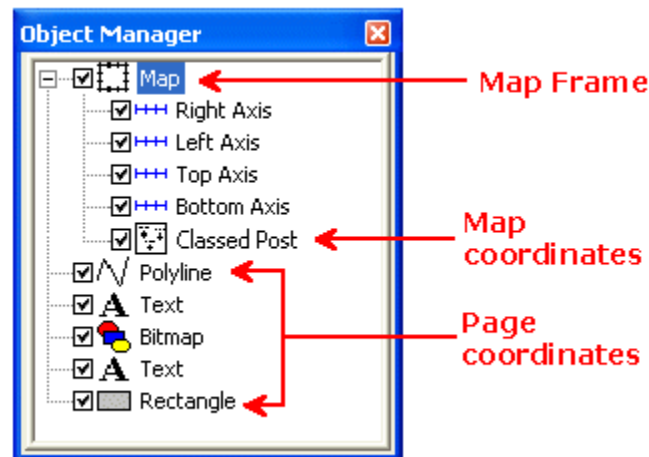


Converting Drawn Objects from Page Coordinates to Map Coordinates

Surfer uses two sets of coordinates to keep track of objects - map coordinates and page coordinates. Maps, which are always contained within a map frame, are stored in map coordinates. Objects drawn with the drawing tools (lines, polygons, text, etc.) are stored in page coordinates.

Since drawn objects are anchored to the page using page coordinates, they do not move if the map is rescaled or repositioned. It is possible, however, to convert the drawn objects into map coordinates and overlay them into the map frame.



*Maps are objects within a map frame and use map coordinates.
Drawn objects use page coordinates.*

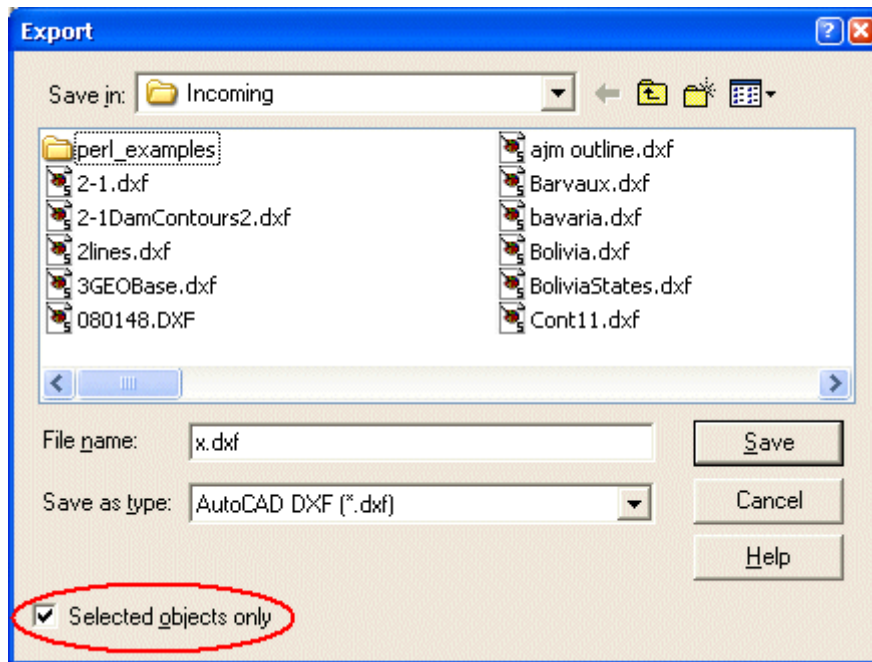
To convert an object from page coordinates to map coordinates, export the drawn objects to a DXF file using map coordinates, load the DXF file as a base map, and overlay with your other maps.

Exporting drawn objects to a DXF file is a two step process. First, export the map to a DXF file and save the map coordinates. Next, export the drawn objects to a DXF file using the saved coordinates.

Step-by-step procedure

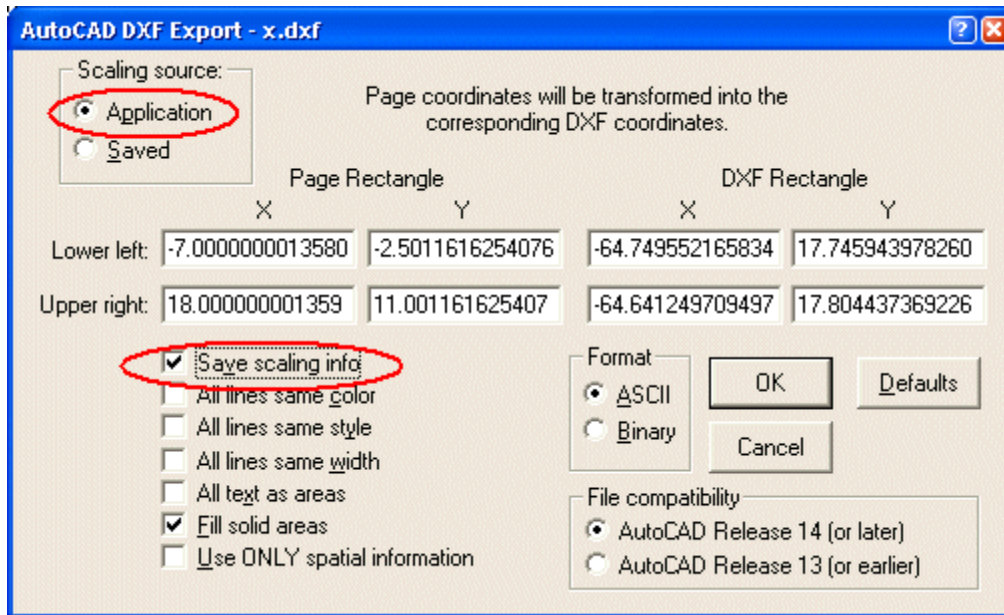
1. Click on the map to select it. The status bar should then indicate that a single map is selected.
2. Choose the **File | Export** menu command.
3. Specify a DXF file name in the **Export** dialog box.
4. Click the check box to enable the *Selected objects only* option.

5. Click the *Save* button.



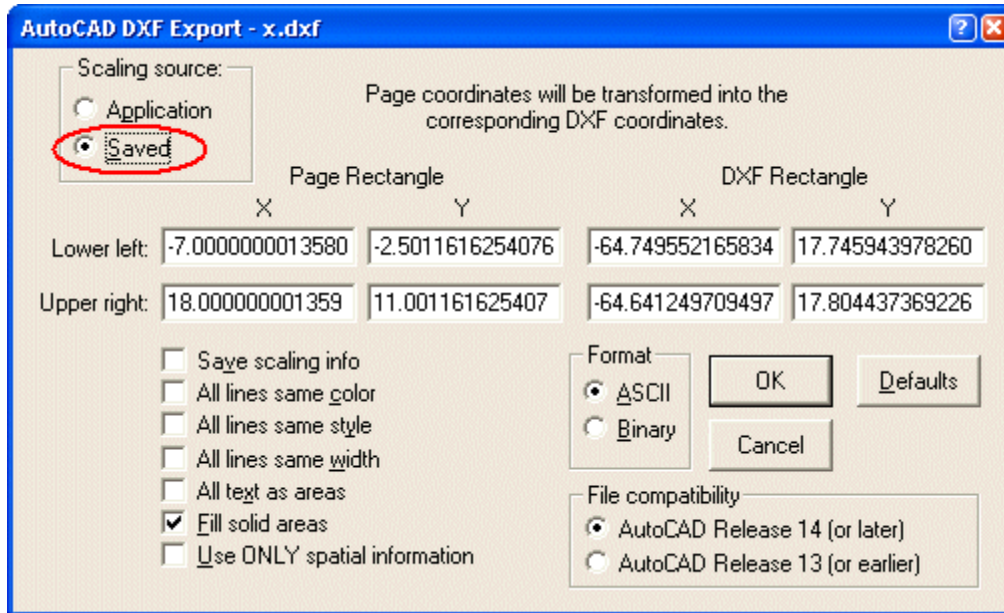
Select the map, choose **File | Export**, specify a DXF file name, enable the Selected objects only check box, and click Save.

6. In the **AutoCAD DXF Export** dialog box, make sure the *Scaling source* is set to *Application*.
7. Verify that the coordinates in the *DXF Rectangle* section are different than those in the *Page Rectangle* section.
8. Click the check box to enable the *Save scaling info* option.
9. Click OK.



When exporting the map to a DXF file, verify that the Scaling source is set to Application, and click the check box to Save scaling info.

10. In the plot window, deselect the map and select all the drawn objects using the **Edit | Invert Selection** menu command.
11. Choose the **File | Export** menu command.
12. Specify the DXF file name in the **Export** dialog box.
13. Click the check box to enable the *Selected objects only* option.
14. Click the *Save* button.
15. In the **AutoCAD DXF Export** dialog box, verify that the *Scaling source* is set to *Saved*.
16. Verify that the coordinates in the *DXF Rectangle* section are different than those in the *Page Rectangle* section.
17. Click OK.



When exporting the drawn objects to a DXF file, change the Scaling source to Saved.

18. Load the DXF file as a base map.
19. Select the maps (**Edit | Select All**) and choose **Map | Overlay Maps**.

Automating the process

A rudimentary script to automate this process has been written and is available for download from www.goldensoftware.com/public/scripts/surfer7/Export2Base.BAS. It handles the case where there is one map frame, and all drawn objects are to be converted. For more complicated situations, this script could serve as the starting point for further development.