towards the center of the application.

To dock the tab in the lower half of the application drop the tab on the lower docking hint as shown below.
This wizard lets you import data and schema from an XML to geodatabase.

Importing data to: C:\TEMP\New Montgomery Schema.gdb

What do you want to import:
- Data
- Schema Only

Specify the XML source to import:
C:\TEMP\New Montgomery Schema.xml
### Import XML Workspace Document

<table>
<thead>
<tr>
<th>Type</th>
<th>Source Name</th>
<th>Target Name</th>
<th>Config. Keyword</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feature dataset</td>
<td>Landbase</td>
<td>Landbase</td>
<td></td>
</tr>
<tr>
<td>Relationship class</td>
<td>ParcelOwners</td>
<td>ParcelOwners</td>
<td></td>
</tr>
<tr>
<td>Topology</td>
<td>Landbase_Topology</td>
<td>Landbase_Topology</td>
<td></td>
</tr>
<tr>
<td>Feature class</td>
<td>Parcels</td>
<td>Parcels</td>
<td>DEFAULTS</td>
</tr>
<tr>
<td>Feature class</td>
<td>RoadNames</td>
<td>RoadNames</td>
<td></td>
</tr>
<tr>
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<td>Road_cl</td>
<td>Road_cl</td>
<td>DEFAULTS</td>
</tr>
<tr>
<td>Feature class</td>
<td>Blocks</td>
<td>Blocks</td>
<td></td>
</tr>
<tr>
<td>Feature class</td>
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<tr>
<td>Feature class</td>
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<td>Road_eop</td>
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</tr>
<tr>
<td>Feature dataset</td>
<td>Water</td>
<td>Water</td>
<td></td>
</tr>
<tr>
<td>Relationship class</td>
<td>Anno_27_71</td>
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<tr>
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<tr>
<td>Feature class</td>
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<td>DEFAULTS</td>
</tr>
<tr>
<td>Feature class</td>
<td>LateralDiam</td>
<td>LateralDiam</td>
<td></td>
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<tr>
<td>Relationship class</td>
<td>Anno 19 72</td>
<td>Anno 19 72</td>
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</tr>
</tbody>
</table>
Displays the properties of the selected item.
### Geometric Networks

<table>
<thead>
<tr>
<th>Name</th>
<th>Feature Class</th>
<th>Network Role</th>
<th>Ancillary Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distrib mains</td>
<td>Complex Edge</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>Fittings</td>
<td>Simple Junction</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>Hydrants</td>
<td>Simple Junction</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>Laterals</td>
<td>Simple Edge</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>Sysvalves</td>
<td>Simple Junction</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>Tanks</td>
<td>Simple Junction</td>
<td>Source/Sink</td>
<td></td>
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<td>Transmains</td>
<td>Complex Edge</td>
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<td></td>
</tr>
<tr>
<td>Water_Net_Junctions</td>
<td>Simple Junction</td>
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<td></td>
</tr>
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</table>

#### Edge Edge Connectivity Rules

<table>
<thead>
<tr>
<th>From Edge</th>
<th>To Edge</th>
<th>From Edge</th>
<th>To Edge</th>
<th>To Edge Subtype Via Junctions/ Subtype</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distrib mains</td>
<td>Distrib mains</td>
<td>Laterals</td>
<td>Service Laterals</td>
<td>Fittings: T (Default)</td>
</tr>
</tbody>
</table>

#### Edge Junction Connectivity Rules

<table>
<thead>
<tr>
<th>From Edge</th>
<th>To Edge</th>
<th>From Junction</th>
<th>To Junction</th>
<th>Min Max</th>
<th>Min Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distrib mains</td>
<td>Distrib mains</td>
<td>Fittings</td>
<td>saddle</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Distrib mains</td>
<td>Distrib mains</td>
<td>Fittings</td>
<td>Tap</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Distrib mains</td>
<td>Distrib mains</td>
<td>Fittings</td>
<td>Tee</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
ARCGIS DIAGRAMMER OPTIONS

In the ARCGIS Diagrammer options window, there are several color schemes for different elements of the diagram. These include:

- **Coded Value Domain Color**
- **Feature Class Color**
- **Feature Dataset Color**
- **Field Color**
- **Geometric Network Color**
- **Network Color**
- **Range Domain Color**
- **Raster Band Color**
- **Raster Catalog Color**
- **Raster Dataset Color**
- **Relationship Color**
- **Subtype Color**
- **Subtype Field Color**
- **Table Color**

Each of these color options has a corresponding color selection box. The options include colors such as Orchid, DarkKhaki, Peru, Firebrick, Gold, ForesGreen, LightBlue, DodgerBlue, AliceBlue, DeepPink, Silver, PaleGreen, DarkSalmon, and Khaki.
Circle Distance
Defines the minimal distance between the circles on the same circular layer (level)
### Back Color
Background color used in schema and data reports

- **Back Color:** White
- **Font Name:** Tahoma
- **Font Size Level 1:** 1
- **Font Size Level 2:** 2
- **Font Size Level 3:** 3
- **Font Size Level 4:** 4
- **Font Size Level 5:** 5
- **Foreground Color:** Black
- **Large Image Background Color:** White
- **Large Image Resolution:** 96
- **Large Image Size:** 500, 500
- **Large Image Type:** esriImageJPG
- **Show Large Image:** True

### Disabled Lined
Color used to display lines that are not editable

- **Disabled Lined:** Gray
- **Enable Undo and Redo:** True
- **Enabled Lines:** CornflowerBlue
- **Text Color:** Black

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Save Window Position
Saves the ArcDiagrammer window position on exit
FAQ

WHAT ARE THE LIMITATION?

WHAT IS NOT SUPPORTED BY ARCGIS DIAGRAMMER?

WHY CAN’T I EXPORT OR IMPORT XML WORKSPACE DOCUMENTS IN ARCCATALOG?
You need either an ArcEditor or ArcInfo license.

REFERENCES

Geodatabase XML
ESRI
November 9, 2006

XML Schema of the Geodatabase
ESRI
February, 2004

FEEDBACK

ENHANCEMENTS OR BUGS?
Please send your comments and/or bugs to us using the following link.
http://groups.google.com/group/arcgis-diagrammer
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