ArcGIS / ArcFM™
Shortcuts & Hints

ssp innovations

"We're proud to release our **ArcGIS / ArcFM𝓍 Shortcuts and Hints** ebook! It's full of great content meant to help any GIS user get more out of ArcGIS and ArcFM™, culled from submissions by users and GIS managers, internal and external, from our fantastic clients to people we have connected with at conferences and presentations. We asked for *their* shortcuts and hints that made them more successful at their job and we compiled all the results and created this ebook, for *you*. We want to thank everyone who sent in their best and had input on creating this ebook. We couldn't have done it without you."

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ArcGIS / ArcFM𝓍 Shortcuts and Hints

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Table of Contributors

Title: Publishing Web Services
Author: Savannaha Mentzer
Position: Supervisor, Geospatial Analysts
Company: Lincoln Electric Systems

Description:

This tip relates to an issue we ran into with our 10.2.1 upgrade. We were having trouble publishing web services from ArcMap at 10.2.1. We didn't realize you needed to specify your ArcGIS connections to online resources through the ArcGIS administrator. Once we added the ArcGIS Online for Organizations address within the portal connections and connected to it, we were able to publish services to ArcGIS Online as we did at 10.1. Without this set, only the service definition file would be created and the service would not be published to ArcGIS Online. We noticed that others have had the same issue and have posted our solution to GeoNet (geonet.esri.com) as well.

Directions:

A. Open the ArcGIS Administrator in All Programs/ArcGIS (Figure 1).

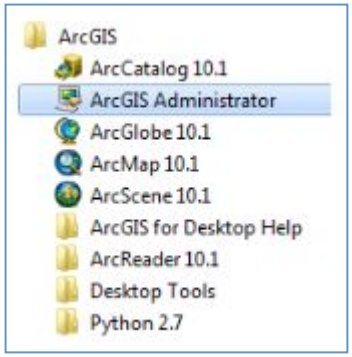

Figure 1

Publishing Web Services (Continued)

B. Click the Advanced Button in the bottom right (Figure 2).

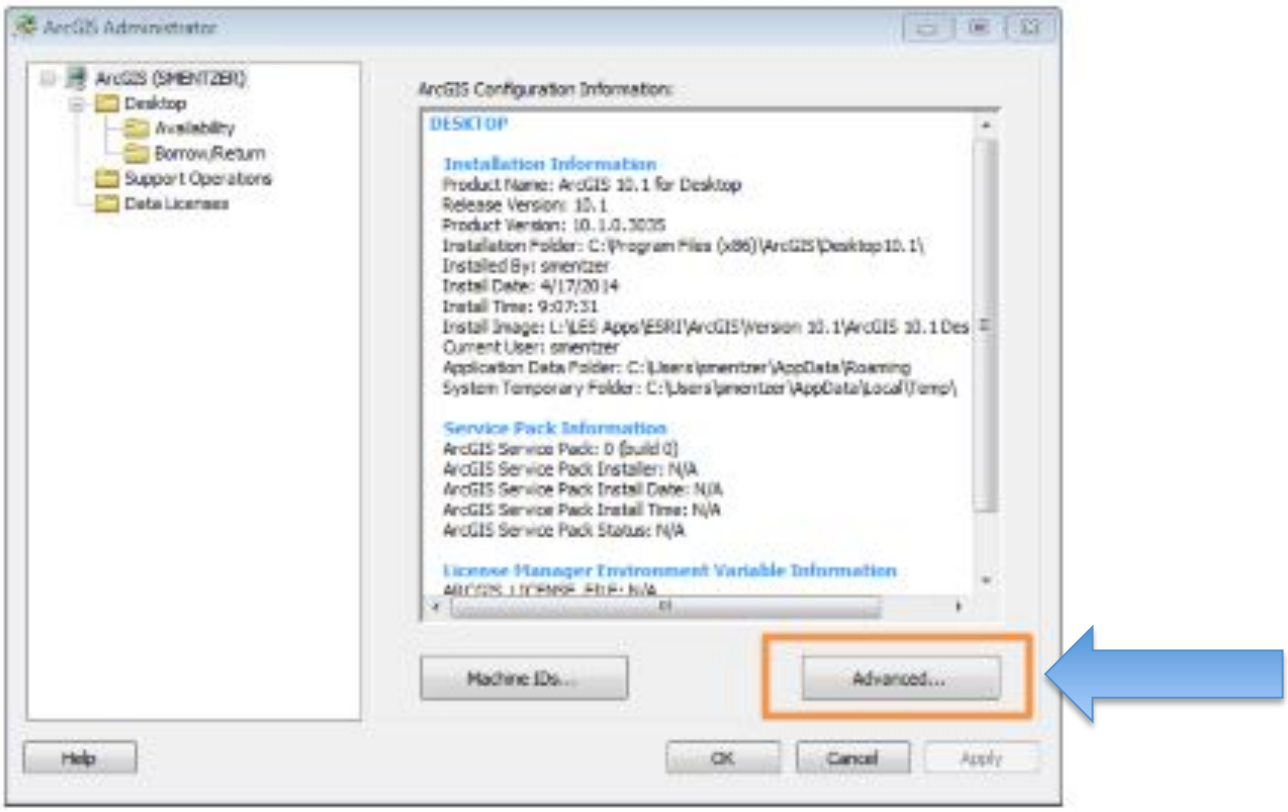

Figure 2

C. Click Manage Portal Connections (Figure 3).

D. Add your company portal address or ArcGIS Online for Organization's address (Figure 4).

E. Once it is added, click connect, and then close the dialog boxes by clicking Save and OK.

Publishing Web Services (Continued)

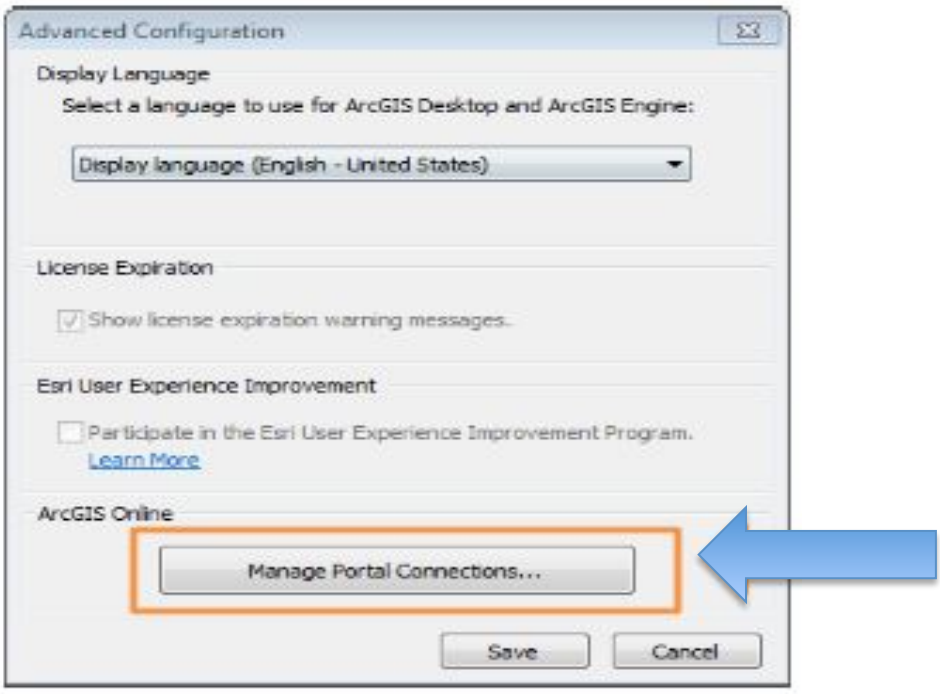

Figure 3

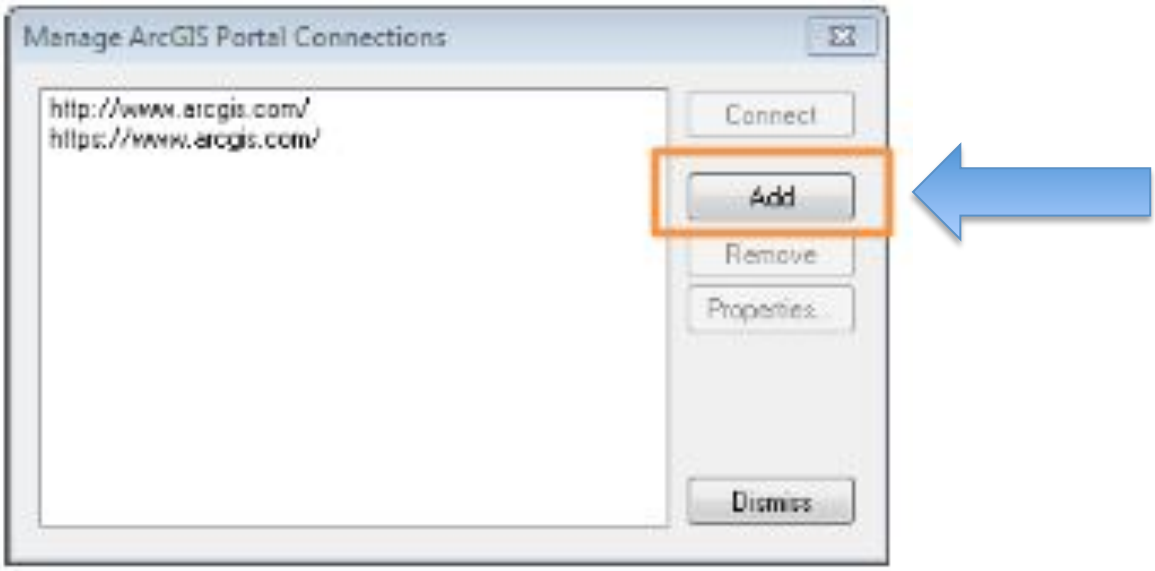

Figure 4

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Title: Simplistic Quantity Determination
Author: Savannaha Mentzer
Position: Supervisor, Geospatial Analysts
Company: Lincoln Electric Systems

Description:

Often I get asked questions like 'how many single phase transformers do we have' or 'how many 600 Amp blade switches are there in the system'. Instead of opening up the attribute table and performing a query, I simply double-click on the layer in the table of contents to open up the layer properties, click on the symbology tab, and then click the count field within the symbology pane. This will automatically count all features that meet each symbology type you have set.

Directions:

A. Right-click or double-click on desired layer in the Table of Contents to open up Layer Properties (Figure 1).

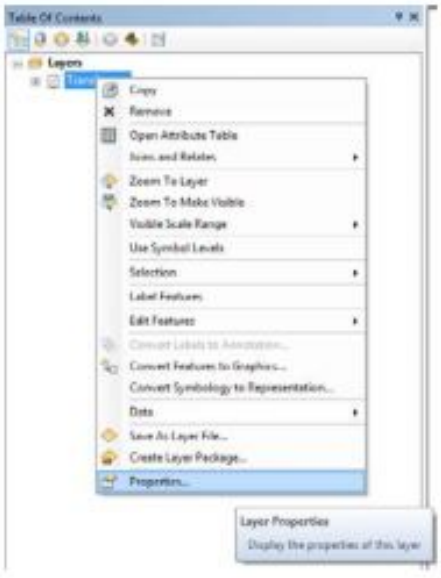


Figure 1

Simplistic Quantity Determination (Continued)

B. Display the Symbology Tab (Figure 2).

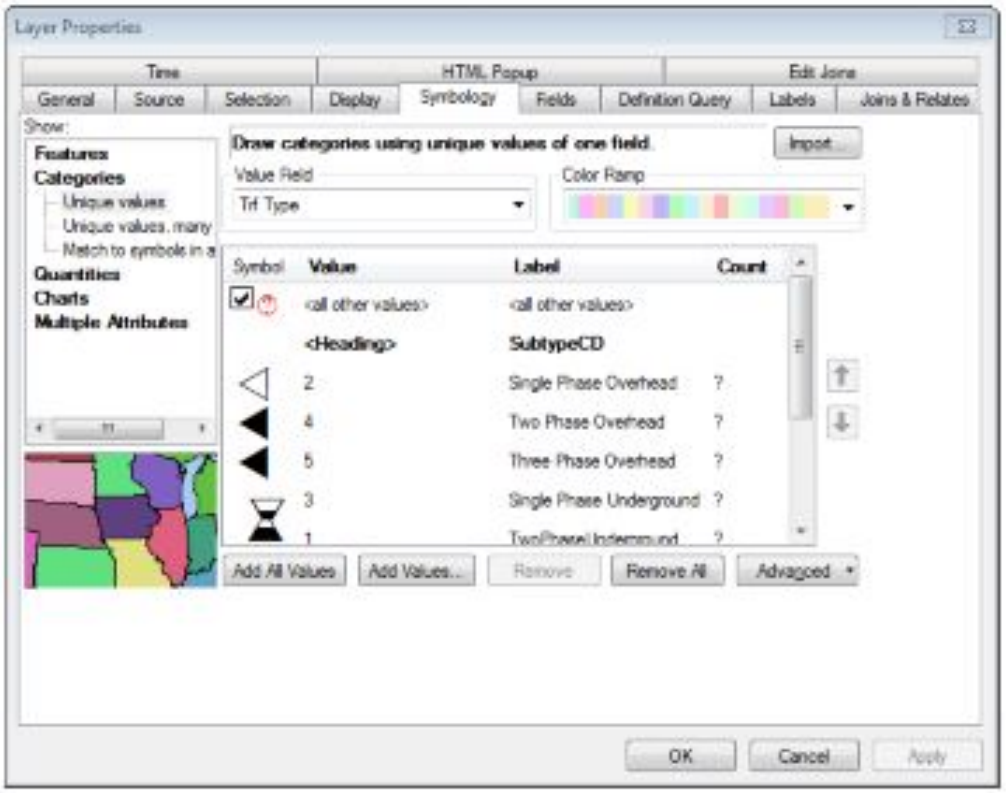


Figure 2

C. Click on the Count field name within the symbology pane. This will populate the counts for each symbol type (Figure 3).

Simplistic Quantity Determination (Continued)

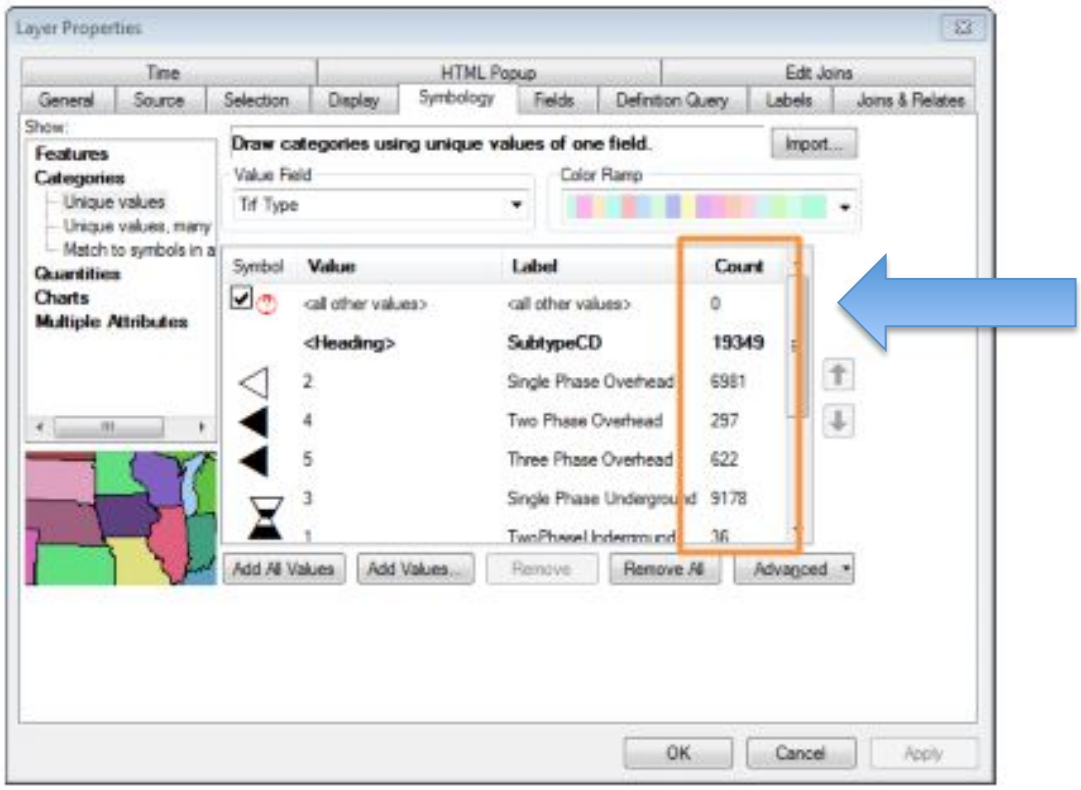


Figure 3

Share this ebook!

Title: Leverage Spatial Selection for New Location
Author: Philip Davenport
Position: GIS QA/QC Supervisor
Company: Middle Tennessee Electric Membership Corporation

Description:

The below instructions discuss the moving of a reference point for selected features so that they can be moved and snapped to a new location.

Directions:

A. Select features and the reference point will be somewhere in the middle of the selected features shown as an 'x' (Figure 1).

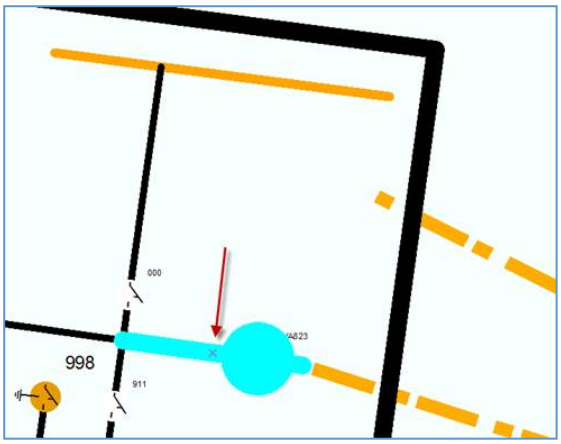


Figure 1

B. Hold down the control key and hover the cursor over the reference point and the cursor will change. You can then drag the point to another location and it will snap based on your current snapping settings (Figure 2).

Leverage Spatial Selection for New Location (Continued)

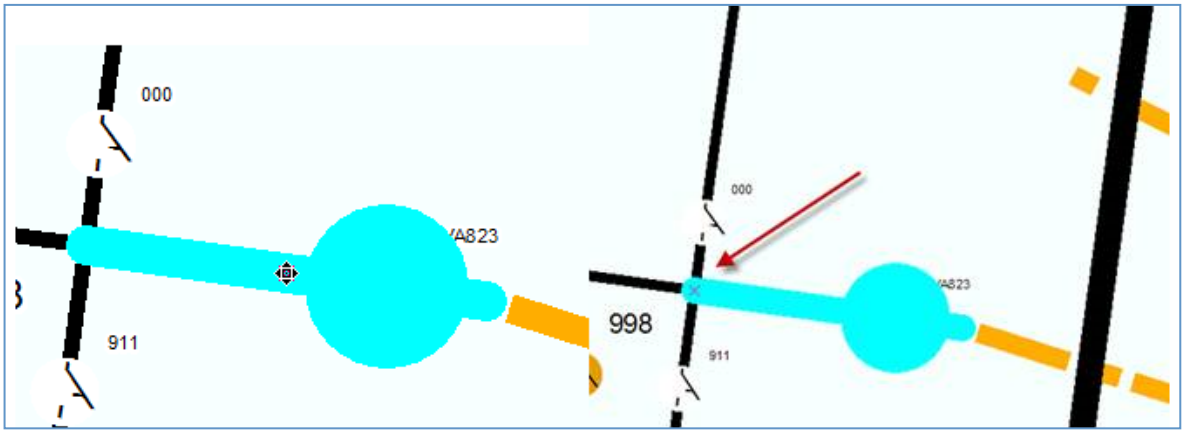


Figure 2

C. With the point moved to the end of this busbar, I can now move the selected set and snap it to the new location (Figure 3).

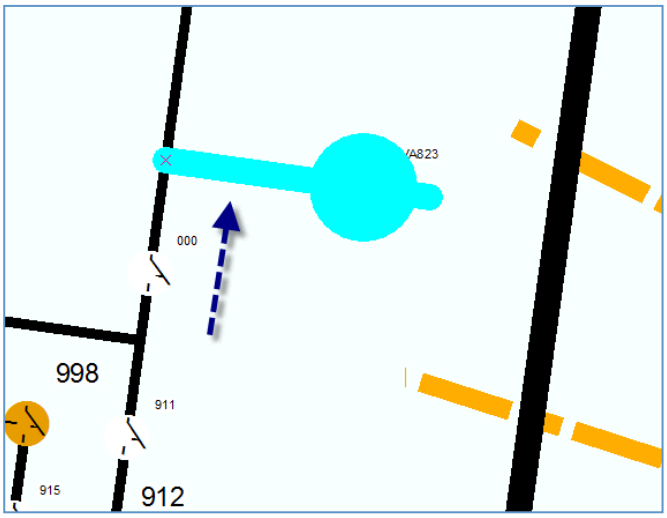


Figure 3

Share this ebook!

Title: Moving Location and Settings Symbol Rotation
Author: Philip Davenport
Position: GIS QA/QC Supervisor
Company: Middle Tennessee Electric Membership Corporation

Description:

The below instructions discuss the moving of the location of a feature and setting the symbol rotation.

Directions:

Select the feature and click the pencil in the shape field of the feature in the attribute editor. This will allow you to click the new location of the feature then click a second point to set the rotation angle. This will display a red 'x' on the map. Clicking update on the attribute editor will set the new location.

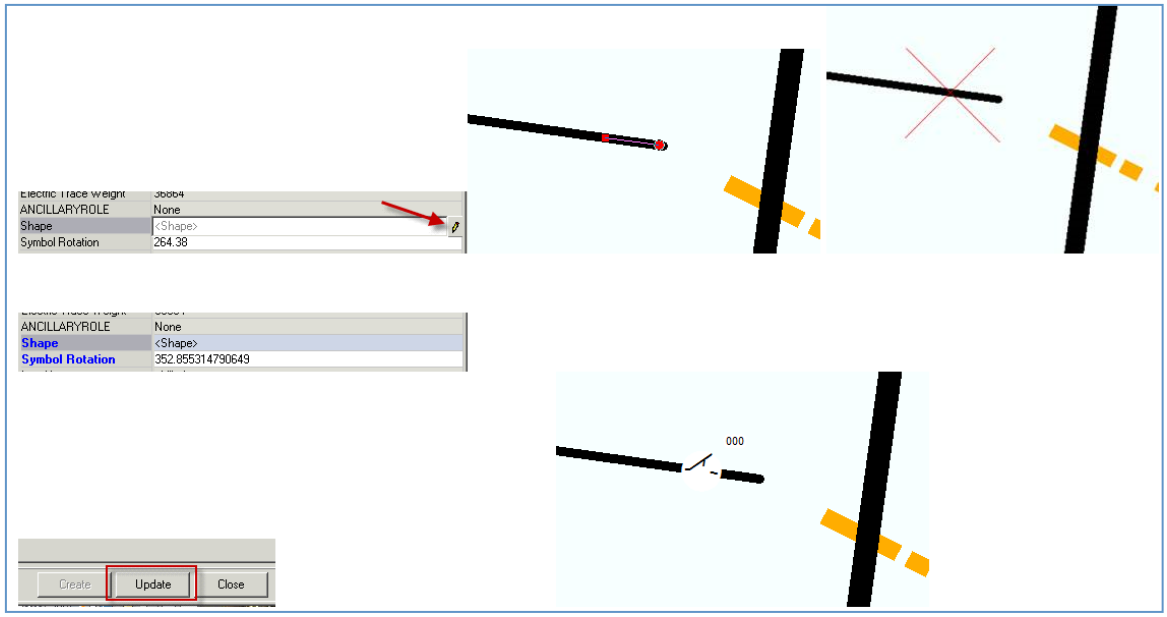


Figure 1

Share this ebook!

Title: Procedure for Thicker Symbol Line Width
Author: Rick Wery
Position: Computer Software Specialist IV
Company: RPQ Engineering, MLGW

Description:

How do you get a character-based symbol to render with a thicker line width?

Directions:

A. Select the desired target symbol (Figure 1). It is a character marker symbol which renders with a fine line width. For some map products, this might be too thin.

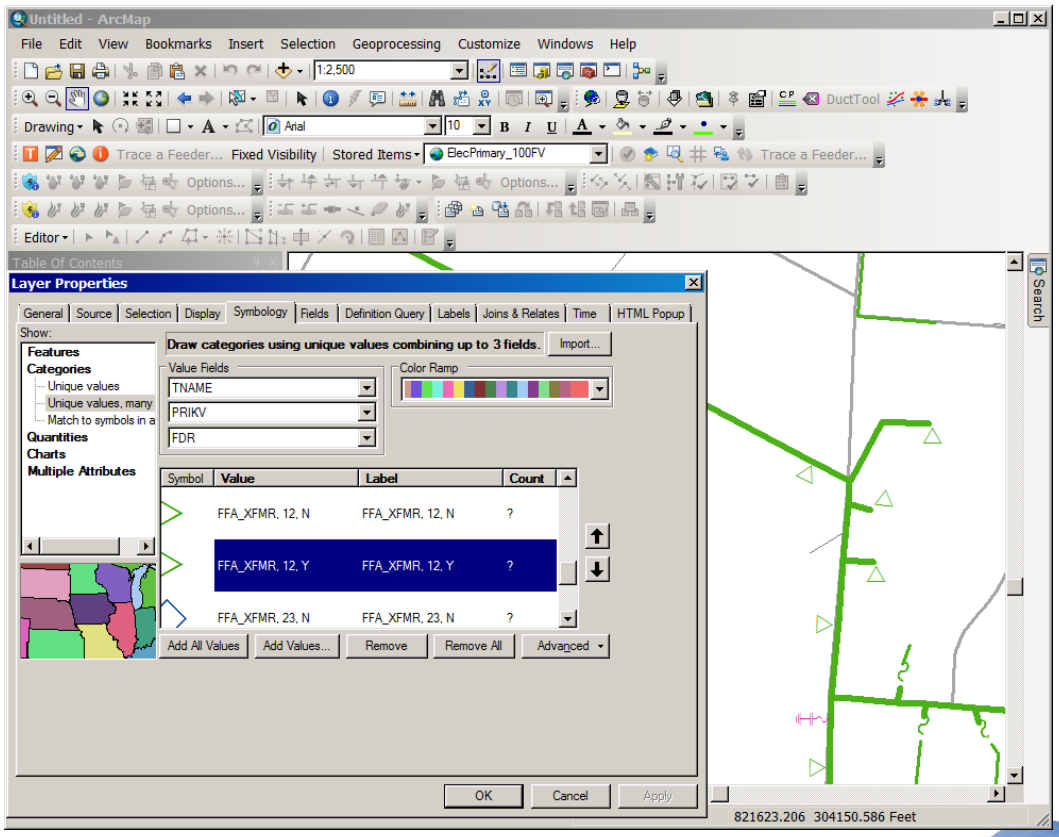


Figure 1

Procedure for Thicker Symbol Line Width (Continued)

B. Double-click the symbol definition line to get its properties page (Figure 2).

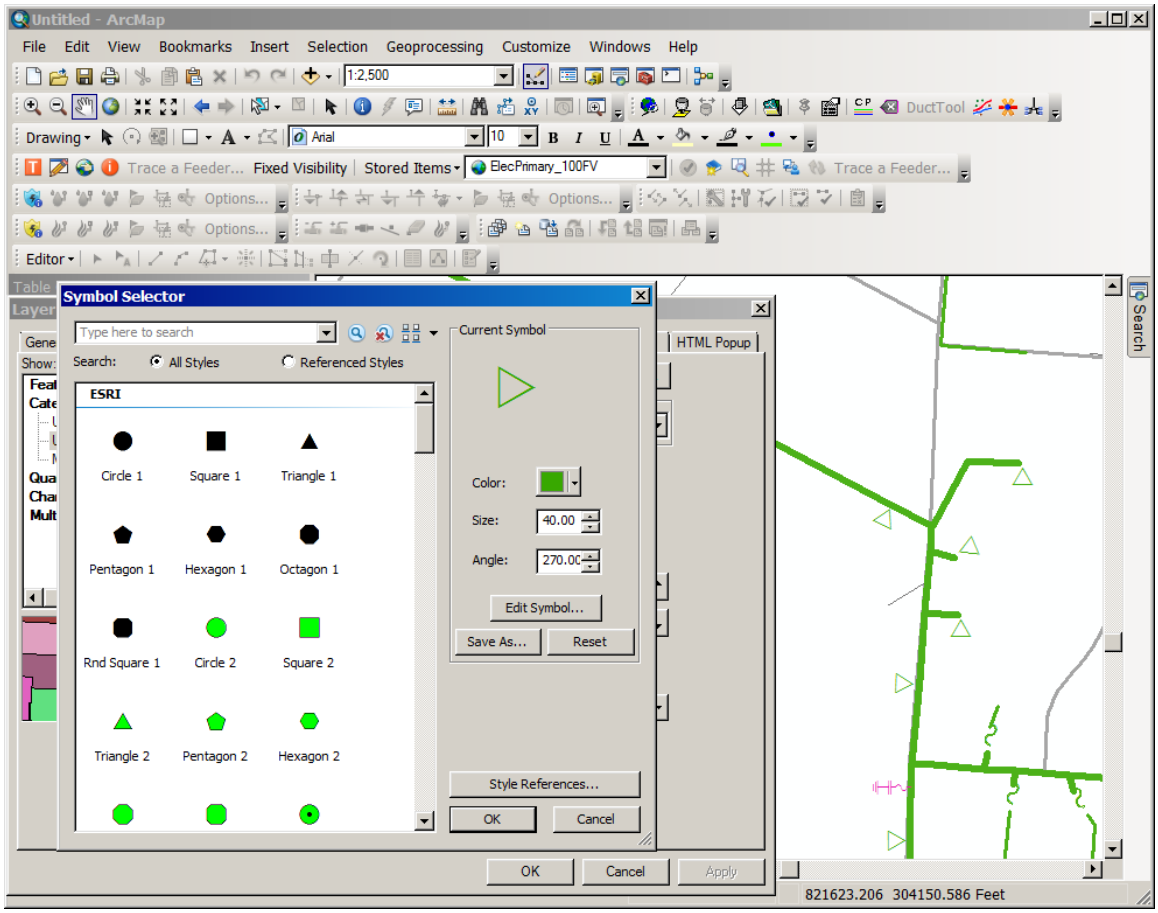


Figure 2

C. Click the Edit Symbol button to see the extended properties (Figure 3).

Procedure for Thicker Symbol Line Width (Continued)

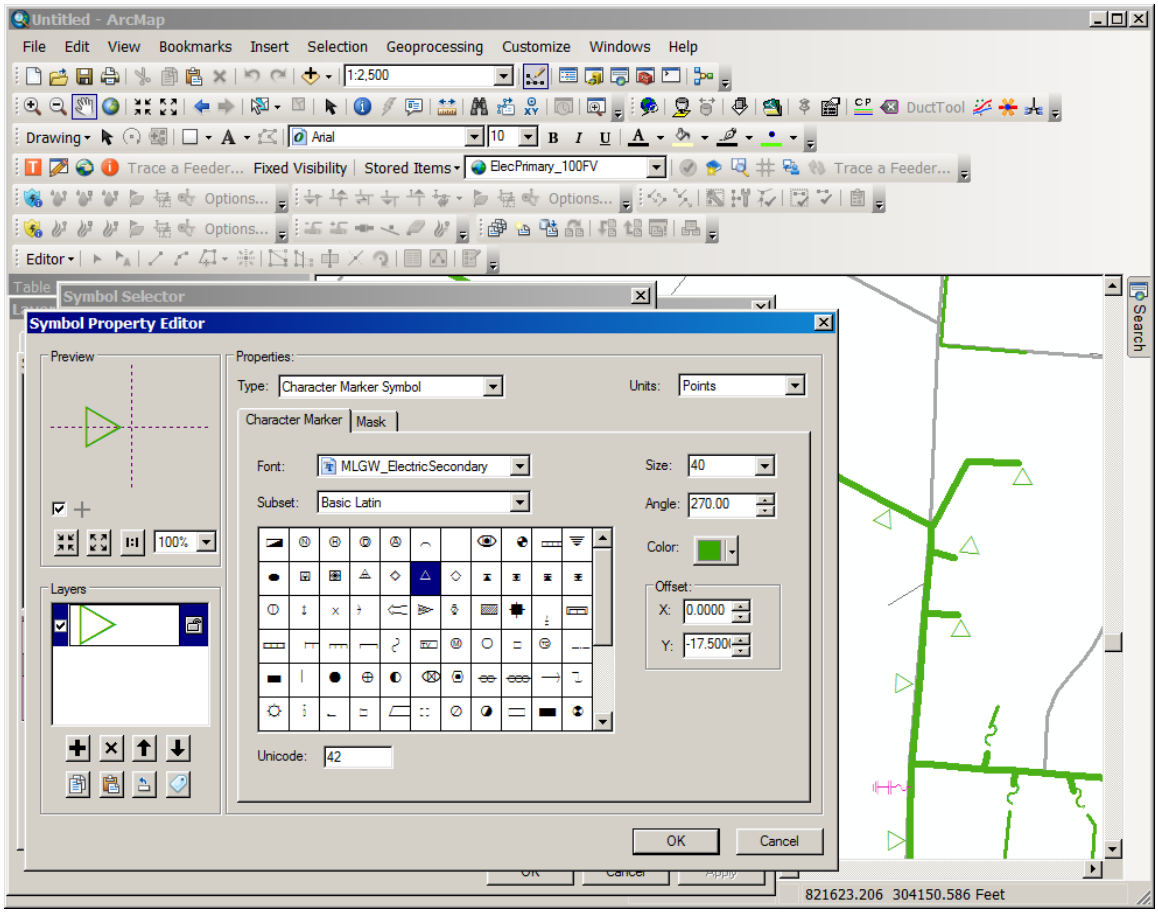


Figure 3

D. You see that this is a Character Marker Symbol. To get the line width thicker we'll trick it with a Mask. To do this, click on the Mask tab and select Halo (Figure 4). The software will give the illustrated result by default.

Procedure for Thicker Symbol Line Width (Continued)

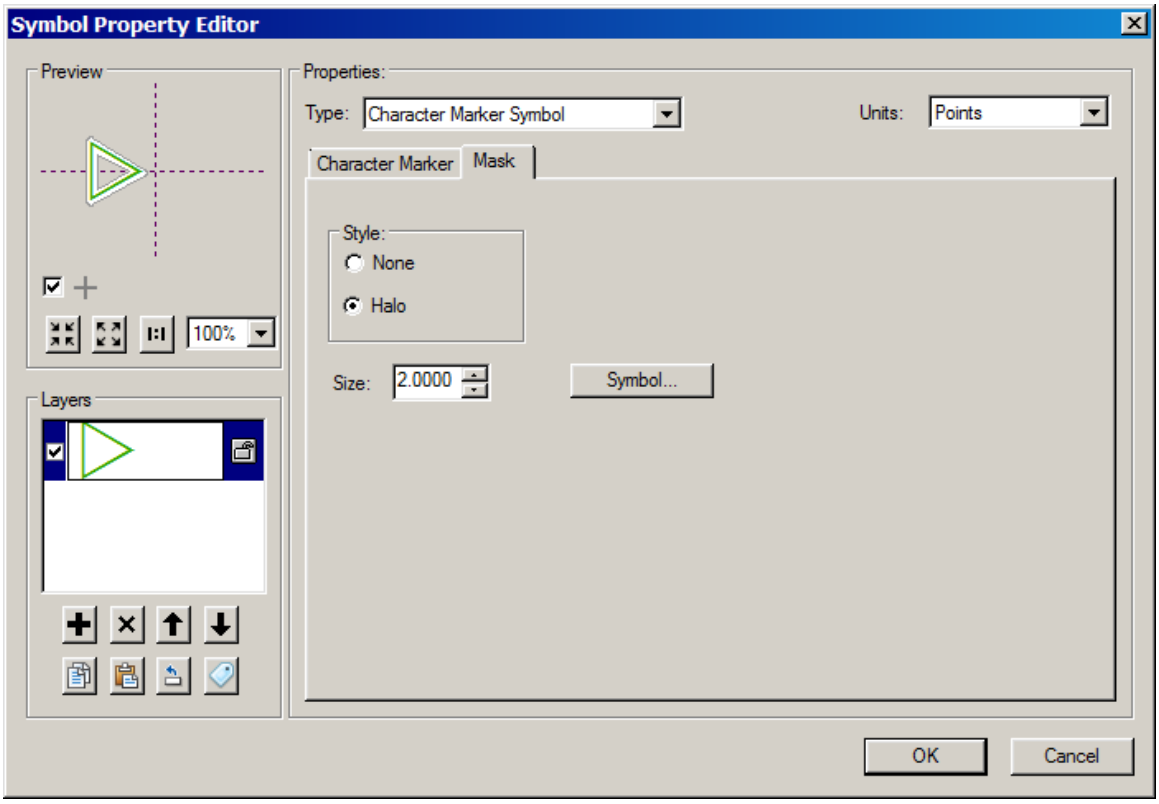


Figure 4

E. This is not quite what we are going for, yet. Set the Size to something arbitrarily very small (like 0.0100). Then click the Symbol button to edit the mask symbol properties (Figure 5).

Procedure for Thicker Symbol Line Width (Continued)

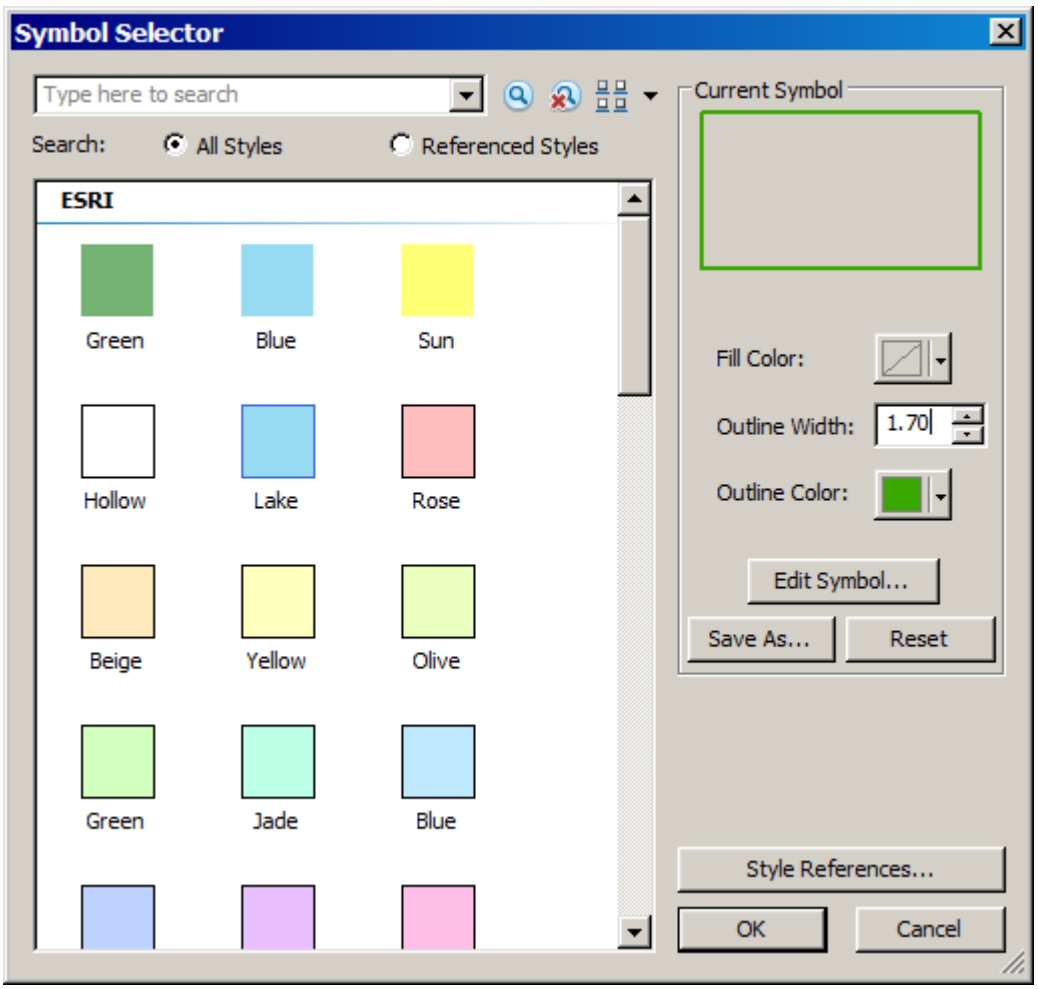


Figure 5

F. Set the Fill color to None and the outline width to an acceptable thickness (1.7). Set the Outline Color to match the symbol color you have chosen. Click OK to keep these settings.

G. This results in a cleaner line than just setting the halo color and size for some reason. Click OK on this dialog (Figure 6) and the next, so we can Apply the changes in the map display.

Procedure for Thicker Symbol Line Width (Continued)

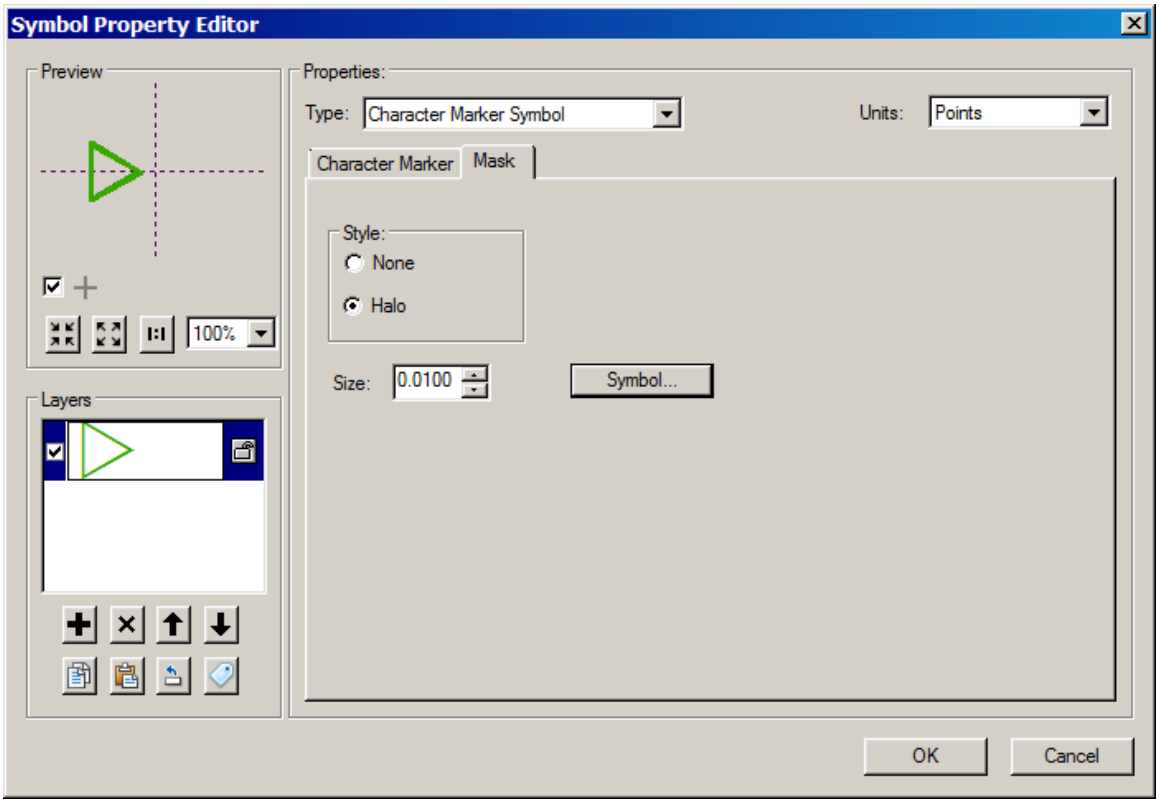


Figure 6

H. Click Apply, then you will see the thicker line width in your map display (Figure 7).

Procedure for Thicker Symbol Line Width (Continued)

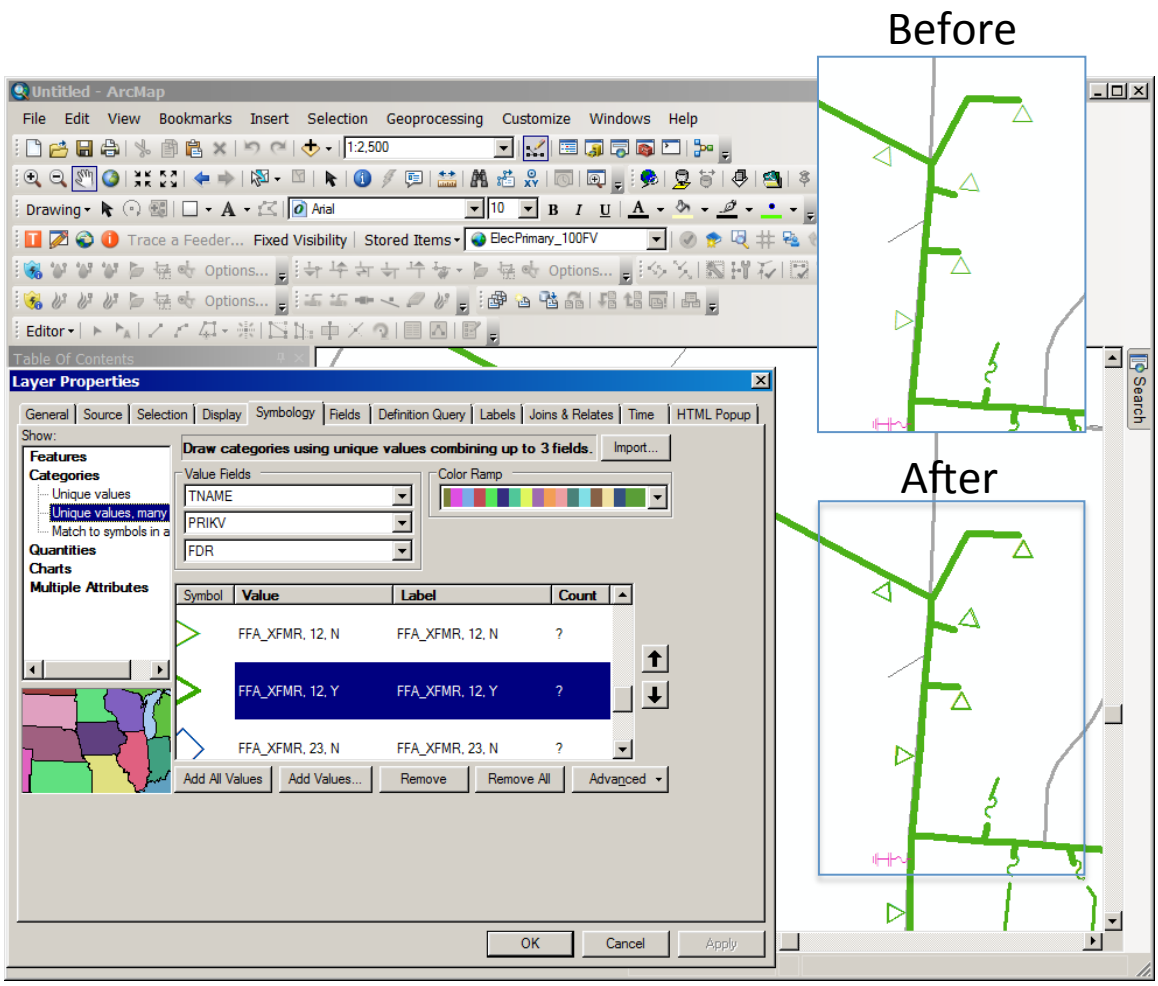


Figure 7

This turned out to be a good solution for the map display we needed. I hope it helps you out.

Share this ebook!

Title: Speed Up Load Times of Stored Displays

Author: William Craft, GISP
Position: Lead, GIS System Administration
Company: CenterPoint Energy

Description:

Sometimes Stored Displays can take quite a while to load in ArcMap, mostly due to a high number of layers and tables within the Table of Contents. The connection properties of each layer and table are automatically checked for verification before the stored display will fully load. In cases where a stored display may have around 100 layers, the wait time can be costly (and frustrating).

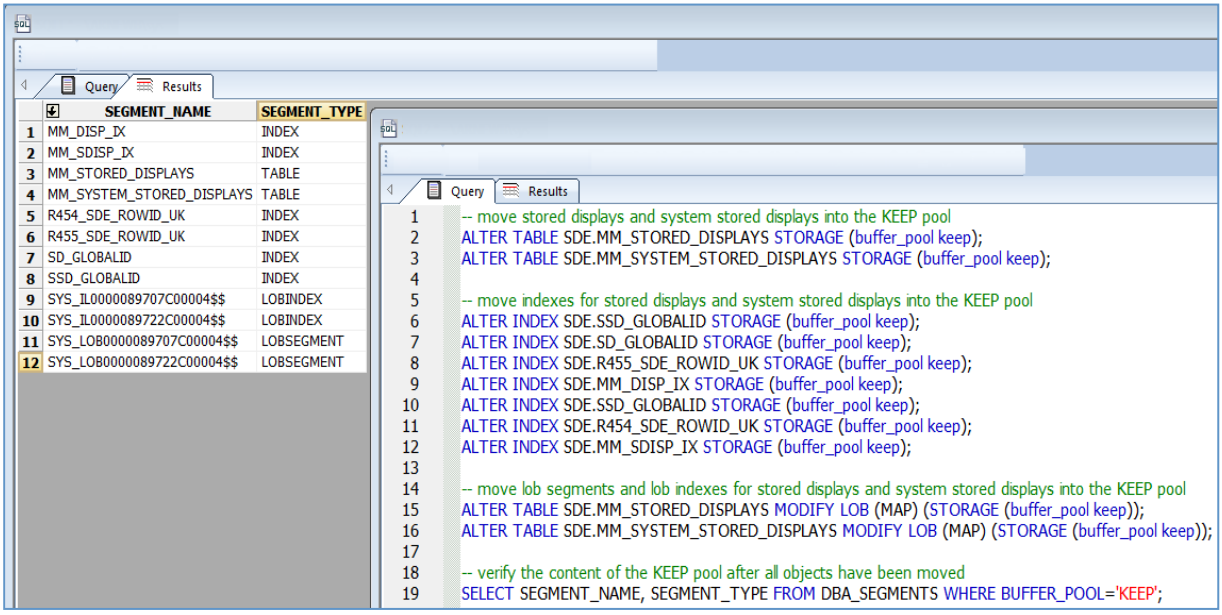
The connection properties for every layer and table are stored in BLOB format within the Geodatabase. As such, the database needs to read in the information within the BLOB multiple times. In many cases, these reads may be performed from disk which makes the overall process even slower.

When the database can read data from memory rather than an array, the wait time is reduced because there is no disk I/O involved. One solution for minimizing the wait time is to pin the stored displays content into memory. Oracle allows you to force a number of database objects to persist in memory without getting flushed out by other data moving in and out of the buffer. This can be accomplished by pinning those objects to the KEEP buffer pool (cache). Depending on the size of your stored displays as well as the amount of memory allocated to your database server, pinning the right objects into the KEEP buffer pool will reduce the wait time when loading stored displays.

Speed Up Load Times of Stored Displays (Continued)

Directions:

Figure 1 below provides the steps required to pin the stored displays to memory, assuming you have already configured the KEEP buffer pool size appropriately:



	SEGMENT_NAME	SEGMENT_TYPE
1	MM_DISP_IX	INDEX
2	MM_SDISP_IX	INDEX
3	MM_STORED_DISPLAYS	TABLE
4	MM_SYSTEM_STORED_DISPLAYS	TABLE
5	R454_SDE_ROWID_UK	INDEX
6	R455_SDE_ROWID_UK	INDEX
7	SD_GLOBALID	INDEX
8	SSD_GLOBALID	INDEX
9	SYS_IL0000089707C00004$$	LOBINDEX
10	SYS_IL0000089722C00004$$	LOBINDEX
11	SYS_LOB0000089707C00004$$	LOBSEGMENT
12	SYS_LOB0000089722C00004$$	LOBSEGMENT

```
1  -- move stored displays and system stored displays into the KEEP pool
2  ALTER TABLE SDE.MM_STORED_DISPLAYS STORAGE (buffer_pool keep);
3  ALTER TABLE SDE.MM_SYSTEM_STORED_DISPLAYS STORAGE (buffer_pool keep);
4
5  -- move indexes for stored displays and system stored displays into the KEEP pool
6  ALTER INDEX SDE.SSD_GLOBALID STORAGE (buffer_pool keep);
7  ALTER INDEX SDE.SD_GLOBALID STORAGE (buffer_pool keep);
8  ALTER INDEX SDE.R455_SDE_ROWID_UK STORAGE (buffer_pool keep);
9  ALTER INDEX SDE.MM_DISP_IX STORAGE (buffer_pool keep);
10 ALTER INDEX SDE.SSD_GLOBALID STORAGE (buffer_pool keep);
11 ALTER INDEX SDE.R454_SDE_ROWID_UK STORAGE (buffer_pool keep);
12 ALTER INDEX SDE.MM_SDISP_IX STORAGE (buffer_pool keep);
13
14 -- move lob segments and lob indexes for stored displays and system stored displays into the KEEP pool
15 ALTER TABLE SDE.MM_STORED_DISPLAYS MODIFY LOB (MAP) (STORAGE (buffer_pool keep));
16 ALTER TABLE SDE.MM_SYSTEM_STORED_DISPLAYS MODIFY LOB (MAP) (STORAGE (buffer_pool keep));
17
18 -- verify the content of the KEEP pool after all objects have been moved
19 SELECT SEGMENT_NAME, SEGMENT_TYPE FROM DBA_SEGMENTS WHERE BUFFER_POOL='KEEP';
```

Figure 1

When comparing the Stored Display load time results between two geodatabases where one had the applicable objects pinned to memory and one did not, a 20% - 25% performance improvement was seen in terms of wait time reduction.

Share this ebook!

Title: Exporting a Fiber Manager𝓍 Report
Author: Brian A. Higgins, GISP
Position: Senior Consultant
Company: SSP Innovations

Description:

There are multiple, outstanding reports that are produced by Schneider Electric's Fiber Manager™. Several of my clients have asked if there is a way to use these reports in Microsoft Excel. Even though there is no "Magic" button to export directly to Excel, we can leverage the fact that the reports utilize Internet Explorer to render.

To export, run the desired report tool (i.e., Splice Report) from the Fiber Manager™ Toolbar. When the report come up in Internet Explorer (Figure 1),

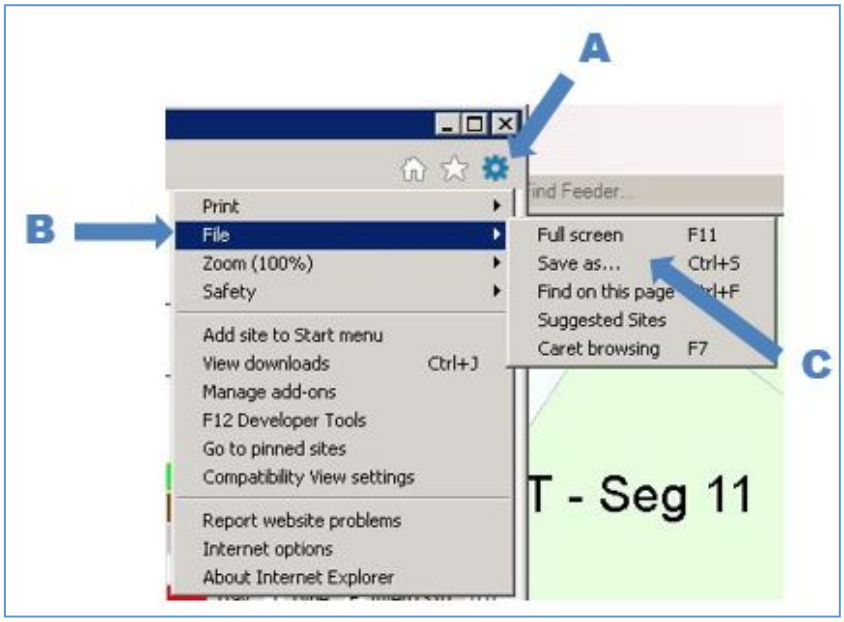


Figure 1

Exporting a Fiber Manager𝓍 Report (Continued)

Directions:

A.Click the Tools Button.

B.Select File

C.Choose the Save as option

D.When the user clicks "Save As", the Save Webpage Interface appears (Figure 2). Save the file in a HTML format in a known location.

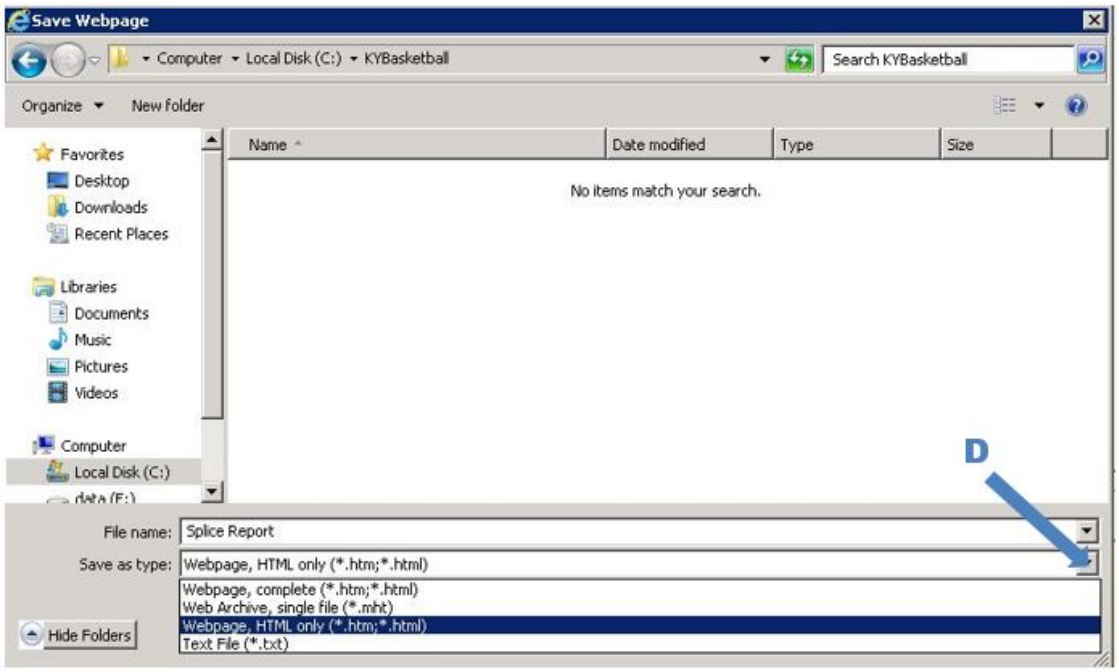


Figure 2

Exporting a Fiber Manager𝓍 Report (Continued)

E. Open up Excel (Figure 3), and open the exported file (*.htm). The user may have to change the file type for the file to be visible for selection.

F. Edit away!

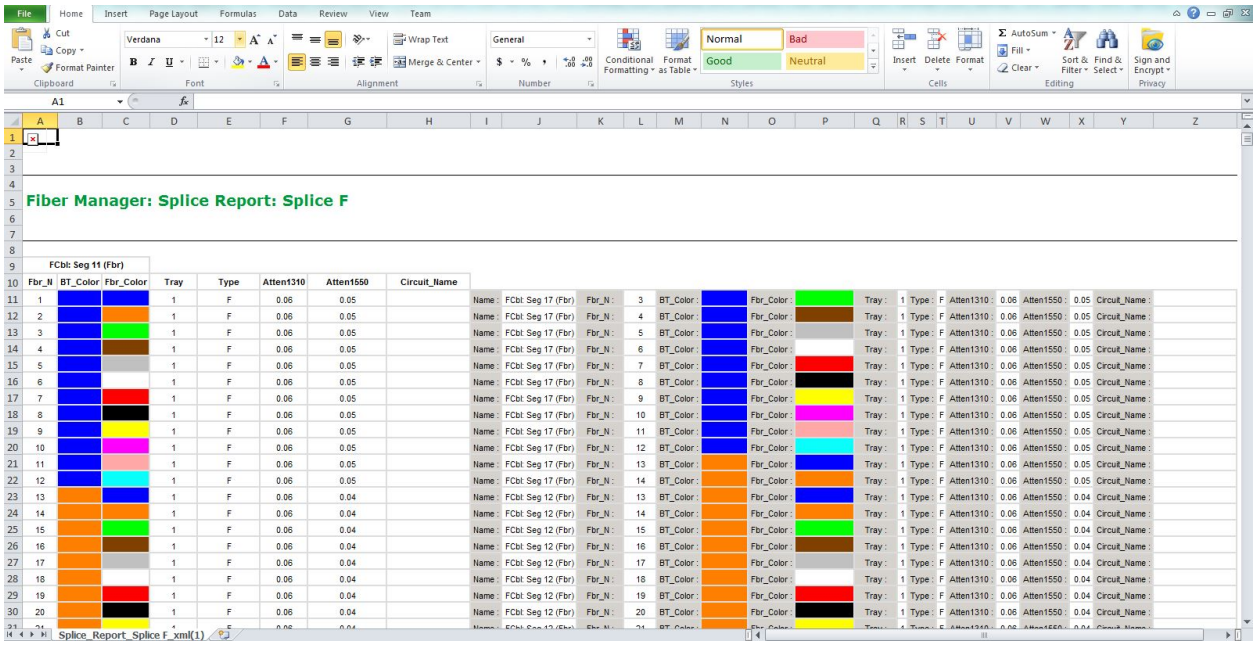


Figure 3

Share this ebook!

Title: GIS Art in PowerPoint

Author: Brian A. Higgins, GISP
Position: Senior Consultant
Company: SSP Innovations

Description:

Everyday Esri's ArcMap amazes me with its functionality. That being said, by its nature, ArcMap must obey spatial rules. There are times that rules need to be broken for presentation impact. An easy way to do this is in Microsoft PowerPoint. All one has to do is export their data view as an Enhanced Windows Metafile (*.emf) format.

Directions:

A.To do this, we first make a simple map as shown in Figure 1.

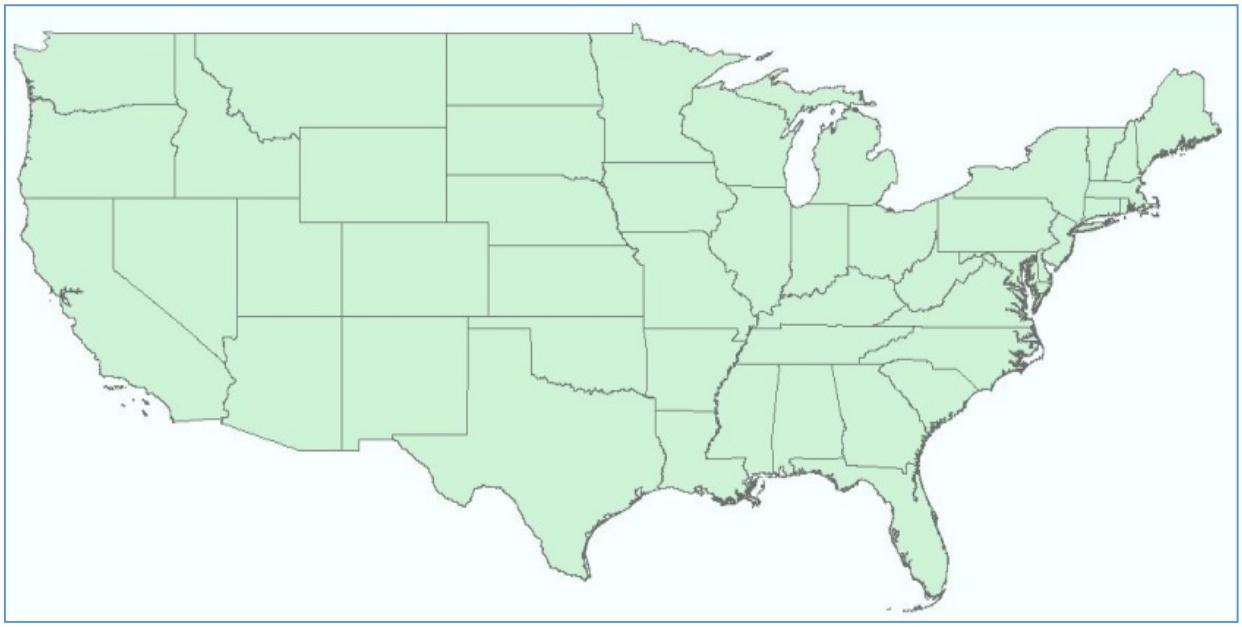


Figure 1

GIS Art in PowerPoint (Continued)

B. Export the map by choosing File, and then Export Map. The Export Map Interface appears (Figure 2).

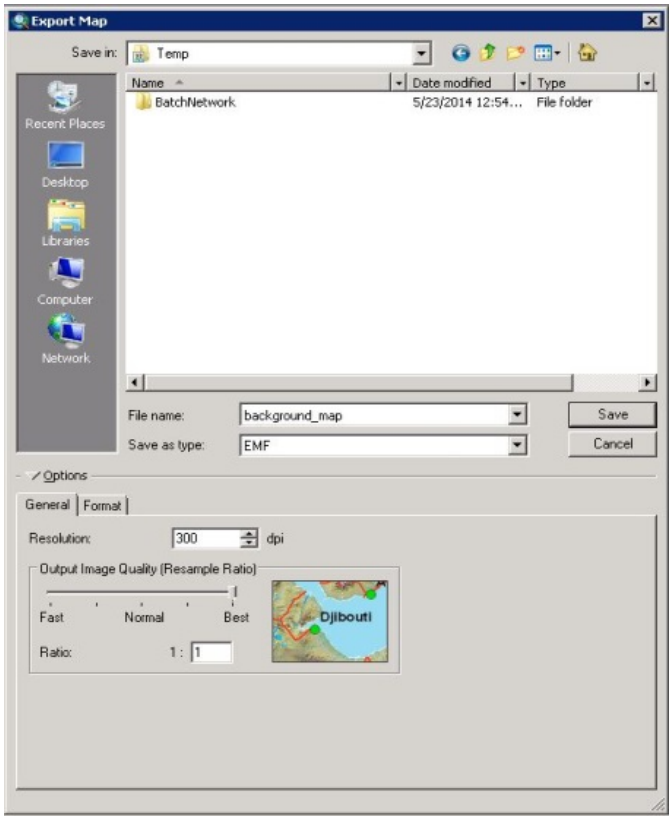


Figure 2

C. Export the map in an EMF Format. Open Microsoft PowerPoint, and add the EMF file as a picture (Figure 3).

GIS Art in PowerPoint (Continued)

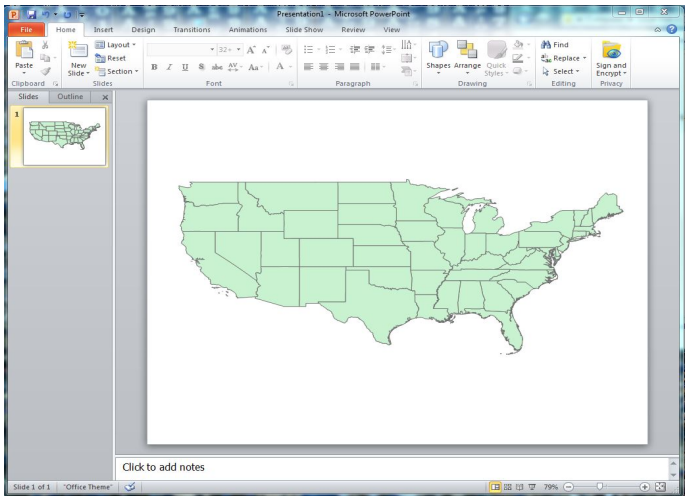


Figure 3

D. Select the inserted image, right-click, select Group from the menu, and then Ungroup. A message appears warning the user that the program is going to convert the image to an Office drawing object. Click the Yes button.

E. After doing this, the user can select any state as a separate object. In this example, I have selected a state randomly (Figure 4).

Figure 4

GIS Art in PowerPoint (Continued)

F. After random state selection we can easily grab a corner and exaggerate the size (Figure 5).

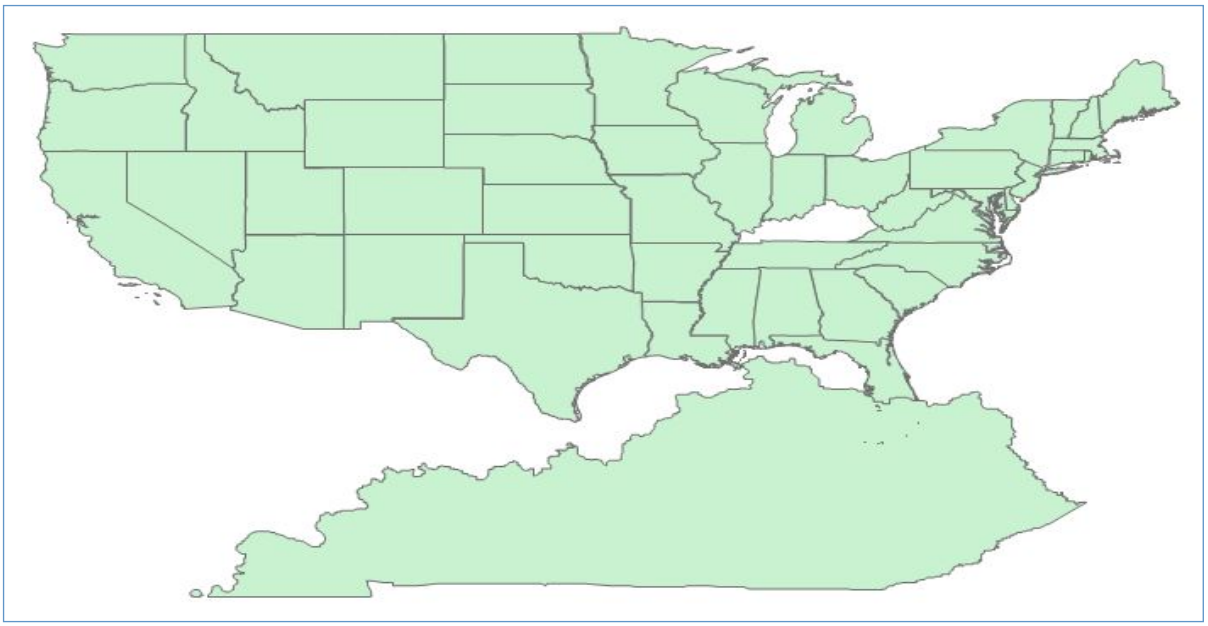


Figure 5

G. Those familiar with PowerPoint, the user can then add a random background image and conduct other graphics alterations (Figure 6). Because the state is now a separate object, it can also “fly in” with animation.

GIS Art in PowerPoint (Continued)

Figure 6

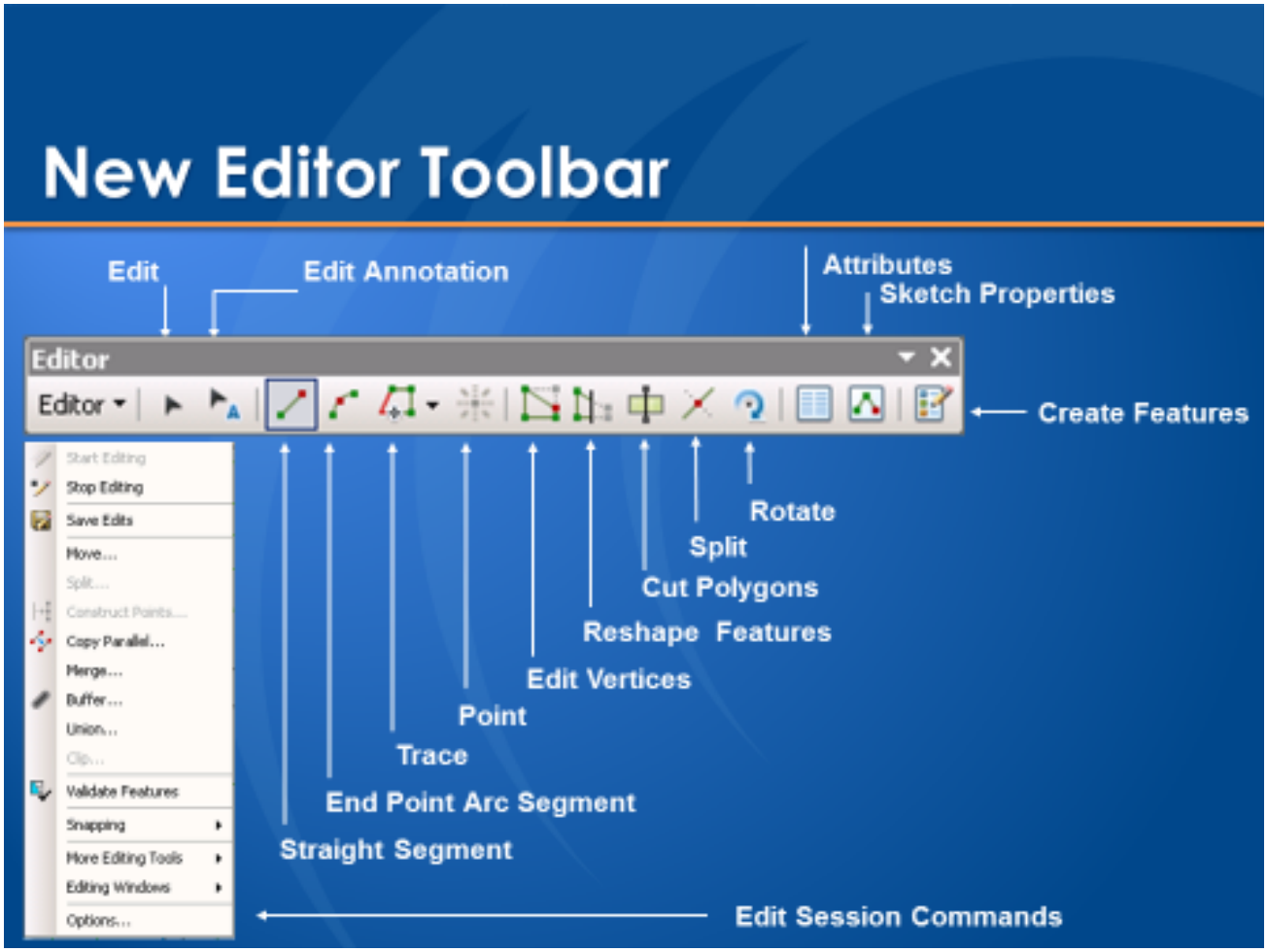
H. C…A…T…S. Cats! Cats! Cats!

Share this ebook!

Title: New vs. Classic Editor Toolbar
Author: Matthew Stuart
Position: Senior Consultant
Company: SSP Innovations

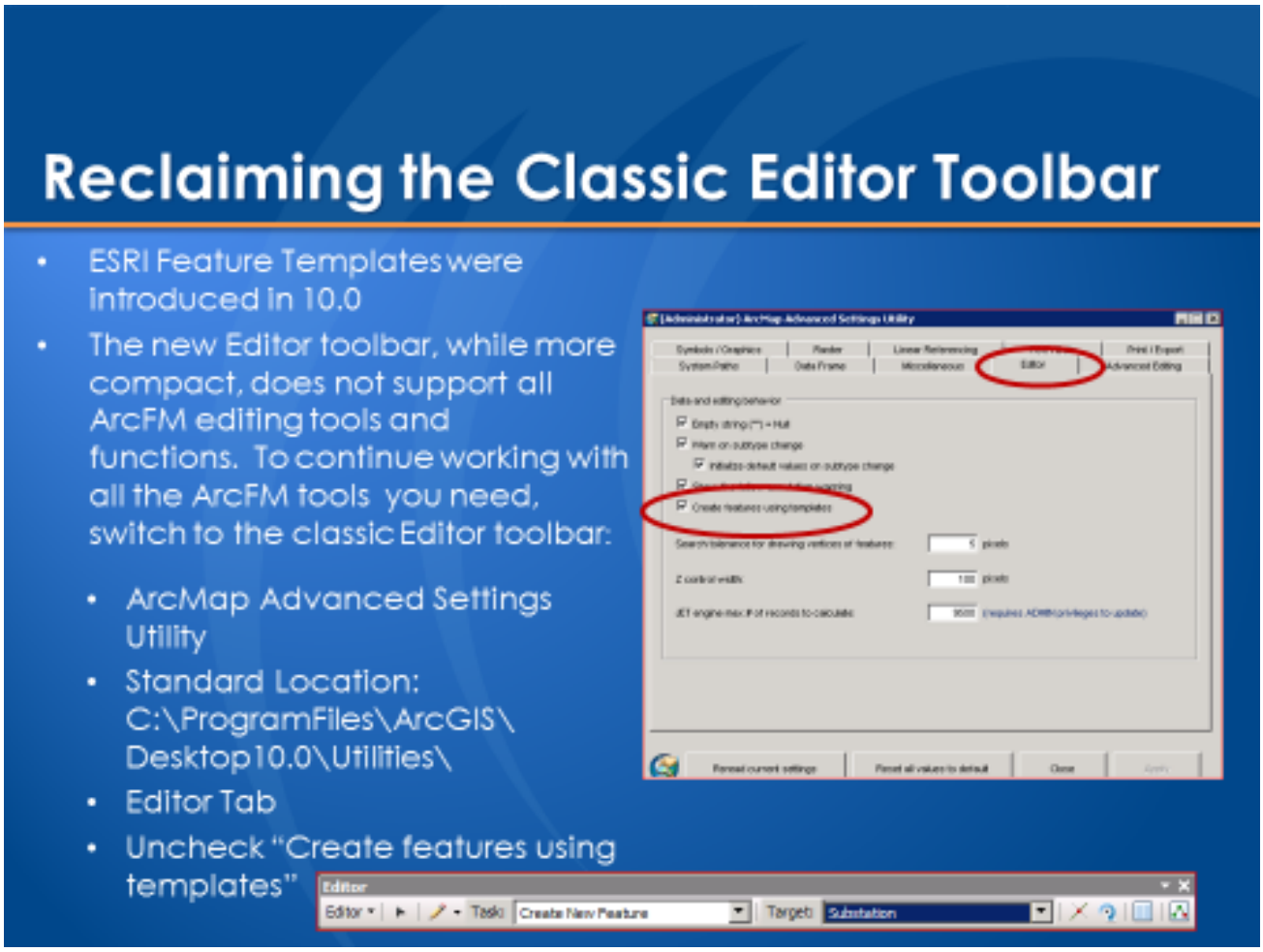
Description:

The two slides below summarize Esri's new Editor Toolbar and how to switch between it and the Classic one.



Slide 1

New vs. Classic Editor Toolbar (Continued)



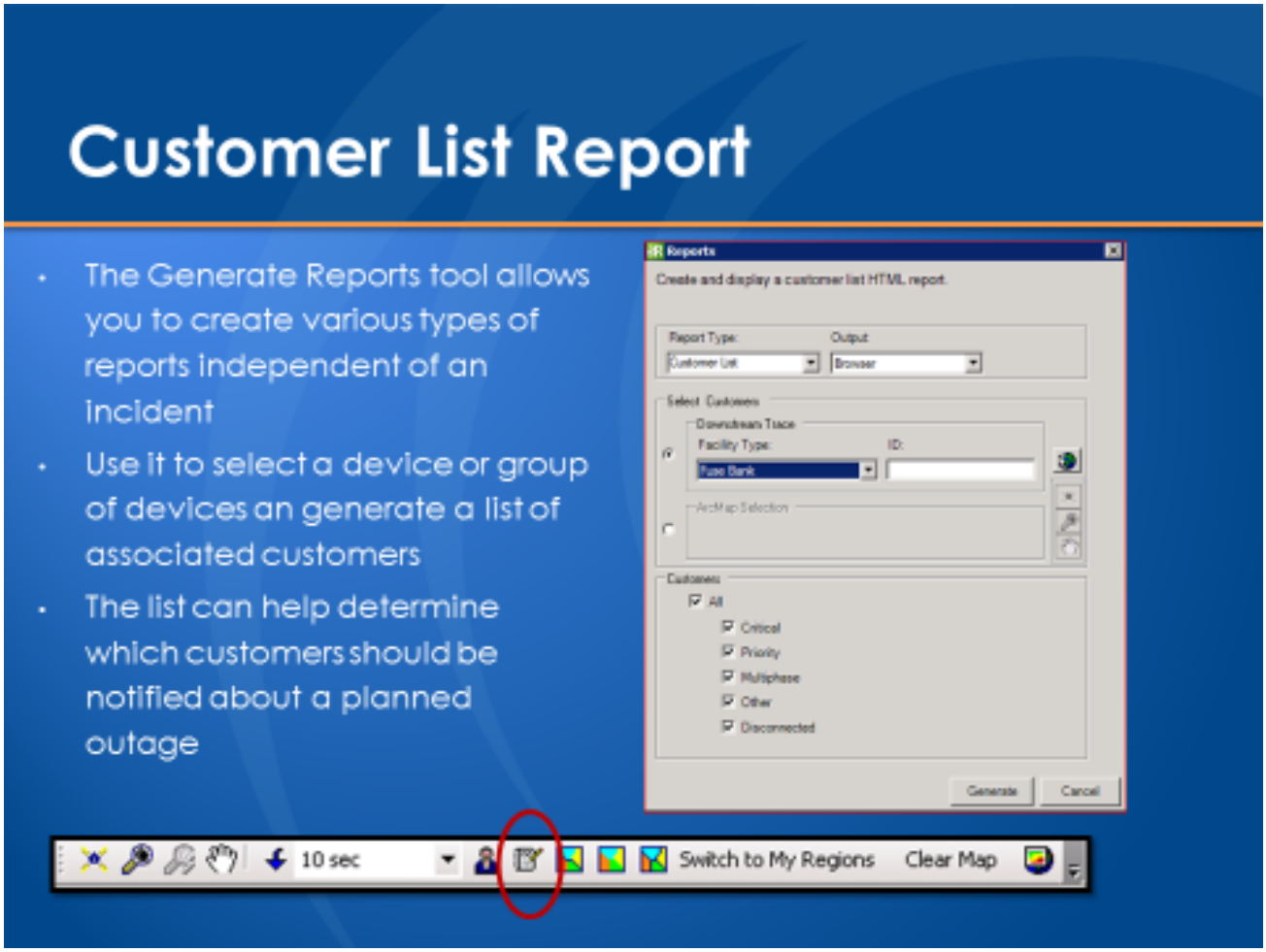
Slide 2

Share this ebook!

Title: Responder𝓧 Customer List Report
Author: Matthew Stuart
Position: Senior Consultant
Company: SSP Innovations

Description:

The slide below summarizes Responder's™ Customer List Report.



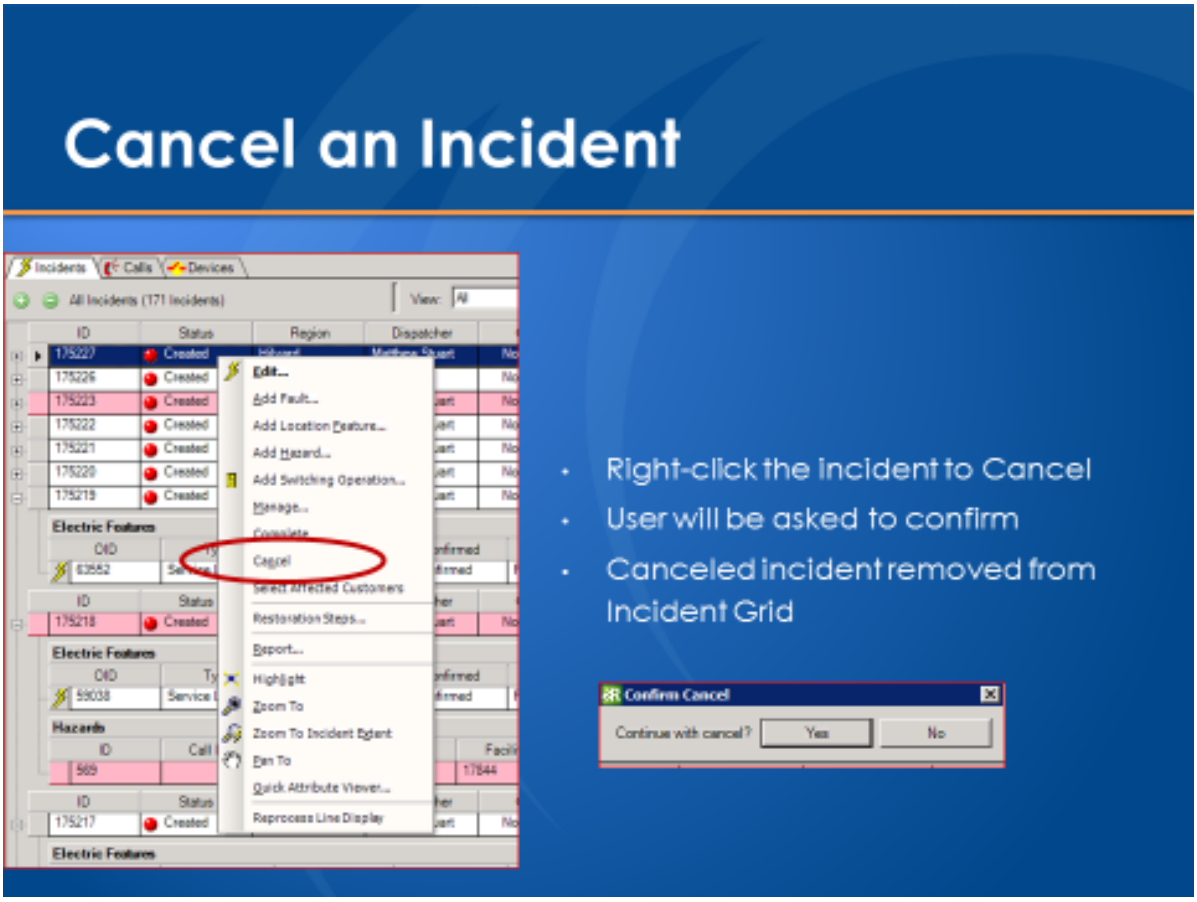
Slide 1

Share this ebook!

Title: Responder𝓧 Incident Cancellation
Author: Matthew Stuart
Position: Senior Consultant
Company: SSP Innovations

Description:

Canceling an incident is pretty straight-forward (as shown in the slide below). Should a canceled incident be moved to Archive Explorer? Or just dropped altogether? Most people don't want to see canceled incidents, but there is an option in Responder™ Archive to show them.



Slide 1

Share this ebook!

Title: Complex Symbology Alteration
Author: John Coleman
Position: Software Consultant
Company: SSP Innovations

Description:

Want to duplicate or change the value field of complex symbology without having to recreate it all?

Directions:

A.Go to Layer Properties -> Symbology tab, then select Import (Figure 1).

Figure 1

B.Here you can import symbology from another layer (or a shapefile copy of the same layer). This will also give you the option to change the value field that gets applied to all symbols (Figure 2). This is especially useful when migrating to Feeder Manager 2.0 fields.

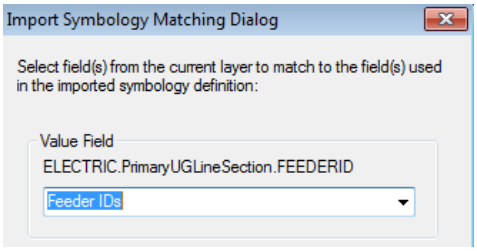


Figure 2

Share this ebook!

Title: Scroll Wheel Modification
Author: John Coleman
Position: Software Consultant
Company: SSP Innovations

Description:

This procedure will modify the functionality of the the scroll wheel to work as it does in Google Maps.

Directions:

A. Go to Customize -> ArcMap Options... -> General tab.
B. Near the bottom of the dialog, there is an option to Roll Forward/ Drag Up to Zoom in or out of the map (Figure 1).

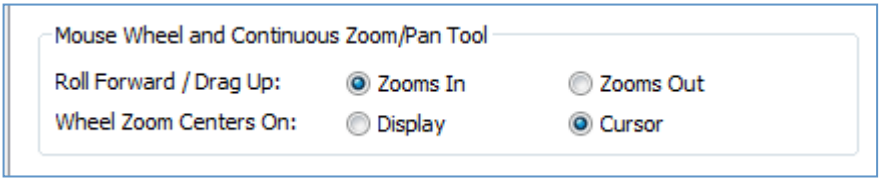


Figure 1

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Title: Selection with Box
Author: John Coleman
Position: Software Consultant
Company: SSP Innovations

Description and Directions:

Having trouble selecting a point or line feature? Instead of clicking to select, draw a selection box around the point(s) and/or line(s), grabbing any features within that box. Then, if necessary, hold the Shift key to unselect the unwanted points/lines, leaving just the desired selection remaining.

Title: Snapping Override
Author: Kyle Anderson
Position: Senior Consultant
Company: SSP Innovations

Description and Directions:

When editing in a congested part of the map and robust snapping settings has the cursor snapping to undesired features, hold down the space bar to temporarily turn off snapping.

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Title: ArcToolbox Trick
Author: Terry Iffland, PMP
Position: Project Specialist
Company: NiSource

Description and Directions:

In ArcCatalog, you can avoid the agony of navigating to a file, file geodatabase, features, etc. while using the tools there. Simply click on the desired entry in the catalog tree, and drag and drop it into the correct entry in the ArcCatalog tool you are using.

Title: Esri Disconnect Tool
Author: Philip Davenport
Position: GIS QA/QC Supervisor
Company: Middle Tennessee Electric Membership Corporation

Description and Directions:

In order to minimize updates to features on a circuit, we will use the Esri disconnect tool to disconnect an area from the network, perform our work, and then reconnect it. This eliminates many thousands of edits downstream. If the connect button is not run, the circuit will remain disconnected and will continue to have the FM1 info. When the disconnect tool is run it gives the disconnected span its own network junctions, so at both ends there will be coincident junctions. The Intersect tool from the toolbox locates these, and allows us to correct them.

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Title: "Hidden" Tools
Authors: Multiple (Specified Below)

This section describes lesser-known tools that may benefit the user.

Tool(s): Find Connected/Disconnected

Author: Kyle Anderson, Senior Consultant

Company: SSP Innovations

Description:

When troubleshooting higher level applications and functions that depend on a Geometric Network, use simple Esri "Find Connected" and "Find Disconnected" trace solvers to gain quick understanding of disconnected features. Many times using a "Find Disconnected" trace across the entire dataset is a very enlightening experience.

Tool(s): Continuous Pan/Zoom and Add Open/Close to Switch Order

Author: Trey Price, Electric Engineering GIS Analyst

Company: Denton Municipal Electric

Description:

These tools (Figure 1) are encouraged by Trey.

Figure 1

“Hidden” Tools (Continued)

Tool(s): Pause Button

Author: Trey Price, Electric Engineering GIS Analyst

Company: Denton Municipal Electric

Description:

Try the pause button (Figure 2) when calculating!

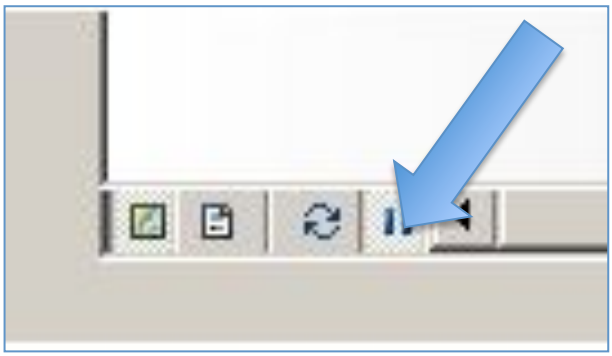

Figure 2

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Title: Pan/Zoom and Feature Selection Short Cuts
Authors: Multiple (Specified Below)

This section describes some Pan/Zoom and Feature Selection Short Cuts that may benefit the user.

Tool(s): Pan/Zoom and Feature Selection

Author: Skye Perry, Principal Consultant/Founder

Company: SSP Innovations

Description:

•Z key in ArcMap auto changes your tool to the Zoom In

•Center mouse (roller) button clicked down will use the Pan Tool

•Tools ->ArcFM™ Options -> Attribute Editor tab -> Turn on "Enable automatic tab activation" and "Always" automatically expand feature selection for faster feature selection interaction.

Tool(s): Pan/Zoom

Author: Kyle Anderson, Senior Consultant

Company: SSP Innovations

Description:

•While holding down the "B" button on the keyboard and the left mouse button, you are placed into zoom-in/zoom-out mode.

•While holding down the "B" button on the keyboard and the right mouse button, you are placed into pan mode.

Pan/Zoom and Feature Selection Short Cuts (Continued)

Tool(s): Selectable Layers Reduction

Author: Skye Perry, Principal Consultant/Founder

Company: SSP Innovations

Description:

Reduce the selectable layers on the selection tab in the Table of Contents to only be applicable to the layers you are actively working with in each ArcFM™ Stored Display or ArcMap Project (*.mxd). This practice GREATLY increases the speed of selecting features on the map and spatial editing as well.

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This ebook you've just read gives a snapshot of some of the more popular tips, tricks, hints and short cuts in the ArcFM™/GIS user community right now. Of course, we've only scratched the surface here.

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