

AutoCAD®/GPS Pathfinder® Integration: Geo-referencing points in AutoCAD for Export to Trimble® GPS Pathfinder Office

August 29, 2013

Purpose: Moving local site coordinate data to State Plane coordinates in AutoCAD. Then importing to Trimble GPS Pathfinder Office.

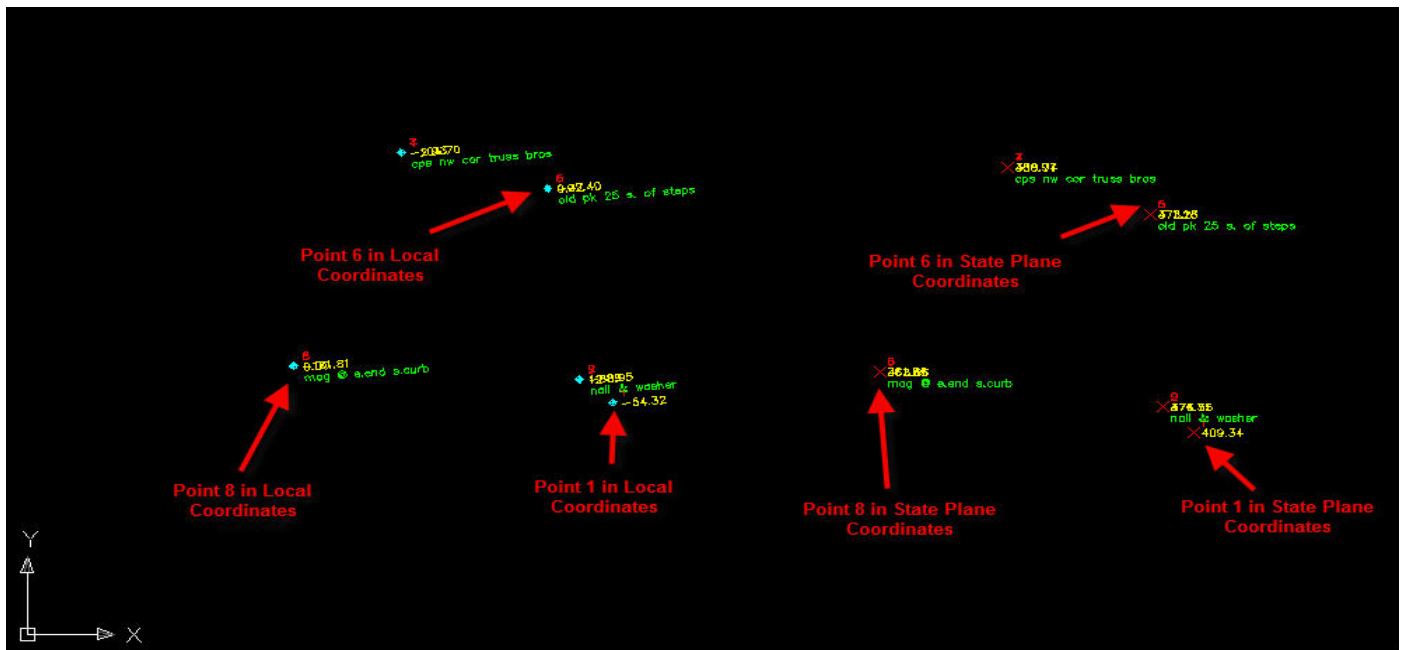
Requirements: AutoCAD-based program, local site data, identifiable State Plane coordinates and Trimble GPS Pathfinder Office.

Results: Local site coordinate data will be imported into Trimble GPS Pathfinder Office and then transferred to a Trimble GPS data collector for navigation or updating data.

Procedure:

Step 1: In your AutoCAD based program, with the file containing the surveyed points open, reference in the file with the State Plane points, using **XREF** command.

Step 2: In each file, identify at least three points that share the same location.



Step 3: Type **AL** at the command line and press Enter to start the Align command. On the command line you will be prompted to “Select Objects”. In the Drawing Window select all of the objects from the local coordinate file to be moved to State Plane, and right-click or press enter.

Step 4: When asked to “Specify first source point,” on the command line select one of the local points identified in Step 2. Next you will be asked to “Specify destination point.” Select the corresponding State Plane point.

Step 5: Repeat the point selection process from Step 4 for the remaining pairs of points. The local coordinate objects will be moved and rotated, and the Align command will end.

Step 6: Detach the XREF of the State Plane drawing using the **XREF** command.

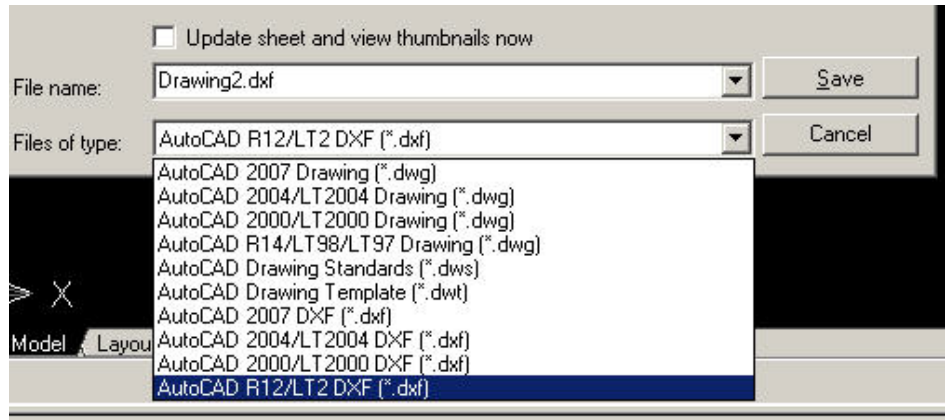


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Step 7: Save the drawing with the objects moved from the local coordinate system to your State Plane system.

Step 8: Go to File/Save As to save the file as an R12 DXF. Select AutoCAD R12/LT12 DXF from the “Files of Type” drop-down. Name the file, and click “Save”.



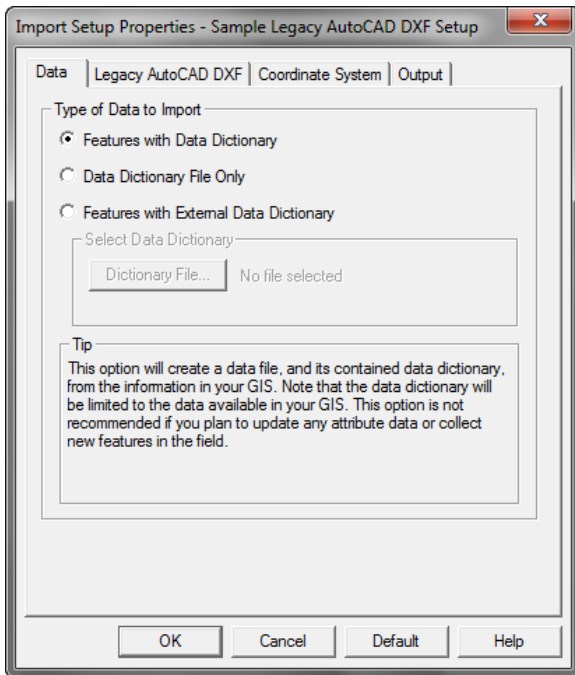
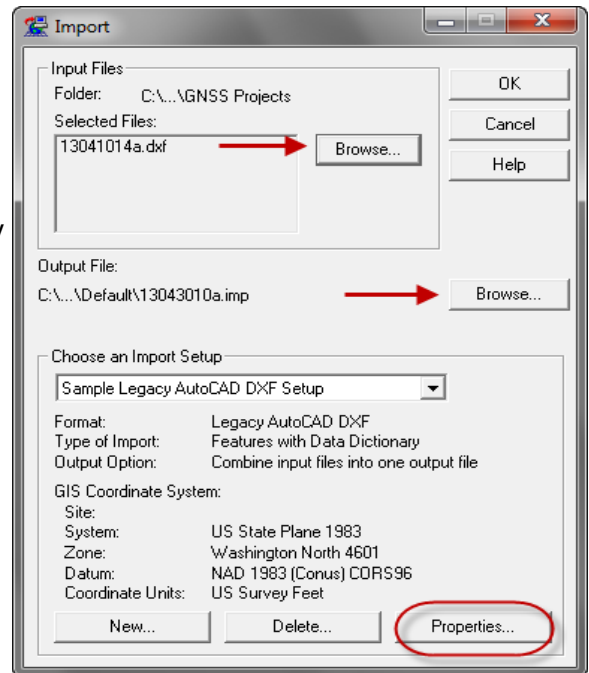
Step 9: Open GPS Pathfinder Office and select a project to work in. Click on Utilities > Import.

Step 10: Choose an Import Setup, such as Sample Legacy AutoCAD DXF Setup.

Browse to the Auto-CAD dxf file that you wish to import.

Use the second Browse button to select the Output File location.

Click Properties.



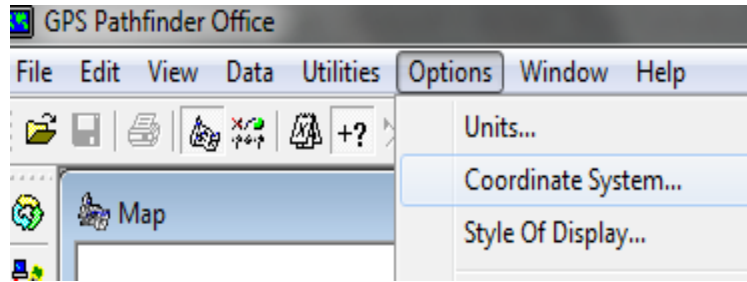
Step 11: Choose the type of data to import, and set the information about the AutoCAD DXF file.

Choose the correct coordinate system, and set your output options.

Click OK.

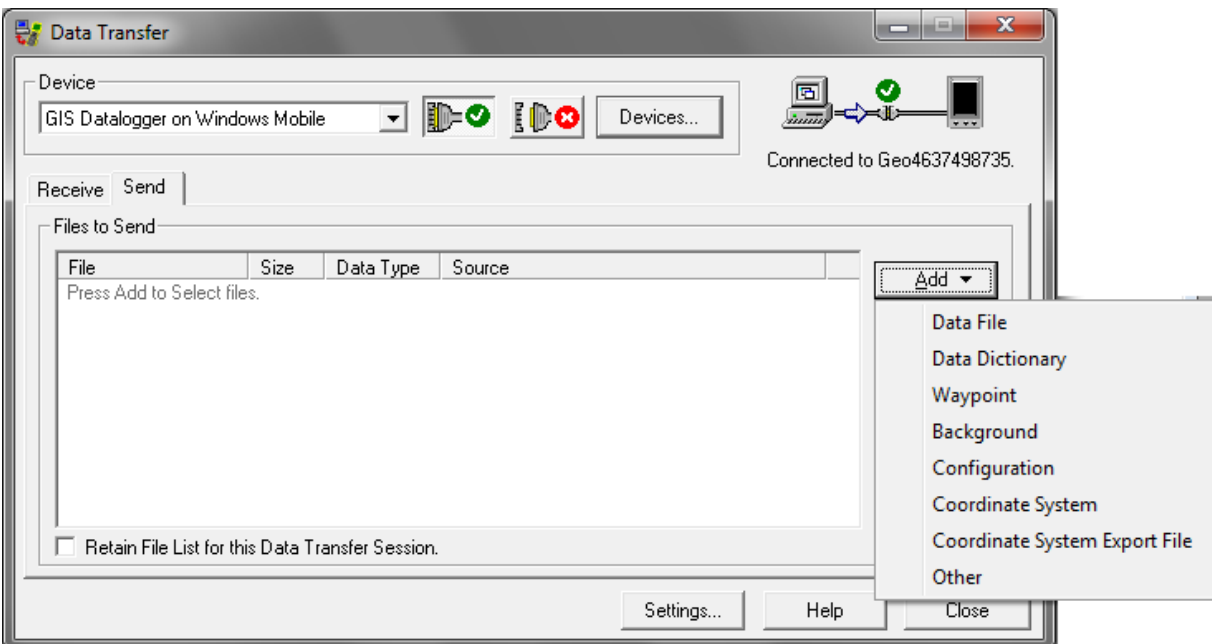
Step 12: Verify all your settings and click OK again to finish the Import process.

Step 13: In Pathfinder Office, set your display coordinates, Options> Coordinate System, to match your import settings for the dxf file if you wish to display the file before transferring to the handheld.



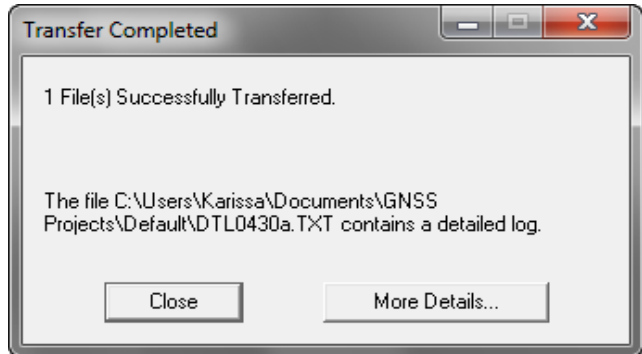
Step 14: To transfer the file to your mobile device, double-check that you have an ActiveSync® or Windows® Mobile Device center connection, and then click Utilities > Data Transfer.

Step 15: Click the Send tab, and then click on Add > Data File.



Step 16: Then select the .imp file to transfer to the mobile device, and click Open. This will bring you back to the Data Transfer dialog. Click on Transfer All.

You will receive a message that says “Transfer Completed.” Click Close on this message and on the Data Transfer dialog box.



Note: Rounding and accuracy may be affected as the coordinates are being calculated to a higher accuracy than they are being displayed in AutoCAD. Use these steps in AutoCAD 12 or later for moving the points from Local Site to State Plane Coordinates.