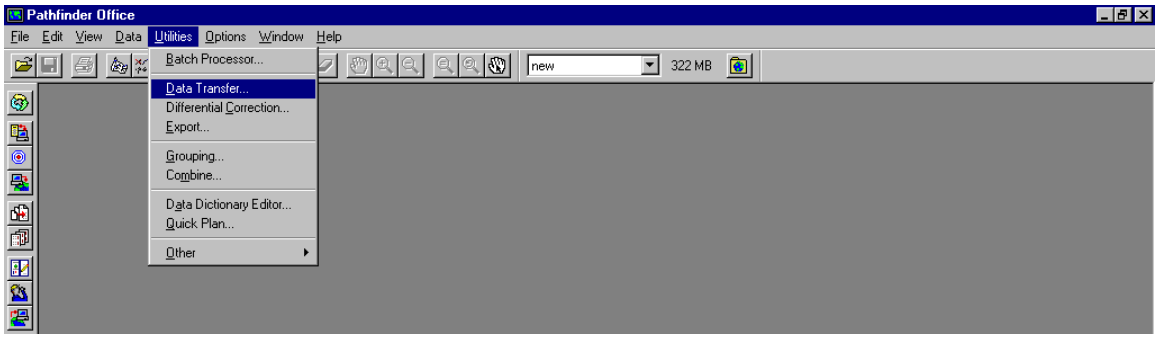
Trimble GPS units Data Download, Differential Correction and Export to GIS

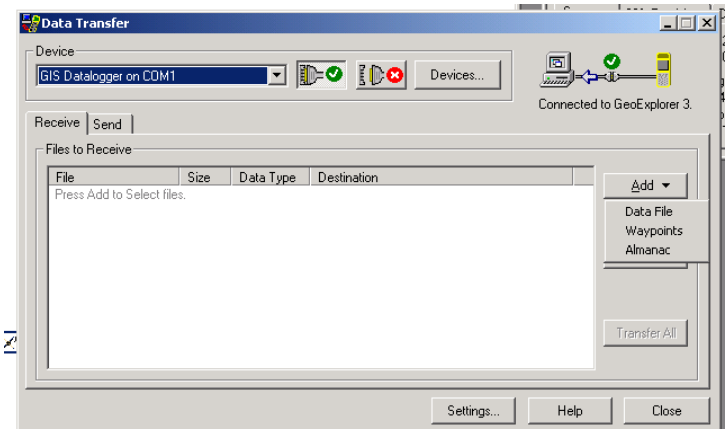
1. Transfer data from GPS unit to computer

a) Open the Pathfinder Office software and select the name for your project from the drop down menu, click OK or open a *New Project*.
b) Connect the GPS unit to the computer.
c) Turn the GPS unit **ON** and arrow down to **Data Transfer** (not necessary for the Geoexplorer 3**)**, press **<Enter**>.
d) In Pathfinder Office select *Utilities/Data Transfer*.

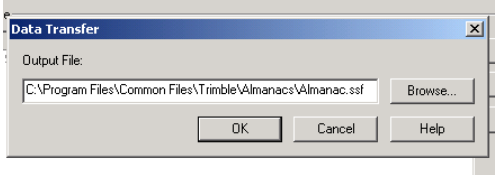


Pathfinder Office will connect to the GPS unit.

d) Begin by transferring the new almanac to the computer. The almanac is a file describing the present satellite status and health and is automatically collected during a GPS session.
In the *Add* drop down menu, select Almanac.



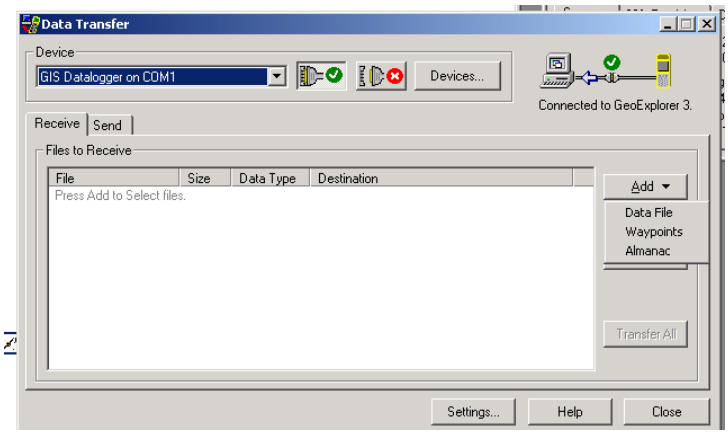
e) The name of the almanac is almanac.ssf, click OK.



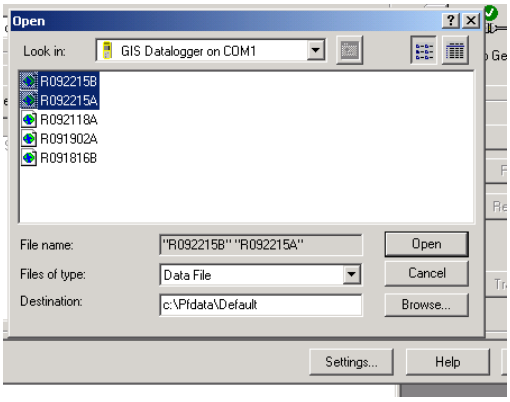
Click *Transfer All* to transfer the almanac to the computer.

Your old almanac will be overwritten, this is OK. The Data Transfer screen will give you the message that almanac has been transferred.

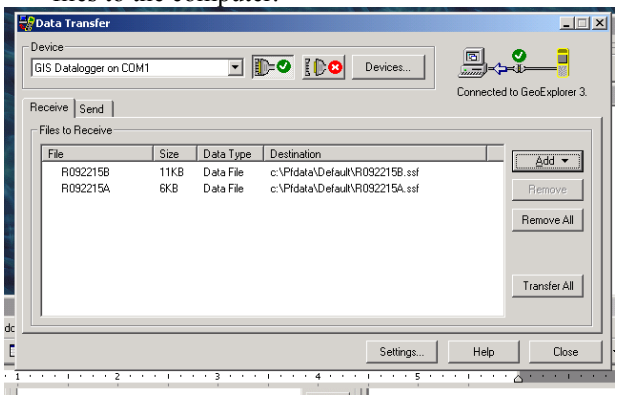
f) To transfer your collected positions, select *Data File* in the *Add* drop down menu.



g) Hold down the **<Shift>** key and select files Set the correct destination directory, then click *Open*.



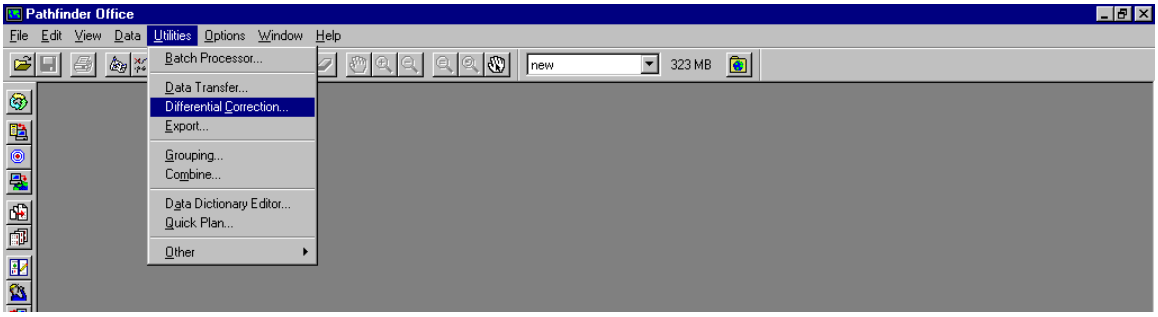
h) The selected file will appear in the Data Transfer window. Select *Transfer All* to transfer the files to the computer.



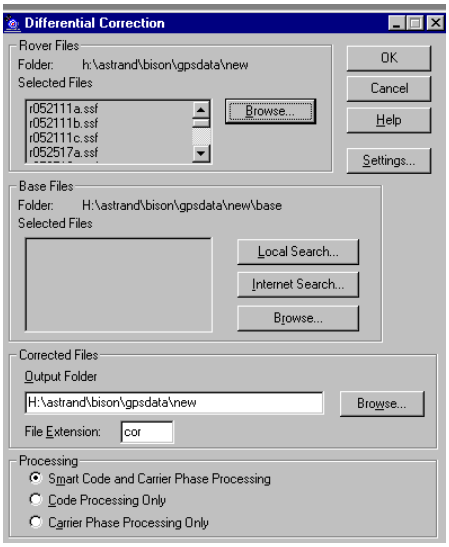
i) Turn off the GPS unit.

2. Differential correction of data

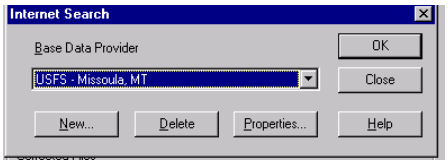
a) Select Utilities/Differential Correction in Pathfinder Office



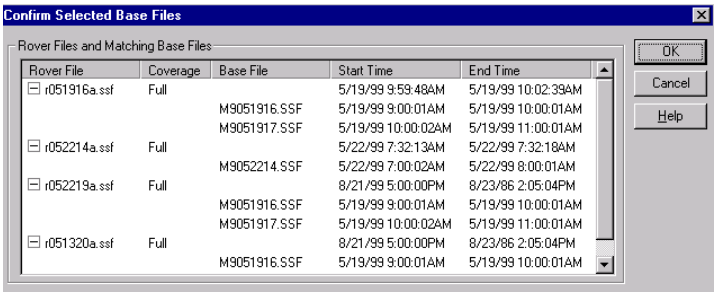
b) The Differential Correction screen will appear. The newly transferred files will show in the *Selected Files* window. If the files you are going to differentially correct don't automatically appear you can look for them using the *Browse* button.



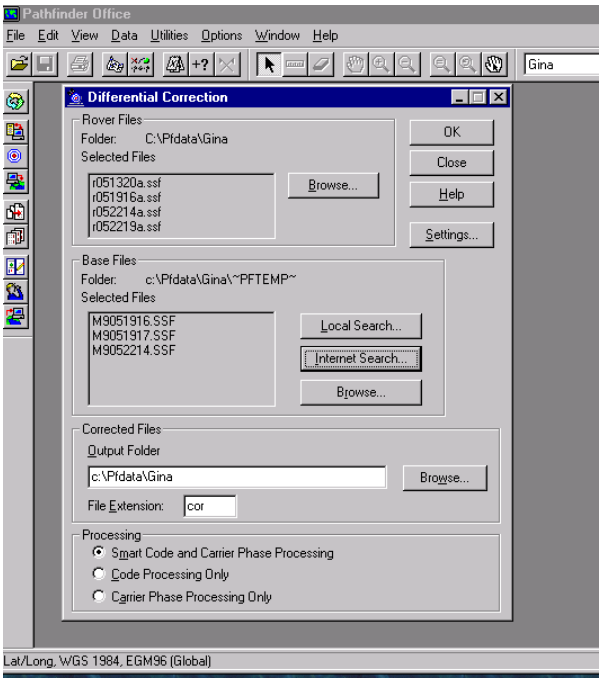
a) Select *Internet Search* to find base station data for your differential correction. You will now be prompted to select a Base Data Provider. Use the drop down menu to select the base station closest to your study area. If none of the available base stations are close enough (within 300 km), click on new and download a better base station from Trimbles web site.



b) Click OK. The appropriate base station files will be transferred via the Internet to your computer. You should get a confirmation that the correct files have been transferred. Click OK to continue.



c) The base files should now show in the *Base File* box on the *Differential Correction* screen.



Click OK to execute the differential correction. You will get a message that the *Differential Correction is Complete*. Click *Close*.

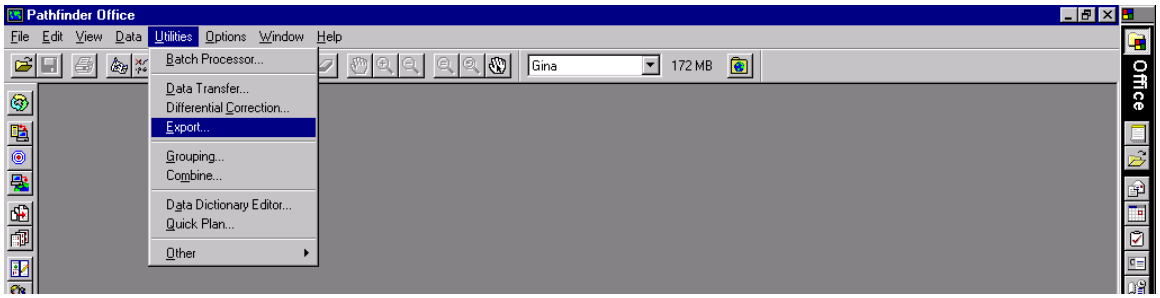
NOTE: At times the base station files will NOT be automatically downloaded from the Internet You can manually download the base station file from the US Forest Service Web page:

http://www.fs.fed.us/database/gps/welcome.htm

Base stations are occasionally down and you may have to select an alternative base station.

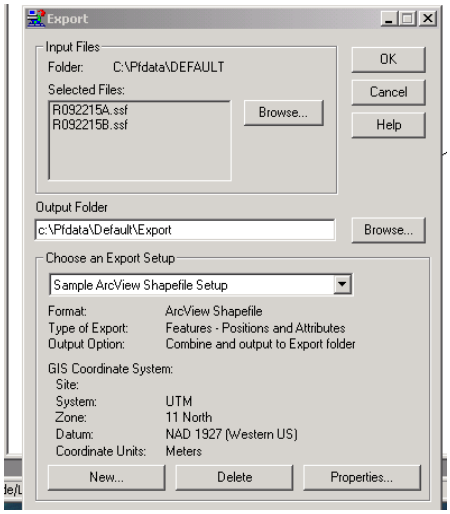
3. Export data for use in ArcView

a) Select *Utilities/Export* in Pathfinder Office.



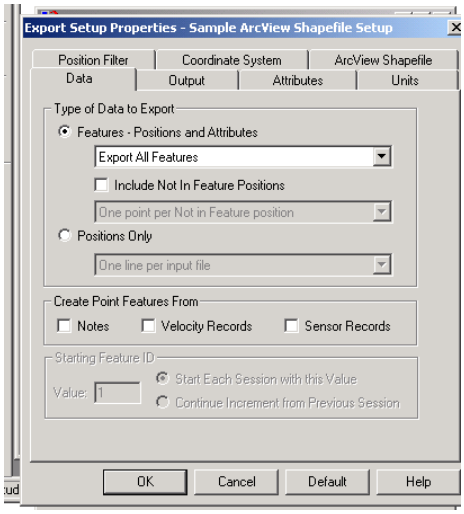
b) The *Export* screen will show the recently corrected input files, or use *Browse* to find the files you want to export to ArcView, Arc/INFO or other format. Select desired export format by selecting in the drop down menu under *Choose an Export Setup*. Selects *Sample ArcView Shapefile Setup* for line-data and *Sample dBase Setup* for point-data. Notice that line-data and point-data must be exported in separate export sessions.

If you have collected data using a Data Dictionary, select *Sample ArcView Shapefile Setup*. In this case line and point data can be exported simultaneously.



Click *Properties* in the lower right in order to select Coordinate System, Units etc.

c) The Export Setup Properties screen will appear.



Go through the menu on the top of this Export Setup screen and select desired options under all the tabs:

Data	Select *Features – Positions and Attributes* if you are using a Data Dictionary If you don't use a Data Dictionary you can select *Positions Only* and choose from the drop down menu if you want *One Point per GPS position*, *One point per input file* (averaging GPS points) or *One line per input file* (line-data).
Position filter	Choose *Filter by GPS Position Info*. If you are planning to map uncorrected data you must check the box for *Uncorrected* in the *Include Positions That Are* box on this screen.
Coordinate System	Select *Use Current Display Coordinate System* if that is OK or choose *Use Export Coordinate System* if you would like to have your output shapefile in another coordinate system, for example UTM. Click *Change* to select desired coordinate system. Make sure to select a Datum that will work with your other GIS data.
Units	Here you have an option to select the units you want in your export file.
Attributes	Here you can select attributes such as date, time, PDOP etc. to be attached to your data points (lines or polys).
Output	Select Output Files (Combine all input files and output to the project export folder works well) Select DOS Files for *System File Format*

Click OK when you are happy with all your selections.

d) Browse to the desired **output folder** for you exported data.

Click OK again on the Export screen. Your GPS points are now exported into chosen format.

e) The default file name for the exported file is Posnpnt.dbf when exporting points in dBase format. The file will always be named this name, so make sure you change the name of your file before you export another set of data – else your exported file will be overwritten.

If you use a Data Dictionary your output files will be named according to the feature names in your Dictionary.

An exported dBase file can be brought into ArcView as an *Event Theme*.