
Autodesk Products Tip & Tricks

Product: AutoCAD Map 3D 2009-2010
Topic: GIS data from a Personal Geodatabase File (.MDB)
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The following information applies to the 2009 and 2010 versions of AutoCAD Map 3D, AutoCAD Civil and AutoCAD Civil 3D.

Using open-source Feature Data Object (FDO) technology, AutoCAD Map 3D provides direct access to the leading data formats used in design and GIS and enables the use of AutoCAD software tools for maintaining a broad variety of spatial information. A number of popular FDO providers, produced and supported by Autodesk, are installed with AutoCAD Map 3D. In addition to these, other FDO providers, produced and supported by the [FDO Open Source community](#) can be added to further augment AutoCAD Map 3D's capabilities.

This document describes best practices to utilize GIS data in the Personal Geodatabase File format. The Personal Geodatabase File is a Microsoft Access MDB file, which contains both geometry and tabular information.

Adding the Open Source OGR FDO provider to AutoCAD Map 3D

The Open Source OGR provider allows direct access to Personal Geodatabase Files and [other geospatial formats](#).

1. Determine and obtain the correct OGR FDO provider.
 - a. Specific versions of AutoCAD Map 3D require specific versions of the FDO provider as follows:

AutoCAD version	FDO provider version
2009	3.3.1
2010	3.4.0

For other versions and product which use FDO providers, see [Products Using FDO](#).

- b. Open Source OGR providers are downloaded from the [OSGeo web site](#). Choose the correct version and then download the **Windows Binary OGR Provider**.
2. **Install the OGR provider**
 - a. If open, close AutoCAD Map 3D.
 - b. The downloaded archive file contains a single file, OGRProvider.dll. Save this file to the **C:\Program Files\AutoCAD Map 3D 2010\FDO\bin** folder. A similar folder structure exists for 2009 and the Civil products, substitute your product's name and look for the **FDO\bin** folder.
 - c. For **AutoCAD Map 3D 2010**. In the **FDO\bin** folder, locate the **providers.xml** file and open it with Notepad. Scroll to the bottom of the file. Immediately before the last line, **</FeatureProviderRegistry>**, paste the following text:

```
<FeatureProvider>
  <Name>OSGeo.OGR.3.4</Name>
  <DisplayName>OSGeo FDO Provider for OGR</DisplayName>
  <Description>FDO Access to OGR Data Sources</Description>
  <IsManaged>False</IsManaged>
  <Version>3.4.0.0</Version>
  <FeatureDataObjectsVersion>3.4.0.0</FeatureDataObjectsVersion>
  <LibraryPath>.\OGRProvider.dll</LibraryPath>
</FeatureProvider>
```

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For **AutoCAD Map 3D 2009**. In the **FDO\bin** folder, locate the **providers.xml** file and open it with Notepad. Scroll to the bottom of the file. Immediately before the last line, **</FeatureProviderRegistry>**, paste the following text:

```
<FeatureProvider>
  <Name>OSGeo.OGR.0.1</Name>
  <DisplayName>FDO Provider for OGR</DisplayName>
  <Description>Access to OGR data sources</Description>
  <IsManaged>False</IsManaged>
  <Version>0.1.0.0</Version>
  <FeatureDataObjectsVersion>3.3.0.0</FeatureDataObjectsVersion>
  <LibraryPath>OGRProvider.dll</LibraryPath>
</FeatureProvider>
```

Save and close the **providers.xml** file.

The OGR Provider is now installed and ready to use.

Using the Open Source OGR FDO provider in AutoCAD Map 3D

1. Open the Data Connect window. You should now see a new provider on the list. Locate and click on **Add OGR Connection**.
2. The OGR provider does not have a browse function; you will need to enter the full path to the Personal Geodatabase File. You must include the drive letter, path and complete file name including the .MDB extension.
3. Name the connection anything you like, leave the ReadOnly field set to True and click Connect. AutoCAD Map 3D will read the contents and display a list of available data sources.
4. Add and style layers as with any FDO data source.

Migrating data from a Personal Geodatabase File into a more robust data source.

The Open Source OGR Provider allows only read access of a Personal Geodatabase File; it does not have the ability to write to or update this format. A limitation of the format itself is poor performance, resulting in long wait times when querying data. Both of these limitations can be overcome by migrating the data into a standard, highly optimized format like SDF.

1. Begin by establishing an OGR connection to a Personal Geodatabase File. Adding layers is not necessary.
2. On the Task Pane's Map Explorer tab, right click on the Schema icon and select **Create SDF...**
3. Enter a name for your new data source and click Save.
4. Choose a Coordinate System and click OK. This opens the Schema Editor.
5. Right click on **Schema1** and select Delete Schema. Confirm and click OK. This creates both an empty SDF file and a connection to it.
6. On the Task Pane's Display Manager tab, click on the Data icon and select Bulk Copy...
7. On the **From** (left) side of the Bulk Copy window, select the OGR connection.
8. On the **To** (right) side, select the SDF connection.
9. Under **Select items to copy**, choose the desired data. To choose the entire data set, select the top check box.
10. Under **Ignore the following errors...**, select Coordinate system.
11. Click **Copy Now** and confirm.

The data is now in a fully functioning, performance optimized SDF file. Disconnect the OGR connection, it is no longer needed.