

How to link Excel Data to Map 3D Graphical objects

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Overview

You need to link detailed information from Excel to Map 3D graphical objects? Then follow us through this article. You'll see how to set up the ODBC Excel source and configure Map 3D.

You can link texts or blocks, and polylines enclosing Texts or Blocks with external data. In this simple example, the linking of a Map 3D polyline enclosing a block and an Excel file is shown. The Map 3D file shows room contours and a block within, containing the room ID. The Excel file contains the room ID and a text attribute.

You could also link various other sources, using the available ODBC drivers, to Map 3D graphical objects or tables.

On the next pages, we provide you a step by step description on how to accomplish this.

The data files used in this article are: *M3D_ROOMS.dwg* and *ROOM_ID.xls*. They are available for you to follow along while reading these pages.

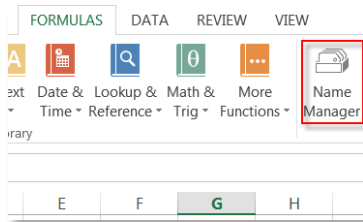
These steps use ODBC connection and it's assumed, that Map 3D and ODBC drivers for MS Office both have either 32 or 64 bit. You can't connect if it's different.

If you're running a 64 bit Windows with 32-bit Microsoft Office and 64 bit AutoCAD Civil 3D or AutoCAD Map 3D, you can either obtain a 64 bit version of Microsoft Office or install the 64 bit Microsoft Access Database Engine from [here](https://knowledge.autodesk.com/support/autocad-civil-3d/troubleshooting/caas/sfdcarticles/sfdcarticles/How-to-install-64-bit-Microsoft-Database-Drivers-alongside-32-bit-Microsoft-Office.html) (<https://knowledge.autodesk.com/support/autocad-civil-3d/troubleshooting/caas/sfdcarticles/sfdcarticles/How-to-install-64-bit-Microsoft-Database-Drivers-alongside-32-bit-Microsoft-Office.html>).

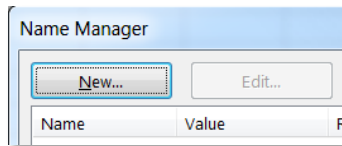
Prepare the Excel File

Open the *.xls file in Excel and create a Name for the data range you want to refer to in Map 3D. To accomplish this, please follow the next steps:

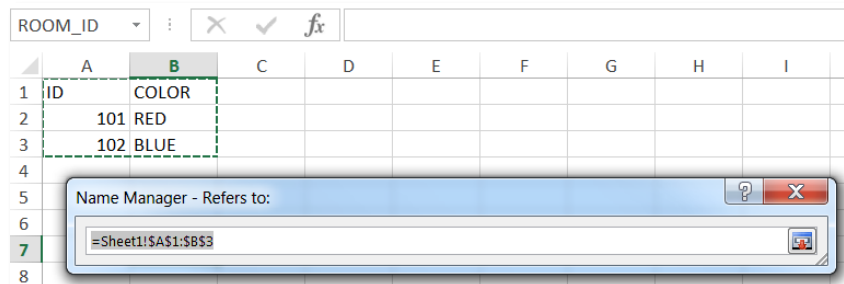
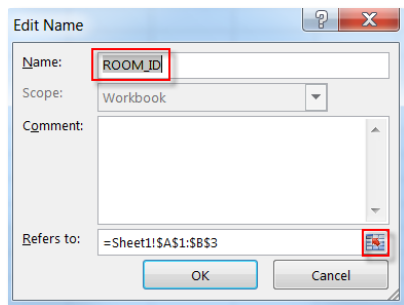
Click 'Name Manager' in the FORMULAS tab.



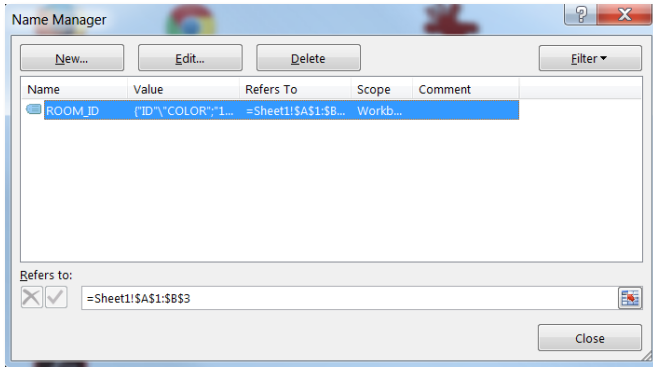
In the name manager, click 'New'.



Enter the name, a comment if needed and specify the 'Refers to' rows and columns. In this case the whole data on the worksheet is selected.



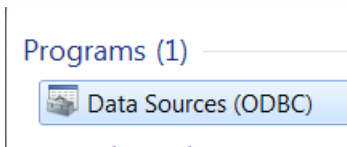
Close the Name manager.



Save the Excel file.

Configure an ODBC Data Source

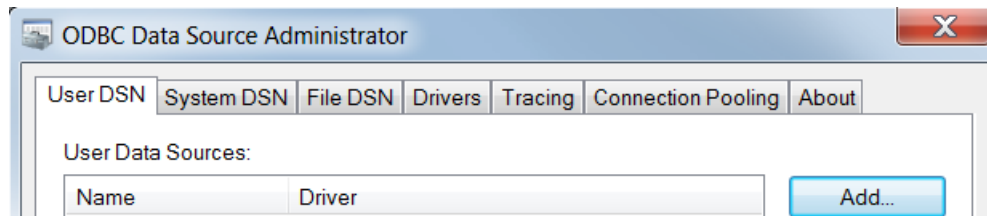
Launch 'Data Sources (ODBC)' from for search results for ODBC, entered in Windows Start Menu search field.



(or: Start Menu / Control Panel / Administrative Tools)

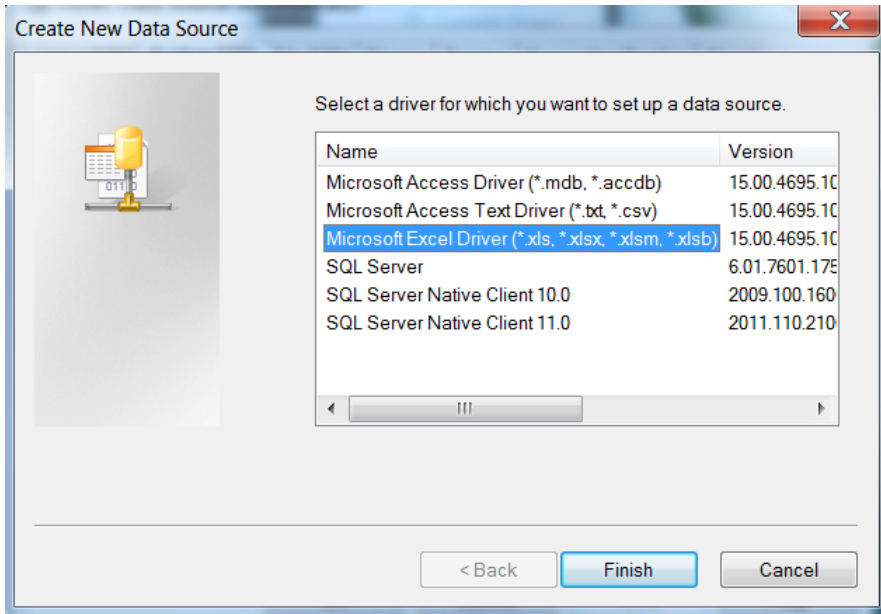
If only the current user should be able to use the ODBC source, select 'User DSN' Tab. If all Users should be able to use it, select or 'System DSN'.

Click 'Add...'



In 'Create New Data Source' dialog,

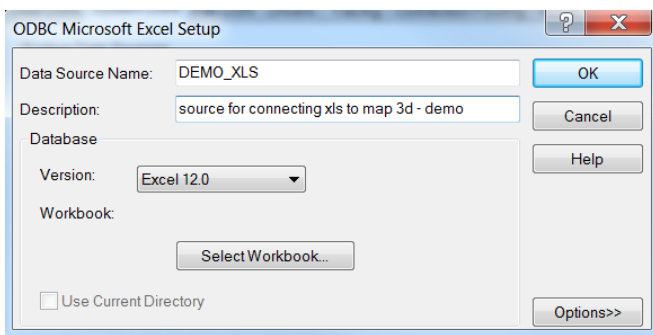
- Select the Microsoft Excel Driver
- Click 'Finish'



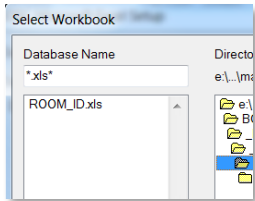
Enter the 'Data Source Name' and 'Description'.

Select the right 'Version' (e.g. for Excel 2007: 12.0).

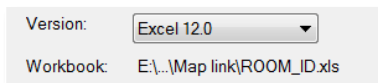
Click 'Select Workbook...'



Select the Excel file and OK.



Result:



Click OK to close the 'ODBC Microsoft Excel Setup'.

The newly created Data Source is listed now.

Name	Driver
DEMO_XLS	Microsoft Excel Driver (*.xls, *.xlsx, *.xlsm, *.xlsb)

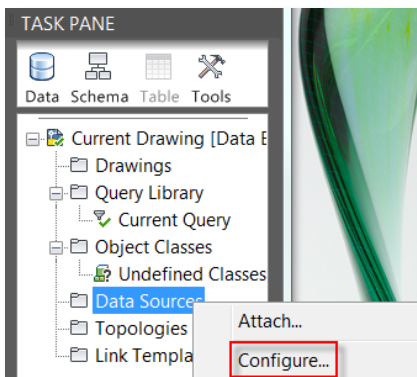
Click OK to close the 'ODBC Data Source Administrator'.

Configure and Attach the Data Source in Map 3D

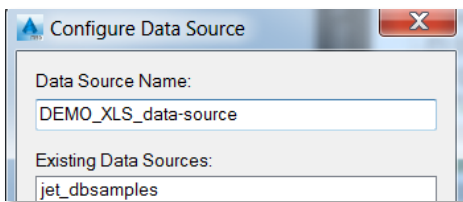
Launch Map 3D and open the drawing File.

Go to the Task Pane, click the Tab 'Map Explorer'.

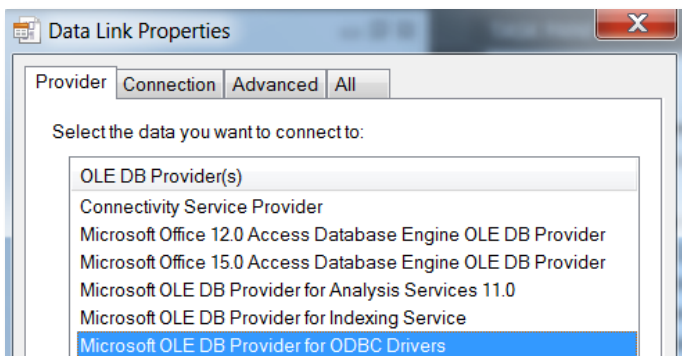
Right-click 'Data Sources' and select 'Configure...'



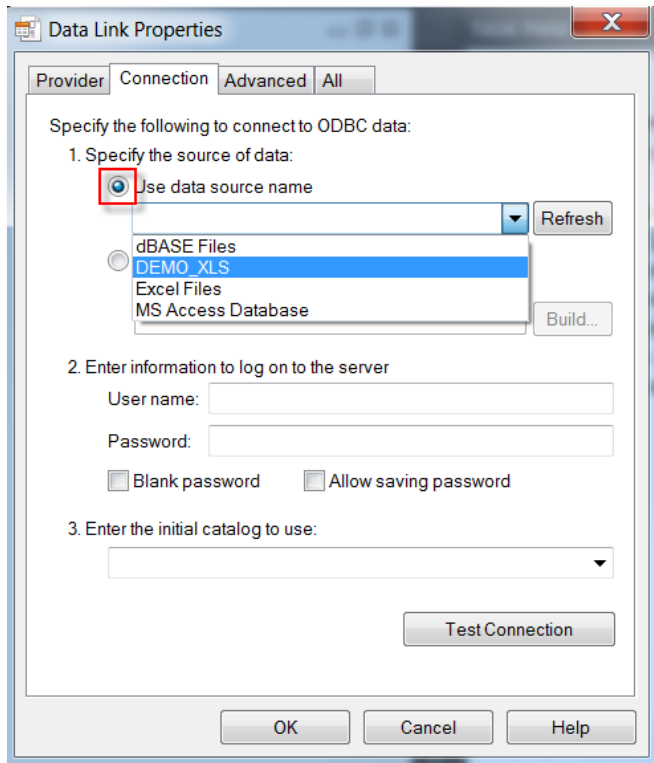
Enter a 'Data Source Name', Click OK.



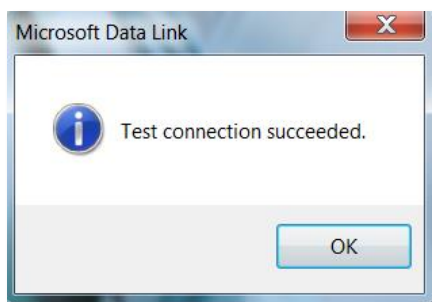
On the Provider Tab, select the 'Microsoft OLE DB Provider for ODBC Drivers'.



On the connection tab, select 'Use data source name' and select the prepared ODBC data source name (DEMO_XLS).

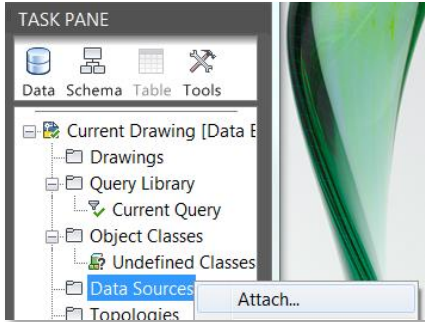


Click 'Test connection'.

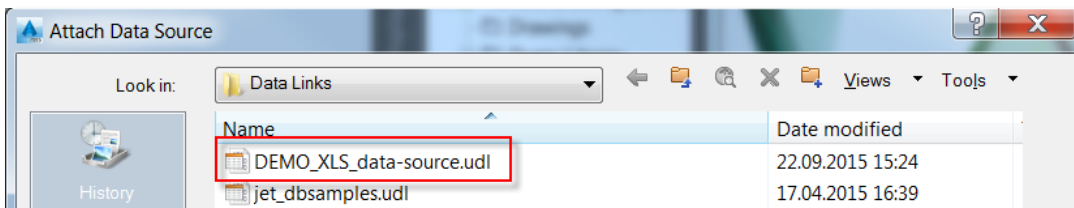


Click OK. If the test isn't successful, please review the configuration. Click OK to close the 'Data Link Properties' dialog.

Right-click 'Data Sources' again and select 'Attach...'.

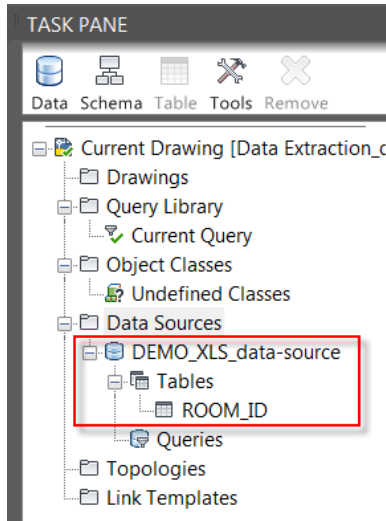


Select the corresponding *.UDL (universal data link) file that has been created during the definition of the Data Link. Click 'Attach'.



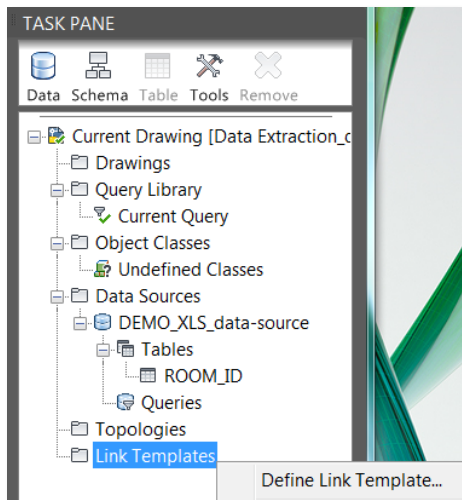
(Path: C:\Users*<your_user>*\AppData\Roaming\Autodesk\Autodesk AutoCAD Map 3D 2016\R20.1\enu\Data Links)

Result:



Configure Link Template in Map 3D

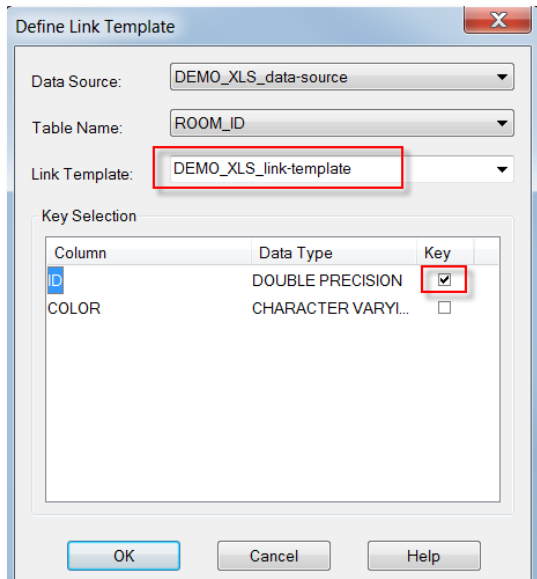
Right-Click on 'Link Template'.



Select Data Source and Table Name (the Name of the configured Excel data range).

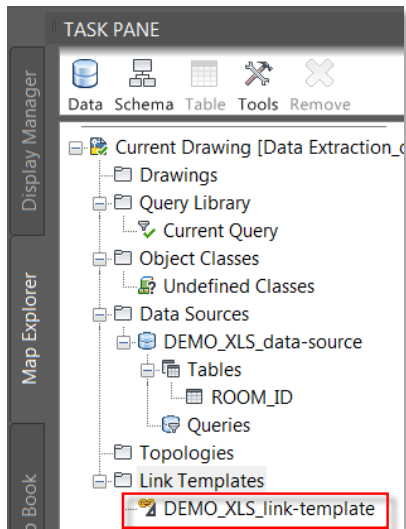
Enter a Link Template name.

Select the key attribute.



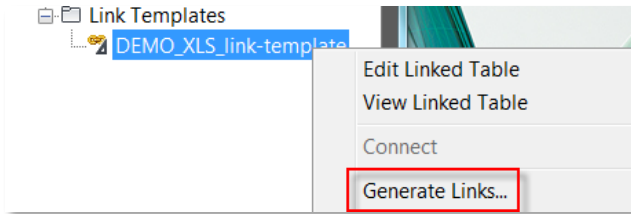
Click OK to Close the Define Link Template dialog.

Result:



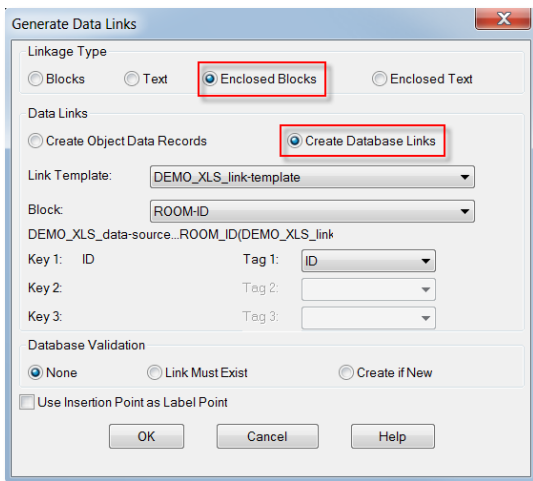
Generate Links in Map 3D

Right-click on the Link Template to Generate Links... .



The Generate Data Links dialog opens.

Select 'Enclosed Blocks' as Linkage type and 'Create Database Links'. Select the created Link Template, Block and Tags from the listboxes as shown.



Click OK to close the Generate Data Links dialog.

Select the objects to generate from (or All).

```
Command:  
Command: _ADEGENLINK  
A- ADEGENLINK Block objects to generate from: [Select All]<All>:
```

Monitor the command line output.

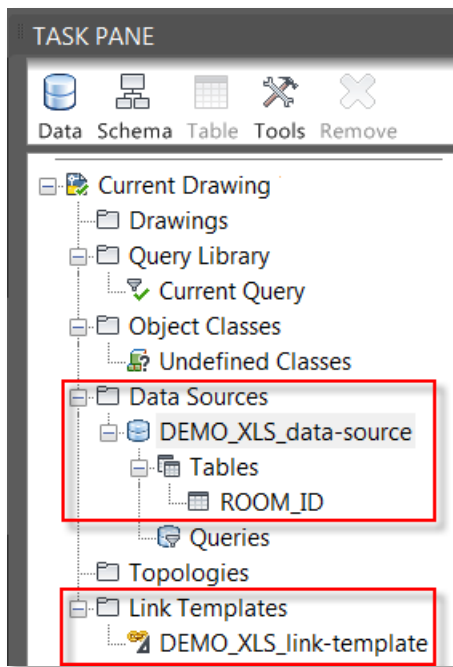
```
2 object(s) to process.  
Processing 2...done. 2 links created.
```

For more details on this dialog, see

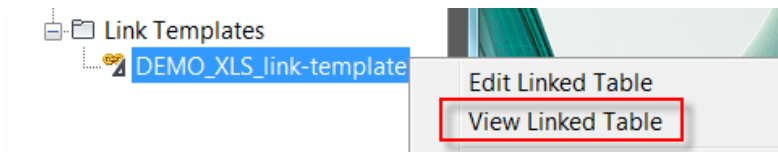
<http://help.autodesk.com/cloudhelp/2016/ENU/MAP3D-Use/files/GUID-7E9A8588-E5B5-474E-A7C0-4915C27960A2.htm>.

Verify functionality in Map 3D

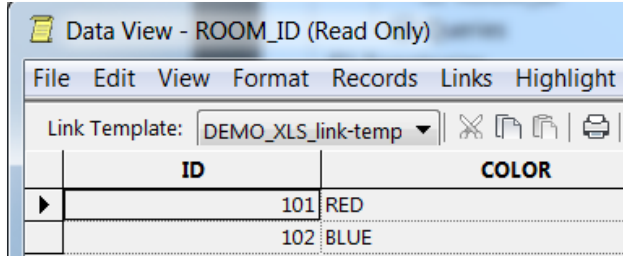
The Data Sources and the Link Templates are now shown in the 'Map Explorer' tab of the Task Pane.



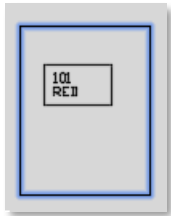
To view the linked Excel table in Map 3D, right-click on your Link Template and select 'View Linked Table'.



Activate 'Auto-Highlight' from the Highlight menu and click on one of the rows.

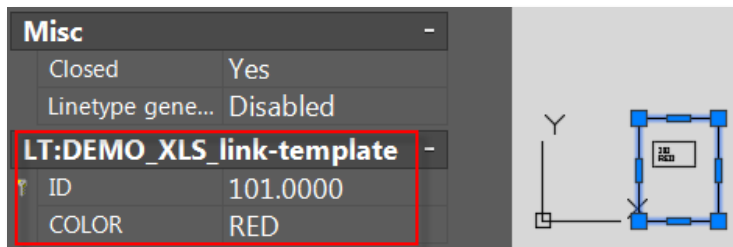


Result: The corresponding polyline enclosing the block is highlighted.



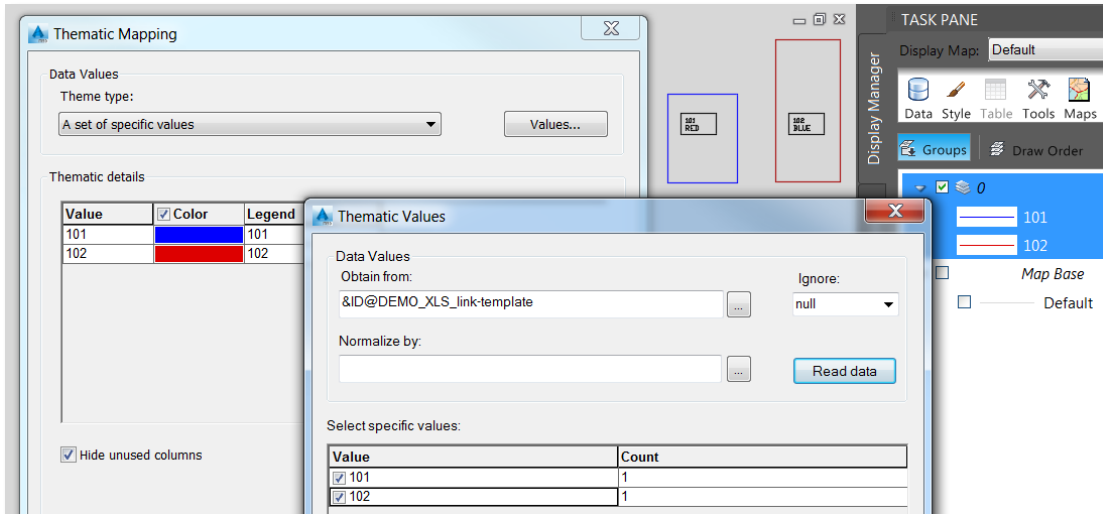
Select one enclosing polyline and show the properties.

The data from Excel is shown in the lowest section of the polyline properties.



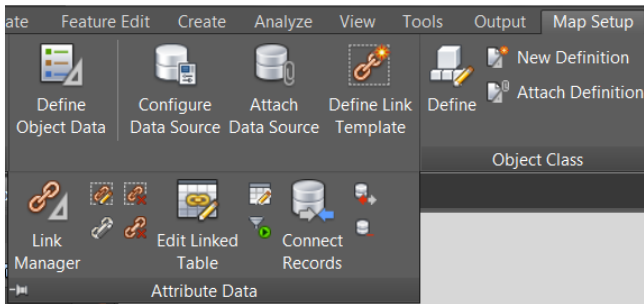
	A	B
1	ID	COLOR
2	101	RED
3	102	BLUE

If needed, you now could style the map based on the attribute values from the Excel data.

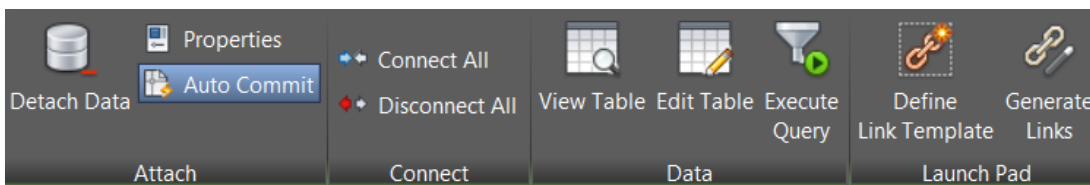
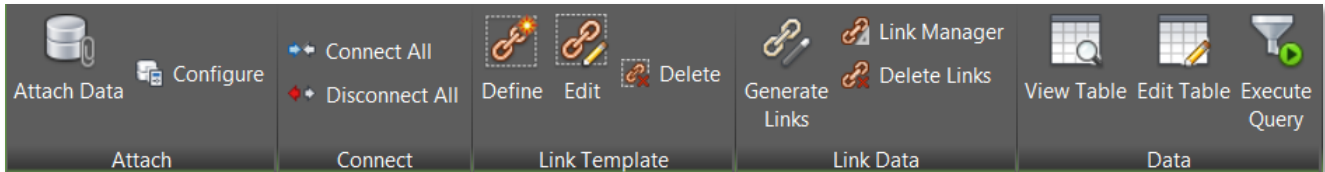


Ribbon Tabs in Map 3D

In the Ribbon Tab 'Map Setup' of the 'Planning and Analysis Workspace' there is an 'Attribute Data' Group. Here you find all the commands for data source and linking operations in one place.



For easy access to the tools, there are context-sensitive Ribbon Tabs for Data Sources and Link Templates.



Helpful Links

[Help page on Linking Excel spreadsheets](#)

[Help page on About Database Links and Link Templates](#)

For your further information – How to connect via FDO:

[YouTube video on how to use FDO to connect to external table data](#)