

1. Configure the MS Excel Data Source:
  - a. From the MS Control Panel, find ODBC Connections Icon and click to open
    - i. (alternative to control panel icon is Start->RUN->ODBCAD32)
  - b. Under User DSN Tab, click "ADD"
  - c. Under Create New Data Source, select the Microsoft Excel Driver
    - i. Note that MS has changed from JET drivers to ACE drivers- this is the cause of current issues with Map3D & "Drag & Drop" functionality with MapExplorer
  - d. Under ODBC MS Excel Setup, enter a data source name and click "select workbook" to point to your Excel file.
  - e. "OK" out of the ODBC dialog boxes
  
2. Note: NO excel "Named Cell Range" necessary. In fact, since named ranges use absolute cell names, I'm not sure you want to – if you insert cells' rows/columns at the end of the range, the range might not automatically expand to show the additional information – a great potential for undesired havoc. However, I've formatted the Schedule No field to be text versus general numbers in Excel.
  
3. Steps in Map3D:
  - a. Configure the Xcel data source
    - i. From the Map Explorer tab of the Map Task Pane:
      1. Right –click on "Data Sources" and left-click on "Configure"
      2. Enter a new name under the "Data Source Name." This doesn't have to be the same name defined in the odbc connection & Click "OK" this will open a "Data Link Properties" dialog box.
      3. Under the Data Link Properties Dialog, Properties Tab, change the OLE DB Provider from SQL Server to ODBC Drivers & Click "Next." This will move you to the "Connection" Tab in the same dialog box.
      4. Under Connection, "1. Specify the source of data" select the "Use Data Source Name" and click on the pull-down arrow to pick the name you defined with the ODBC connection.
      5. Under "2. Enter information to log on to the server" you can select "blank password" for the Excel spreadsheet (unless you password protected it).
      6. Click "Test Connection" to make sure it works. You should get a pop-up window stating "Connection Succeeded" with OK to close. Close this window.
      7. Click OK to close the Data Link Properties Dialog box.
      8. What you've just done in the 7 steps above is create a Universal Data Link file (UDL) under the "Data Links" subdirectory in map.
  - b. Now that you've configured the data source, it's time to finally attach it in Map3D.
    - i. Right-click on Data Sources and select "Attach." This opens to the "data links" directory where map stores all such links. Select the .UDL with the data source

name you just configured and then click “Attach.” Note that the full listing of each worksheet in your workbook now appears under the data source’s “Tables” if you fully expand the tree – hence the comment above that named ranges aren’t required.

- ii. Once a .UDL file is created, you can drag & drop it from Windows explorer into the Map Explorer task pane of Map3D to connect to the spreadsheet. You could create a shortcut on your desktop to this directory to facilitate your data link connections. Before MS changed their ODBC drivers from JET Connect to ACEConnect, dragging & dropping a .XLS or .MDB file from Windows Explorer into Map Explorer would configure the data source behind the scenes and everything in step E above was transparent to us.
- c. Separate step – create CAD objects with data that we can link to the Excel spreadsheet – (in this case it was graphically interacting with each parcel polygon in the drawing & the El Paso County Assessor’s website to add text objects for each parcel in CAD).
- d. So, now we have CAD objects with Object Data and a data table. The next step is to link from the table to the Object Data we’ve attached to the CAD objects.
  - i. Define the link template. This establishes the unique key from the data table to match the drawing.
    1. From Map Explorer Right-click on “link templates” and select “define link template” (also available from the ribbon – Task based, object map tab, external attribute panel “Define Link Template”).
    2. Select the defined data source from above and select the table if there are multiple tables/worksheets in the source file.
    3. Enter a name in the Link Template line of the dialog box
    4. Select the unique (Key) identifier.
  - ii. Now we want to generate the links based on this template.
    1. From the “task-based geospatial” workspace, on the “Object Map” tab of the Ribbon, External Attribute panel, select “Generate Links.” This will open the “Generate Data Links” dialog box.
    2. In the Generate Data Links dialog box, for linkage type, select “text”
    3. For Data Links, select “Create Database Links” – this will switch the next line in the dialog box to give you a selection for what link template to use – select the name you gave in d.i.3 above.
    4. Your choice for database validation
    5. Select “use insertion point as label point”
    6. Click OK to close. Note on the command line a prompt to “Select Text Objects to generate links from” – window over the text you inserted in step c above.
- e. Once the links are created, if you open the properties dialog box, note that there is now a “LT:” section that reports the parcel information straight from the Excel spreadsheet – you can directly modify information in the spreadsheet from this location.

- f. Note that the linkage is to the text object and not to the polygon – this would require a slightly different approach to link to object data attached to the polygon – I'm still working this one out.