

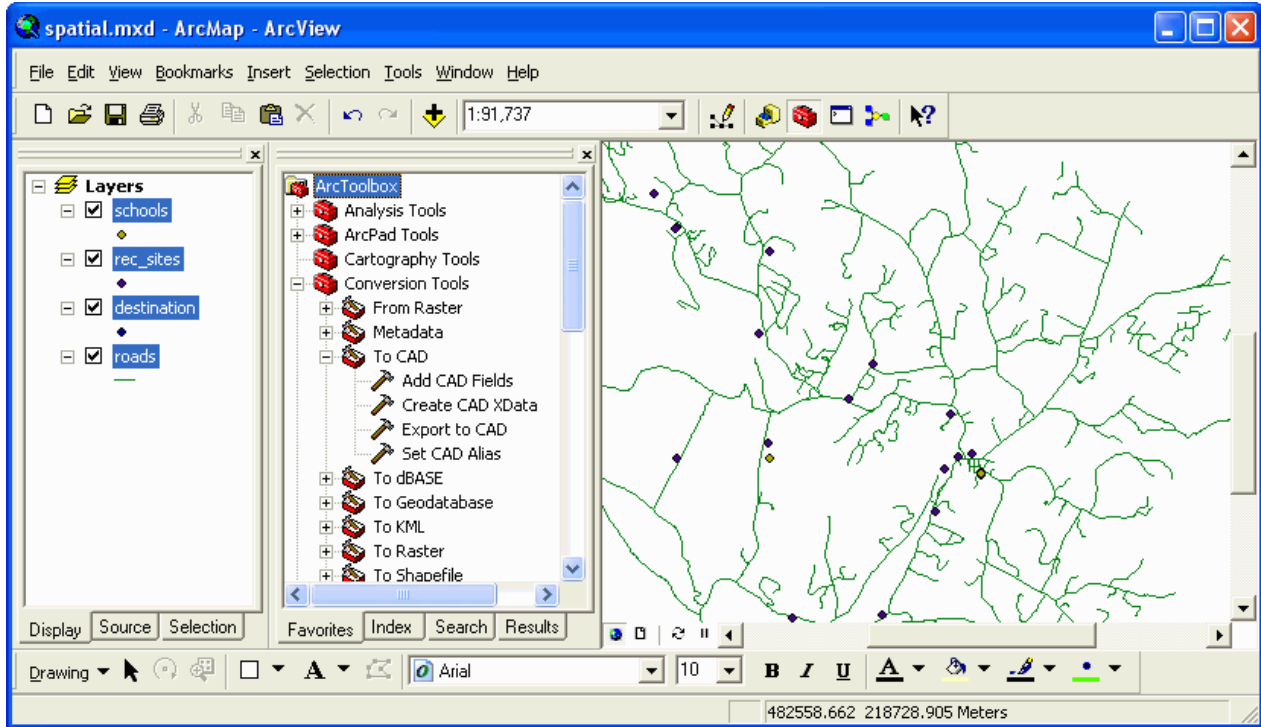
Lesson 15: ESRI to Office to Field and Back

This lesson takes an ESRI geodatabase from ArcView into Carlson Survey and then to Carlson SurvCE for data collection. Next the data is taken from SurvCE into Carlson Survey and then back into ArcView.

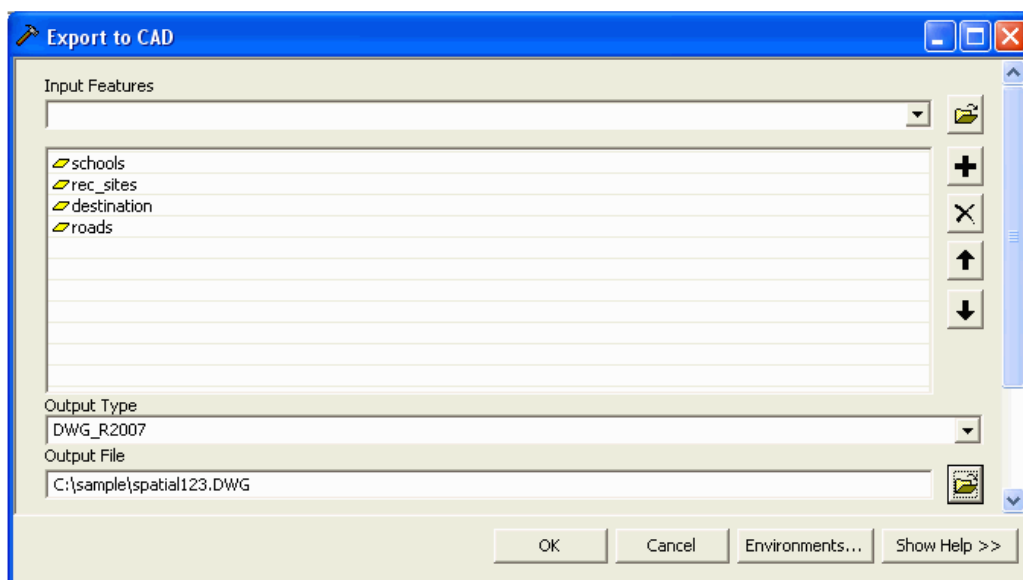
Step 1 (ESRI Geodatabase to DWG File):

ArcGIS Desktop has a routine to output a geodatabase to a DWG file. The DWG file contains all the information in a single file. It has the graphic geometry, feature definitions and feature attribute data. The feature information is stored in a format defined by ESRI called Mapping Specification for DWG (MSD) using standard DWG entities and dictionary entries. In this tutorial, we're going to use ArcView 9.3 to create the DWG with MSD.

From the ArcToolbox, choose Conversion Tools->To CAD->Export To CAD. If you need to bring up the ArcToolbox, go to the ArcView->Window pull-down menu and pick ArcToolbox.

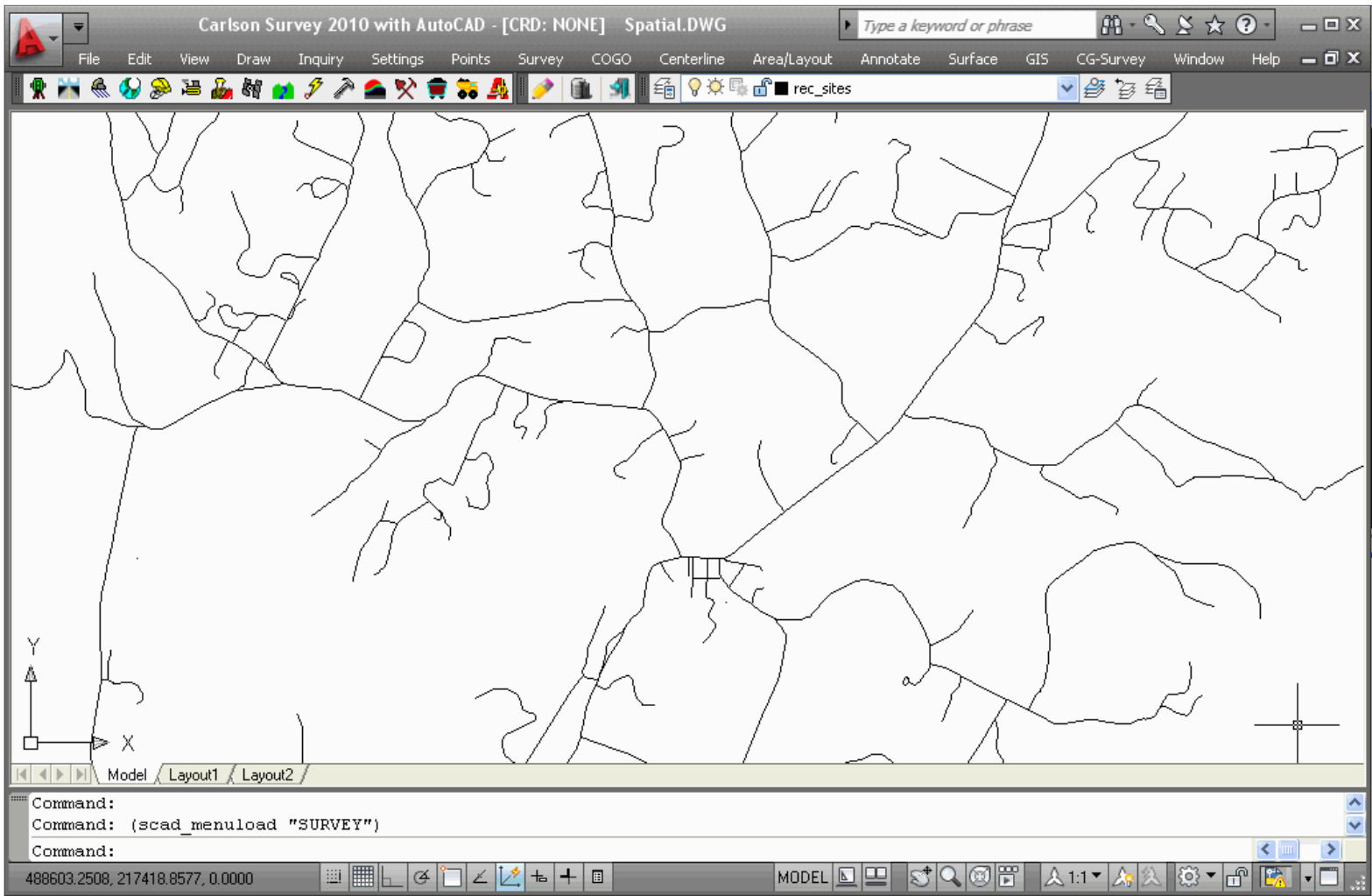


Next, select the features to export in the Export to CAD dialog. To select a feature, pick the down arrow on the Input Features first row and pick the feature name from the list. After selecting the features, choose the output file format for either DWG or DXF file and the version. For example, choose DWG_2007. Finally, enter the DWG file name to create and pick OK.

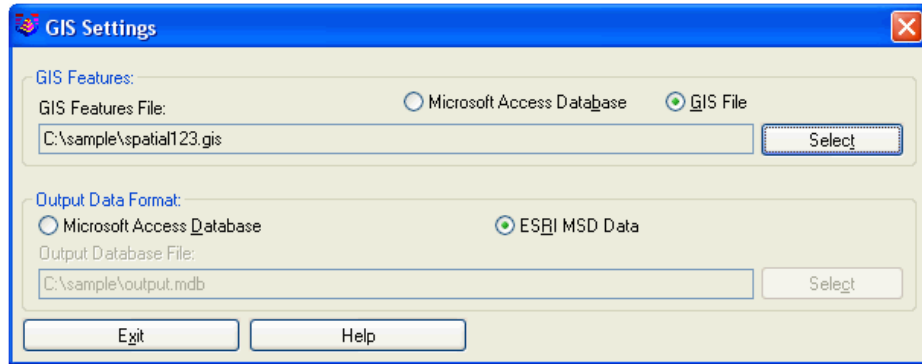


Step 2 (Open Project in Carlson Survey):

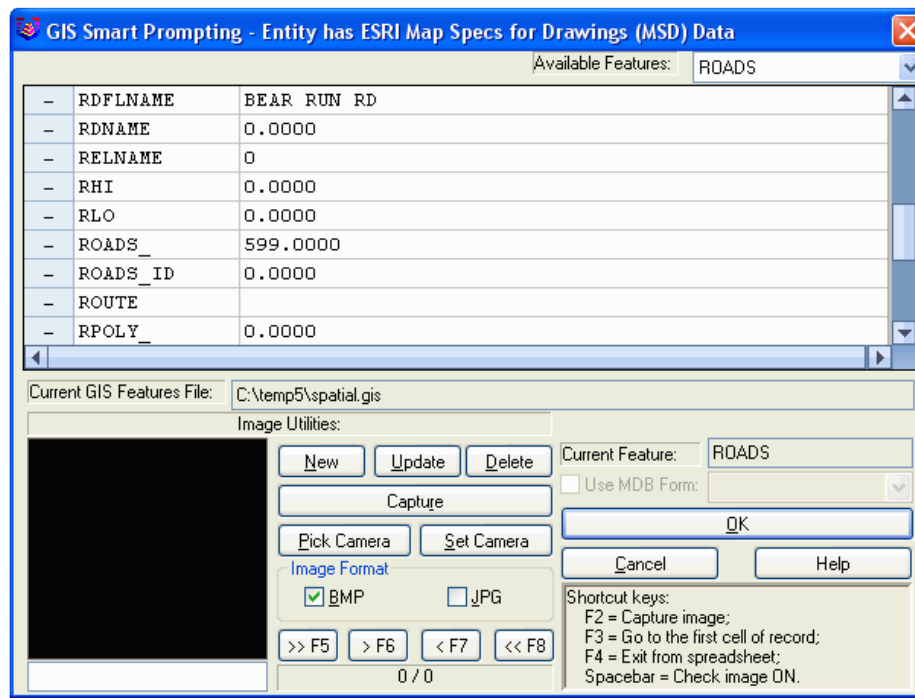
Use File->Open in Carlson Survey to open the drawing created by ESRI.



Next, run GIS->GIS Database Settings. The GIS Features File defines the feature names along with their drawing properties and attribute names. Choose the GIS File format and set the file name. For the Output Data Format, choose ESRI MSD.

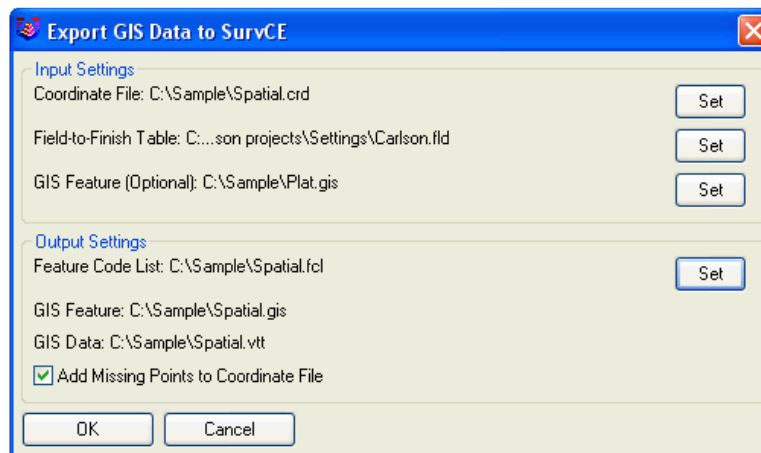


To verify that the GIS attribute data is in the drawing, run GIS->Input-Edit GIS Data and pick on an entity in the drawing. The attribute data is shown in a spreadsheet editor. This example shows the Roads feature data assigned to a polyline.



Step 3 (Export Project to SurvCE):

From the GIS Data menu, choose Export GIS Data to SurvCE. This command takes selected data from the drawing and creates the GIS files that SurvCE uses.



For input files:

Coordinate File: Contains the point database with point#, x, y, z and description.

Field-to-Finish Table: Defines the coding for the description field that will be converted into a Feature Code List for SurvCE.

GIS Feature: Defines the feature and attribute names. Using this file is optional and applies in case that the feature definitions contain more features or attributes than the data entities.

For Output files:

Feature Code File: This is the SurvCE format file for the description field coding definitions.

GIS Feature: This defines the feature and attribute names. This file is automatically named after the Feature Code File.

GIS Data: This file contains the attribute data. This file is automatically named after the Coordinate File.

Add Missing Points to Coordinate File: This option creates points in the Coordinate File for any selected point entities that aren't already in the Coordinate File.

After specifying the files, pick OK and the program prompts for the entities from the drawing to export. You can select the entire drawing by entering "all", or select a subset of the drawing entities. The program will read the GIS data from the selected entities to create the GIS data file (.vtt) for SurvCE.

Now that the project data is converted to SurvCE format, upload the coordinate file, feature code list, GIS feature, GIS data and drawing onto the SurvCE data collector. If you have SurvCE 2.5 or later, then you can use the DWG file format for the drawing. For earlier versions, use the DXF format.

Depending on your collector and connections, you can do the upload with either Carlson Survey->Data Collectors->SurvCE, or Windows ActiveSync, or transfer on a data card. For this example, we have spatial.crd, spatial.fcl, spatial.gis, spatial.vtt and spatial.dwg to upload.

Step 4 (Data Collection in SurvCE):

First download the data files from the SurvCE data collector to the computer. Get the coordinate file (.crd), GIS data file (.vtt) and drawing files (.dwg or .dxf).

Step 5 (Download Project from SurvCE):

ESRI to Office to Field and Back

This step converts the SurvCE GIS data (.vtt) into the ESRI MSD format for the drawing.

First download the data files from the SurvCE data collector to the computer. Get the coordinate file (.crd), GIS data file (.vtt) and drawing files (.dwg or .dxf). Then open the drawing file and use Points->Set Coordinate File to set the coordinate file from SurvCE as current.

From the GIS Data menu, choose Import GIS Data from SurvCE. The routine prompts for the GIS Feature Definition file (.gis) to process along with the SurvCE data to combine the feature definitions.

Step 6 (Load Project into ESRI Geodatabase):

Save the drawing file in Carlson and then run ArcView. Pick the Add Data button in the Standard toolbar and select the drawing.

