

Establishing Irish Tranverse Mercator For the Republic of Ireland and Northern Ireland

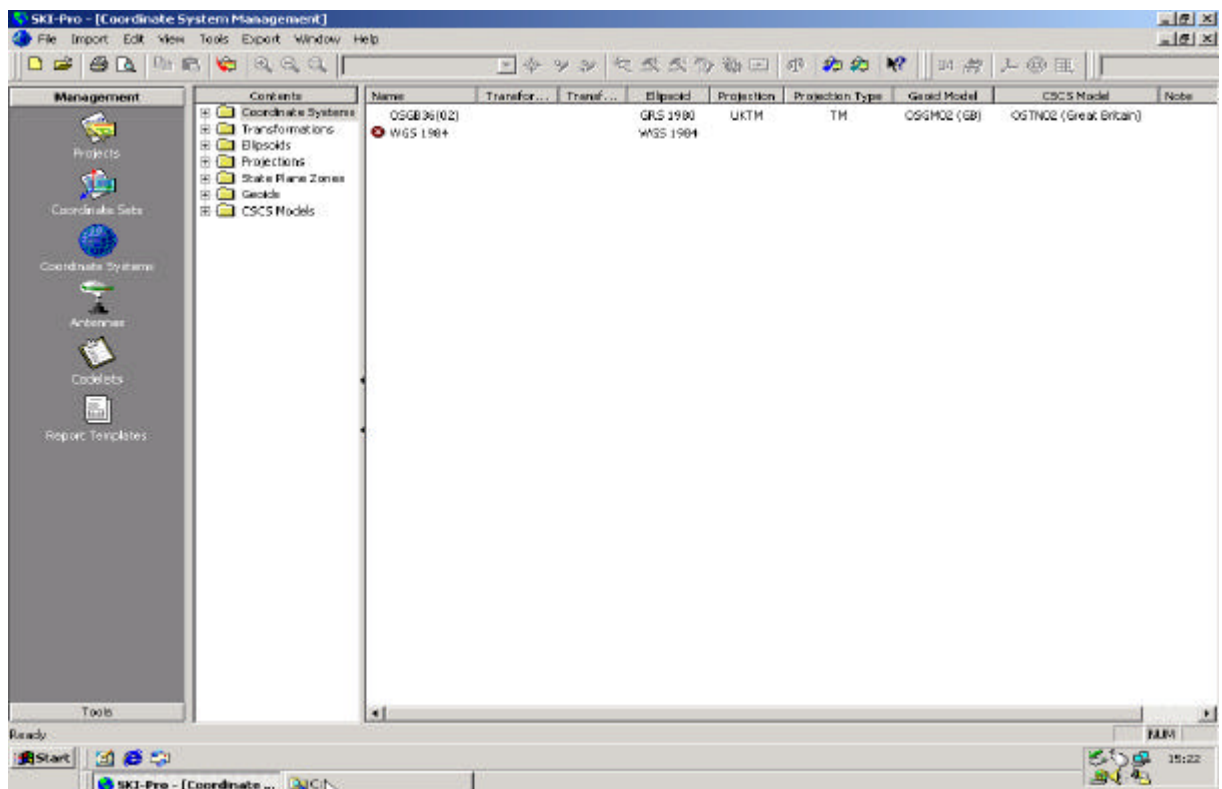
NOTE : Whilst the Irish Transverse Mercator (ITM) Grid System is applicable for the whole of Ireland, the two regions have separate height datums, resulting in a different Geoid Model for each area. There is some overlap between the two, and users working in the border areas should use only one of the models.

Directions to load Coordinate System and Geoid into SKI Pro:

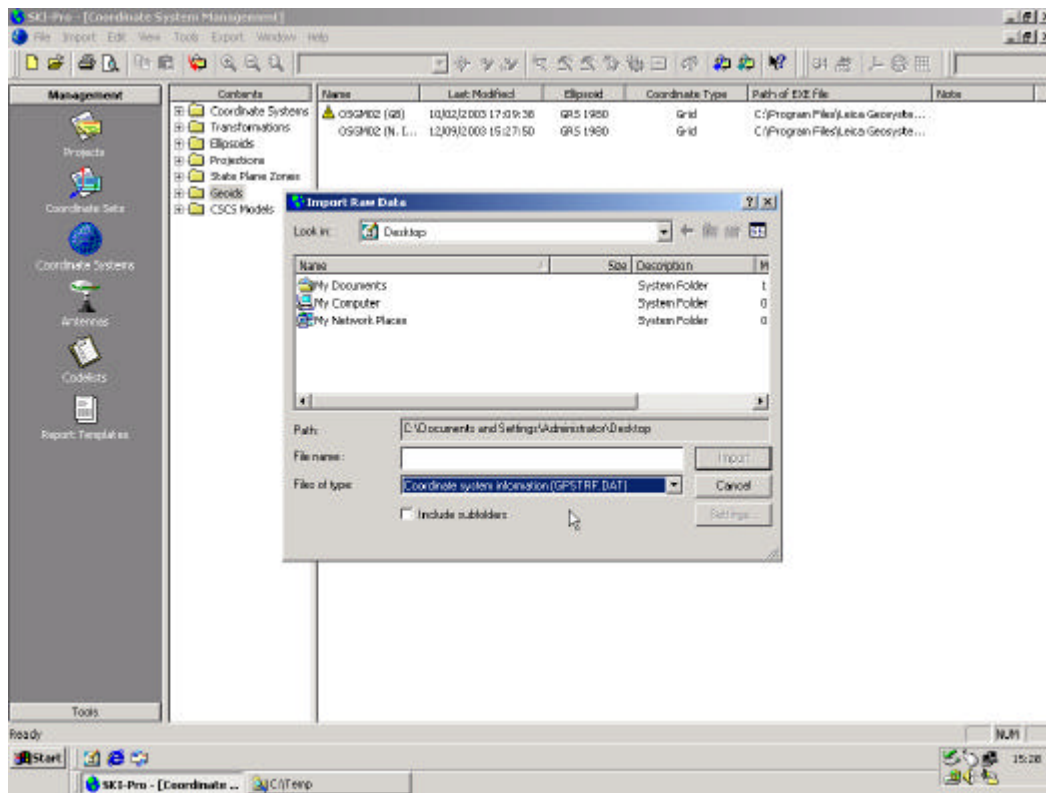
1. Extract all files in the attached zip file (“Irish SKI Pro Files.zip”) to your hard disk. Make sure you tick “Use Folder Names” prior to extracting, which should result in the following directory structure:



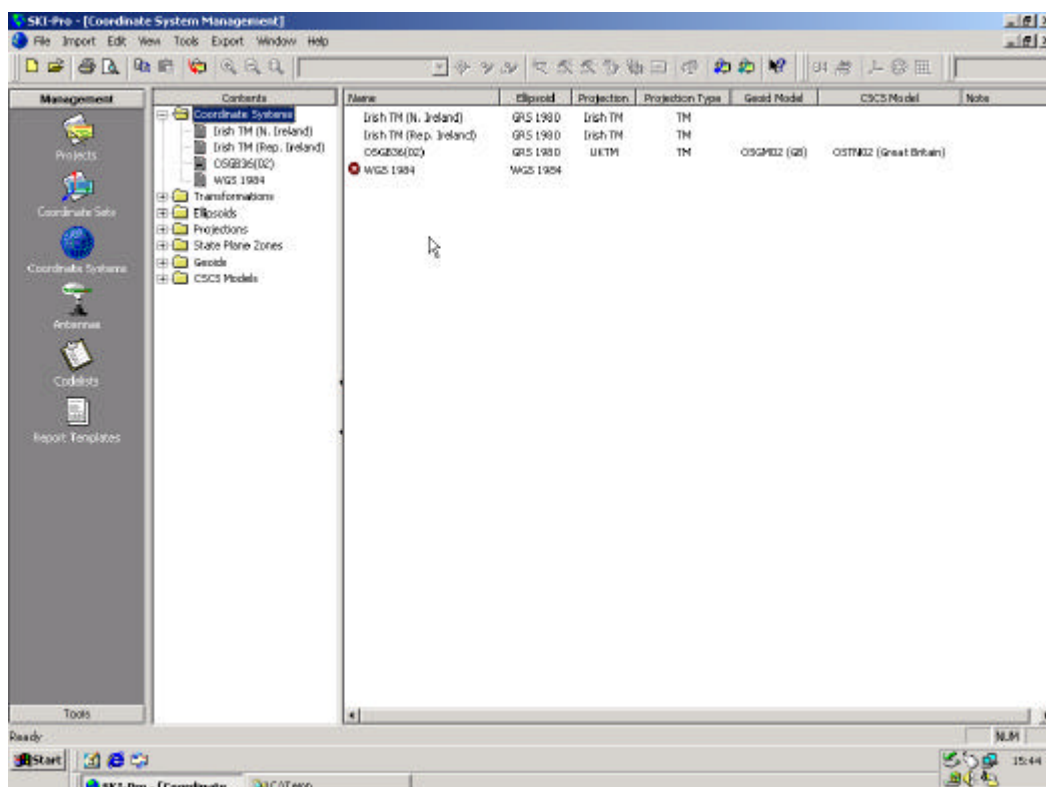
2. In SKI Pro, open Co-ordinate Systems under the Management List Box, or access it from the Tools drop down menu:



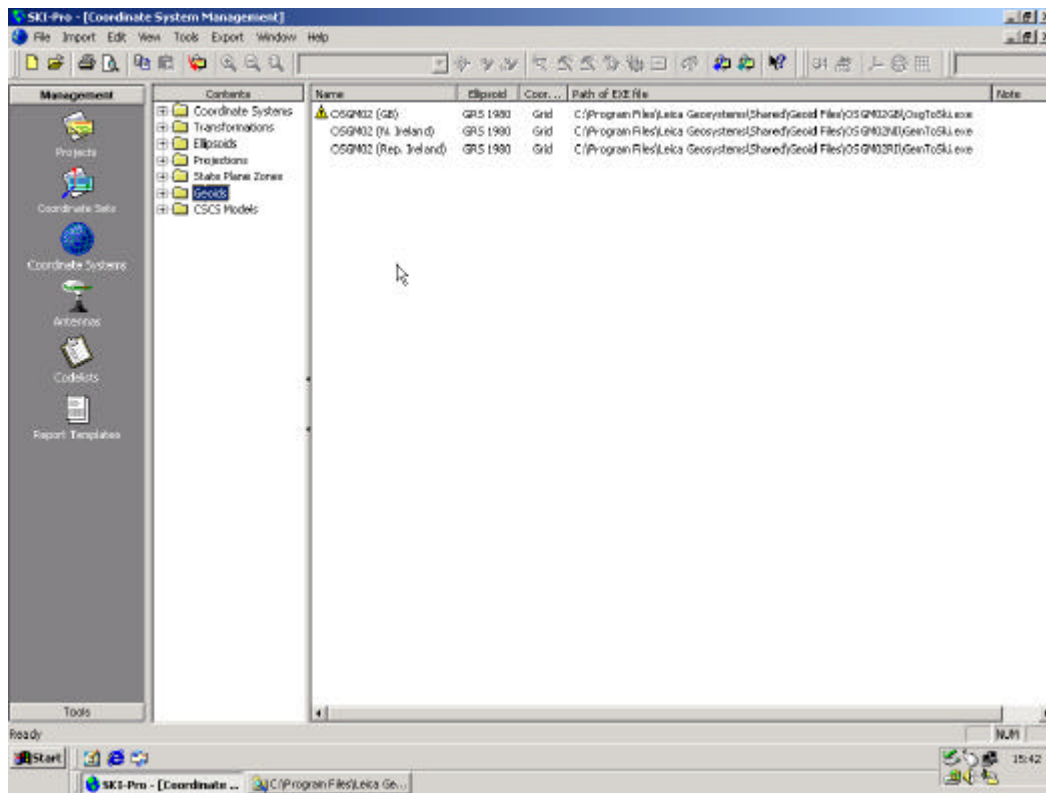
3. Click “Import” and then “Raw Data” from the top drop down menus, and change the “Files of type” to “Coordinate system information (GPSTRF.dat)”



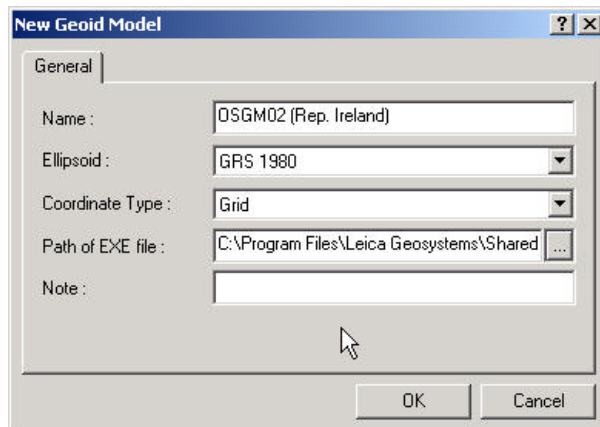
4. Navigate to the following directory: “C:\Temp”
And select the file “GPSTRF.DAT”. This folder and file are created when you extract the file in step 1 above, and click “Import”.
5. This will create the two Coordinate Systems “Irish TM (N. Ireland) and Irish TM (Rep. Ireland)” in SKI Pro:




6. To load the two Geoid Models into SKI Pro, right click on Geoids in Coordinate System Management, and select “New”



7. For the Republic of Ireland, enter the following information:

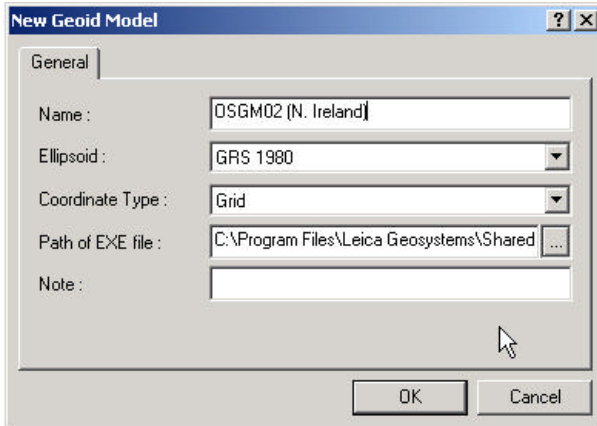



For the Path click the  box and navigate to the following folder:

C:\Program Files\Leica Geosystems\Shared\Geoids\OSGM02_RoI

And select the GemToSki.exe file and click OK.

8. For Northern Ireland, enter the following information:



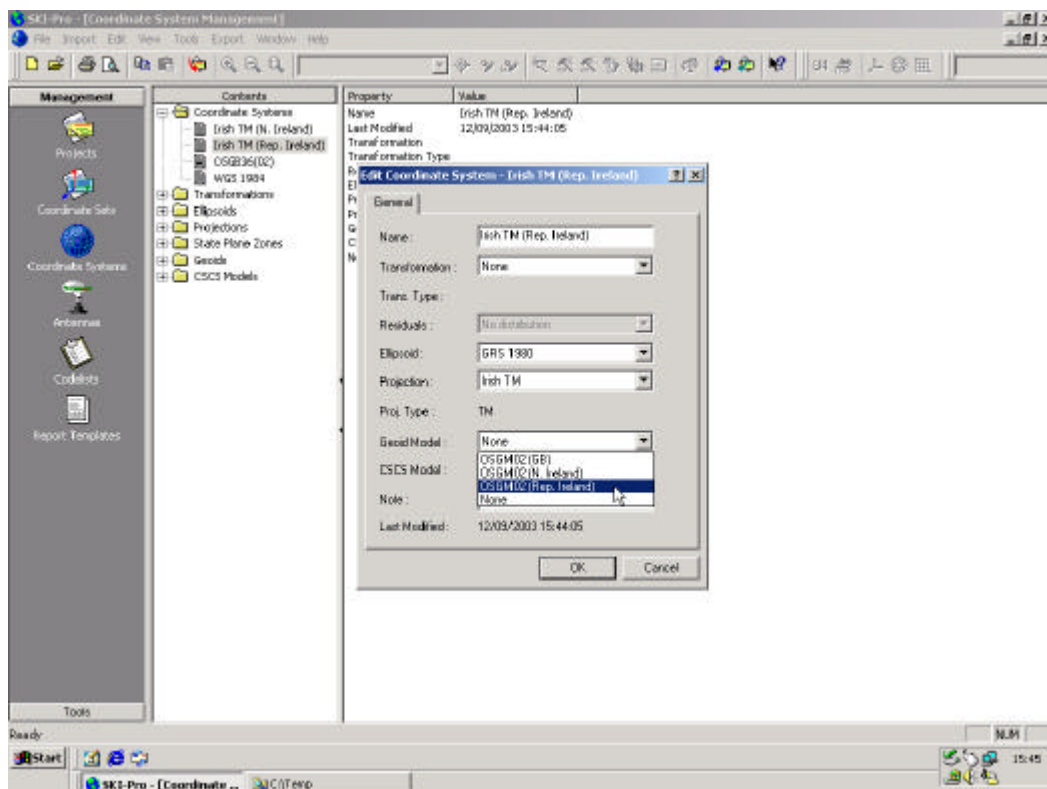
For the Path click the  box and navigate to the following folder:

C:\Program Files\Leica Geosystems\Shared\Geoids\OSGM02_NI

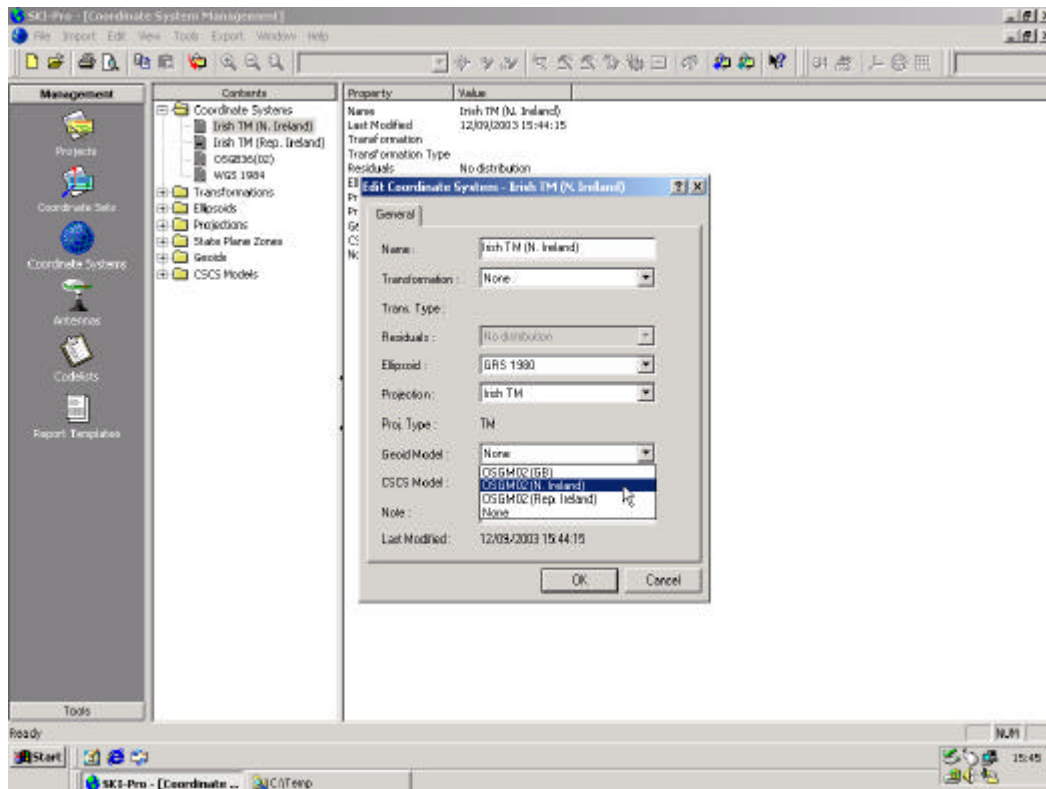
And select the GemToSki.exe file and click OK.

9. Finally attach the newly imported Geoid Models to the respective Coordinate Systems as follows:

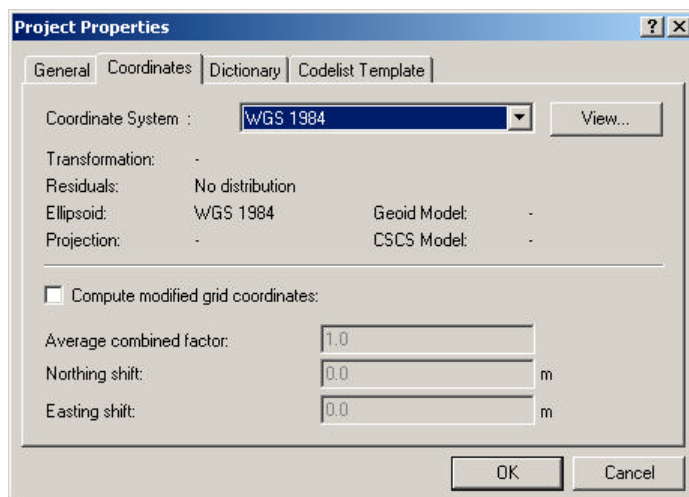
For the Republic of Ireland, right click on the “Irish TM (Rep. Ireland)” coordinate system and click “Properties...”. Change the Geoid Model to “OSGM02 (Rep. Ireland), and click OK.



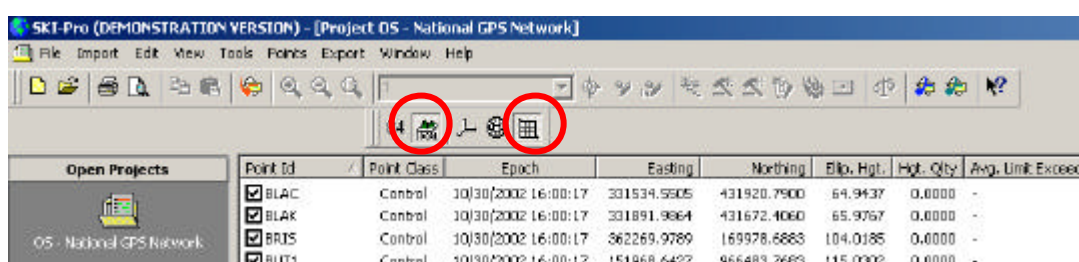
10. For Northern Ireland, right click on the “Irish TM (N. Ireland)” coordinate system and click “Properties...”. Change the Geoid Model to “OSGM02 (N. Ireland)”, and click OK.



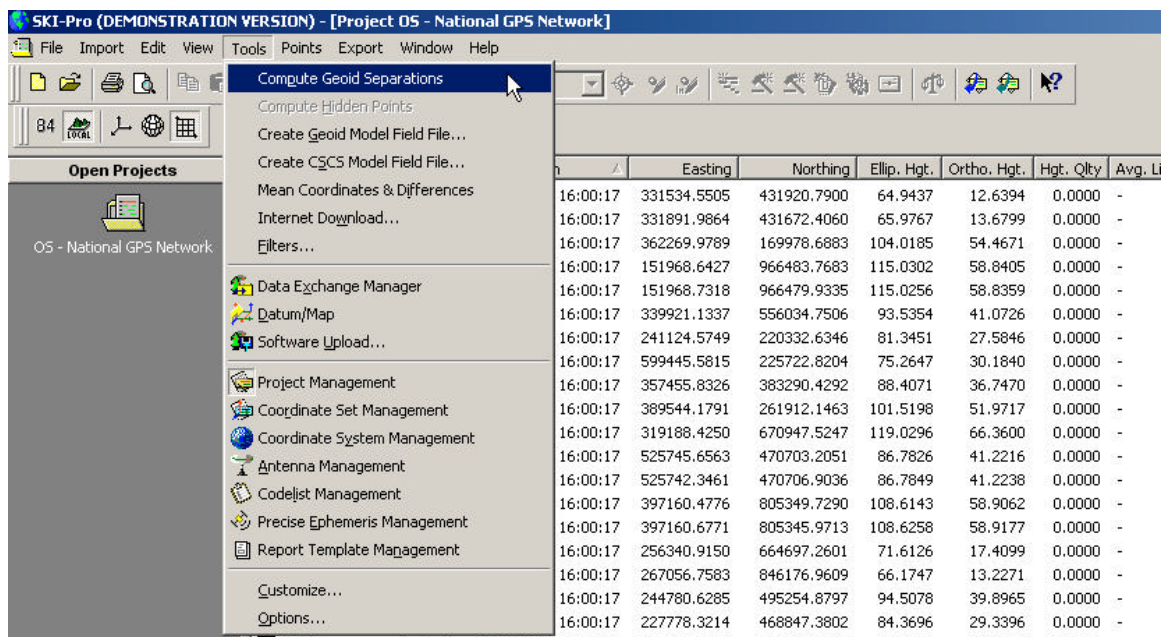
11. Finally attach the desired Coordinate System to your project, in the Project Properties of your open project. Access the Project Properties from the “File” drop down menu in SKI Pro. Select the “Coordinate” Tab, and change the Coordinate System to one of the above systems, and click OK



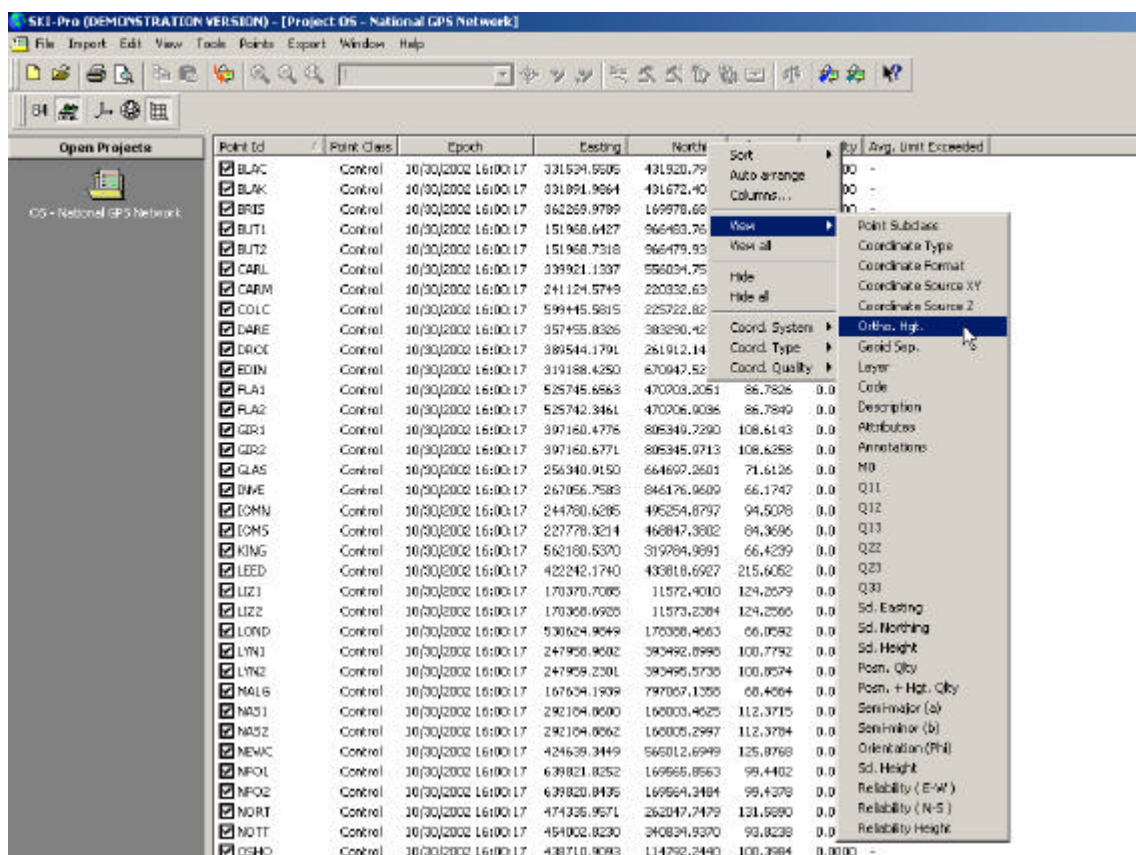
12. Return to the open project and the “Points” quick access tab, at the bottom of the project window. Click the “Local” and then “Grid” icons circled below, to switch from WGS84 to ITM.



13. In order that the Orthometric Heights can be calculated from the Geoid Model, click the “Tools” Menu and select the “Compute Geoid Separations” option.



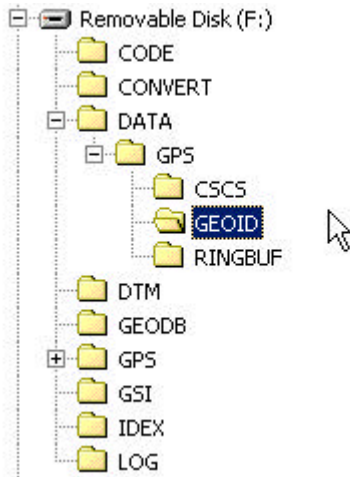
14. Make sure you have the “Ortho. Hgt.” column displayed. If not then use “right click mouse” on one of the column headers and select “View” and then “Ortho. Hgt.”.



15. Export the coordinates!

Directions to load Coordinate System and Geoid onto the System 500 Sensors :

1. Extract all files in the attached zip file (“Irish Sensor Files.zip”) to your GPS ATA Flash card. Make sure you tick “Use Folder Names” prior to extracting, which should result in the following directory structure



This will create the following three files in the below folders on the card:

[\\DATA\GPS\GEOID\OSGM02NI.GEM](#)

[\\DATA\GPS\GEOID\OSGM02RI.GEM](#)

[\\GEODB\GPSTRE.DAT](#)

The above operation will require a desktop PC with a Flash Card Reader or a Laptop with PCMCIA ports. If this is not possible you will need to extract the files to your desktop PC, and use the “Sensor Transfer” (SKI Pro version 2.5 or below) or the “Data Exchange Manager” (SKI Pro version 3.0) in the “Tools” Menu and then transfer the to the above folders on the GPS Card. Please see the SKI Pro Help Menu for more information on how to use the File Transfer Tool.

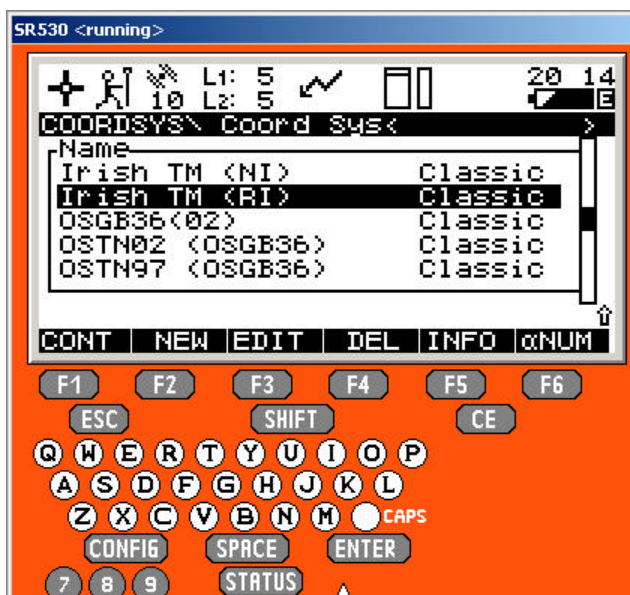
2. With the GPS card in the Sensor, switch on and select “7 Transfer...” from the main menu, and then select “03 Coordinate Systems”. Select and transfer the desired Coordinate System, or F3 “All” for both.



3. Select “1 Survey” and press F6 “CSYS”.



4. Select the desired Coordinate System from the menu, and press F1 “CONT”.



5. Continue into the Survey and Press the STATUS Key, followed by “1 Survey” and then “3 Position”. Press F2 “COORD” until the current position is displayed in Irish Grid. The display height should be the Local Ortho Height.

NOTE: The current displayed position and subsequent RTK measured points will only display the correct ITM coordinates and Orthometric heights providing the reference station coordinates are the true WGS84 values and not a Navigated “HERE” or “SPP” position.