

## Differentially Correcting ArcPad Exchange Files (AXF) using Pathfinder Office

**Session Objectives** – At the conclusion of this session you will be able to:

- Perform differential correction in Pathfinder Office
- Run ShapeCorrect to post-process AXF files.

NOTE: an AXF file is created during the ArcPad Data Manager check-out process if you're working with a geodatabase.

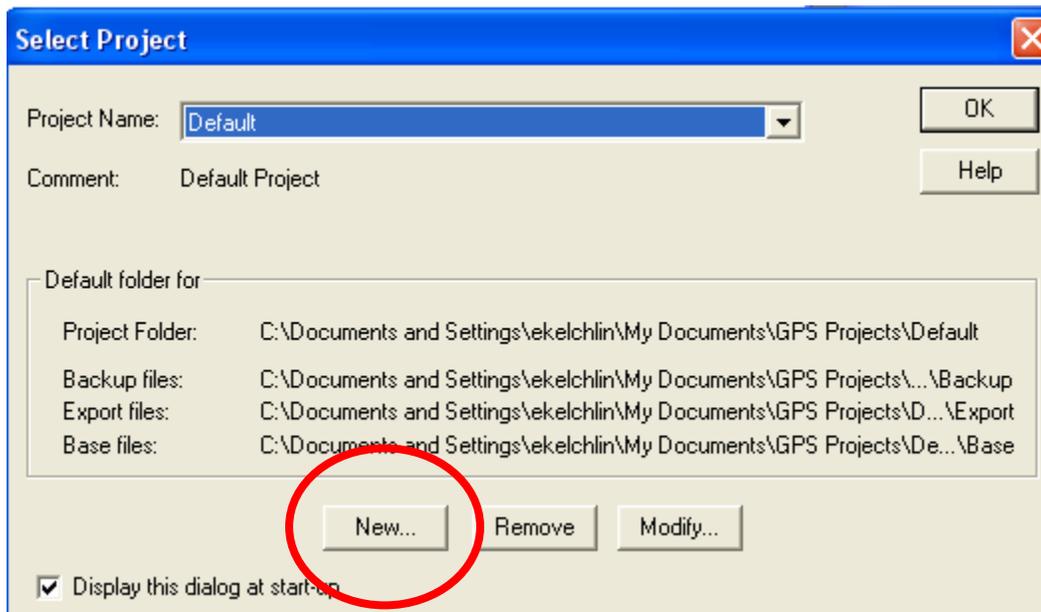
Refer to the following Pathfinder Office document for more detailed information:  
[http://www.geoplane.com/downloads/Office\\_Software\\_Manuals/Mapping/GPS%20Pathfinder%20Office%20User%20Guide%20Vol%203.pdf](http://www.geoplane.com/downloads/Office_Software_Manuals/Mapping/GPS%20Pathfinder%20Office%20User%20Guide%20Vol%203.pdf)

**Material Created By:** Eric Kelchlin, June 2010

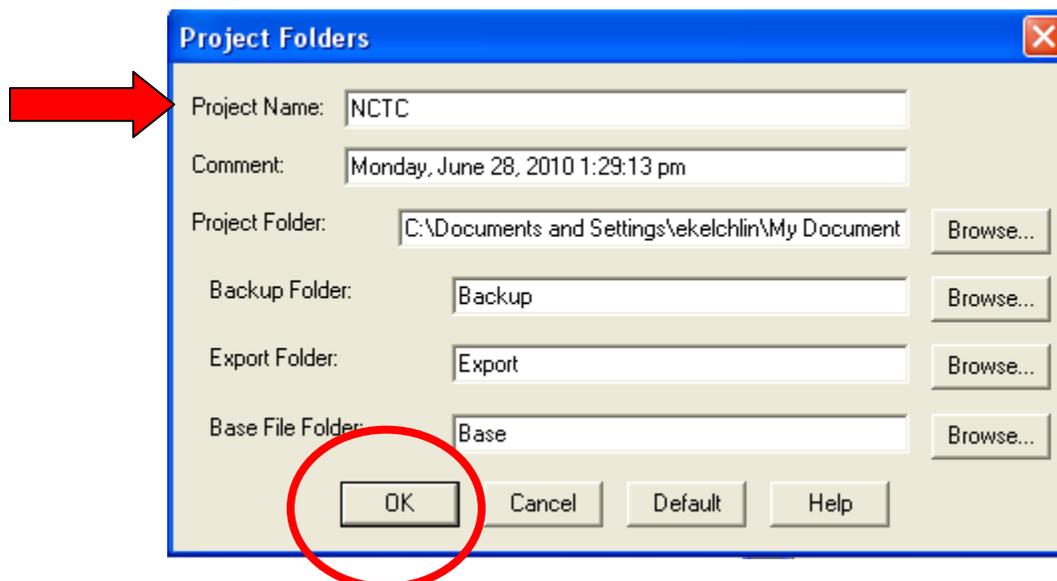
**Software:** Pathfinder Office Professional 4.10-4.20

## SECTION 1 – Setup Pathfinder Office

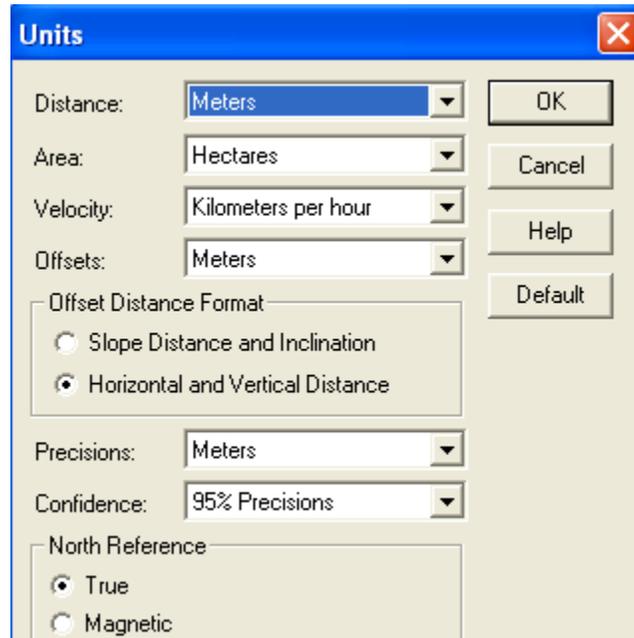
1. Open Pathfinder Office .
2. Click **New** on the **Select Project** dialog.



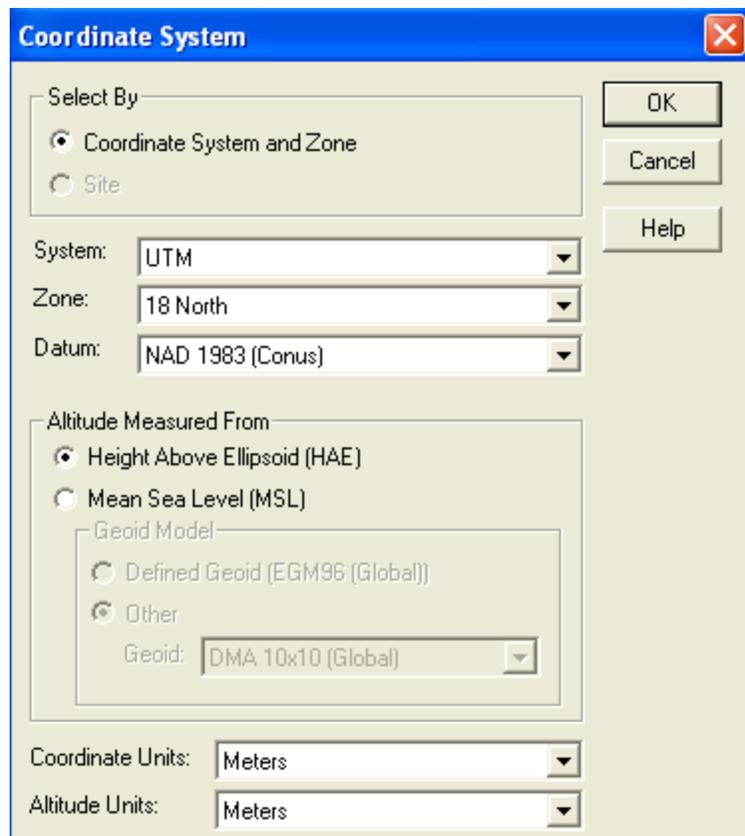
3. Name the GPS project; I use **NCTC** as an example. The remaining folders names will be automatically populated. Click **OK** twice. If security allows you to create a new folder on your C:\ or D:\ drive, then do so. The default project folder is buried down deep which makes it hard to find your data.



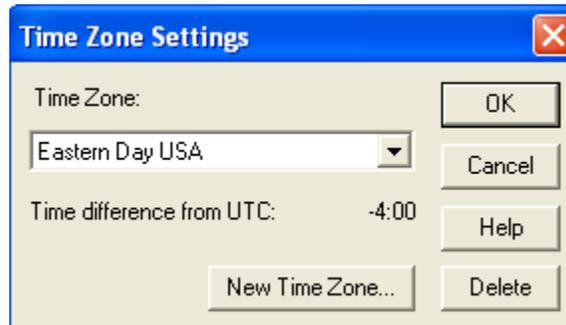
4. Before we work with our GPS data we need make sure our settings are correct. Click on the **Options** button on the main menu and select **Units**. Set all units as shown below.



5. Click on the **Options** button again and select **Coordinate System**. Change the settings to the desired parameters. While at NCTC, use UTM zone18 North, NAD83 as shown here.



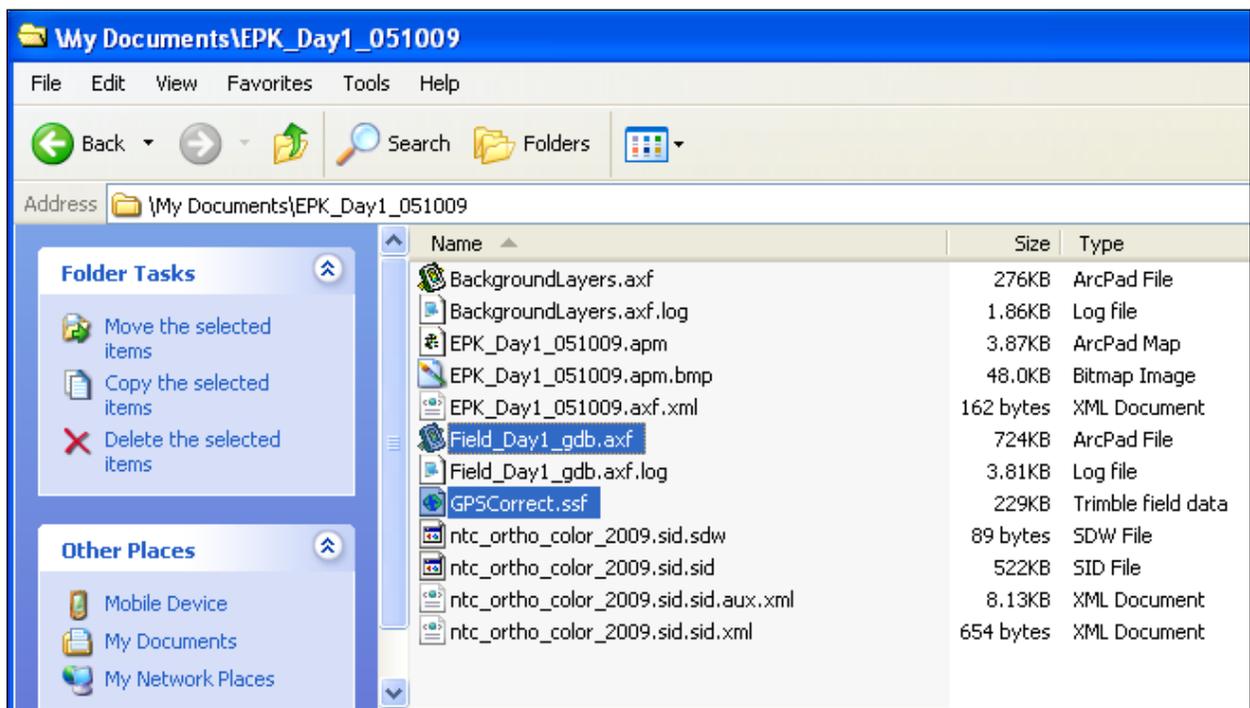
6. Click **Options** one more time and select **Time Zone**. Change the Time Zone to the appropriate zone. Click **OK**.



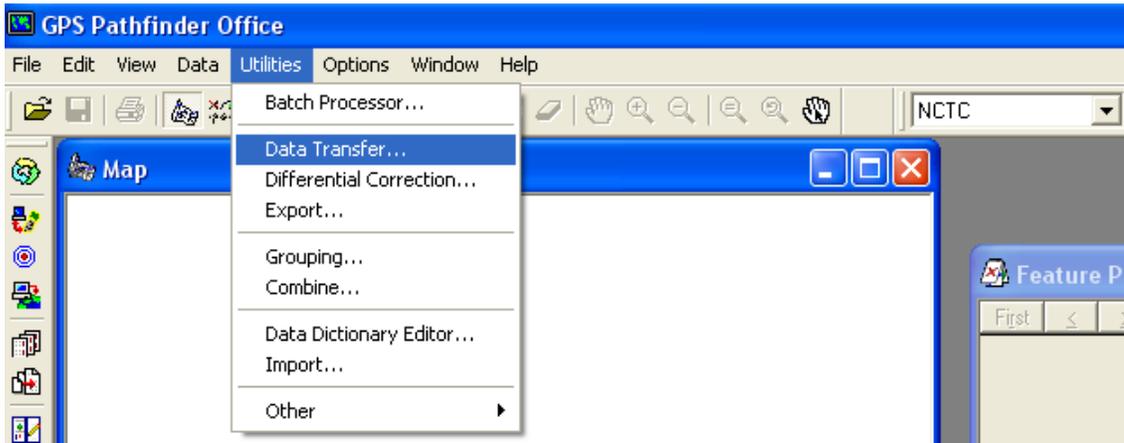
7. Keep Pathfinder Office open.

## SECTION 2 – File Transfer and Differential Correction

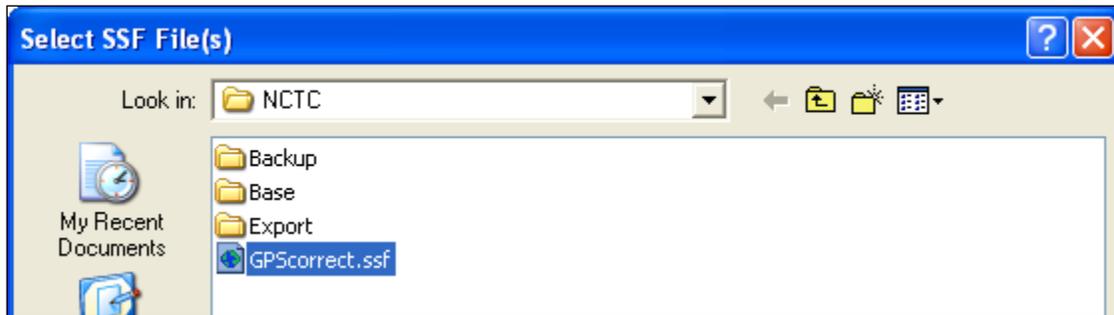
1. Make sure that you already transferred your ArcPad project folder from your GPS device onto your computer.
2. Copy the **GPSCorrect.ssf** and the **.axf** ArcPad file from your project folder and paste in the new **NCTC** project folder using ActiveSync or Windows File Explorer. See the example below:



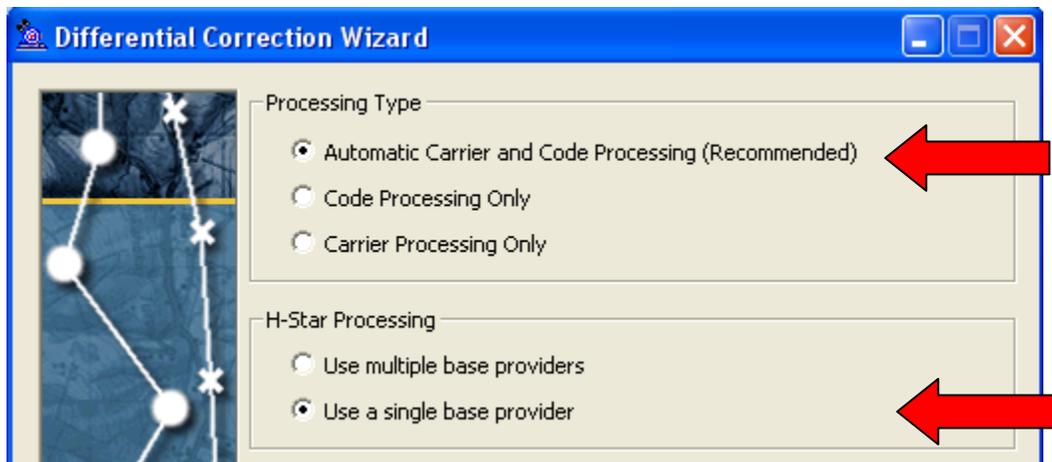
3. From the Pathfinder Office **Utilities** menu, choose **Differential Correction**.



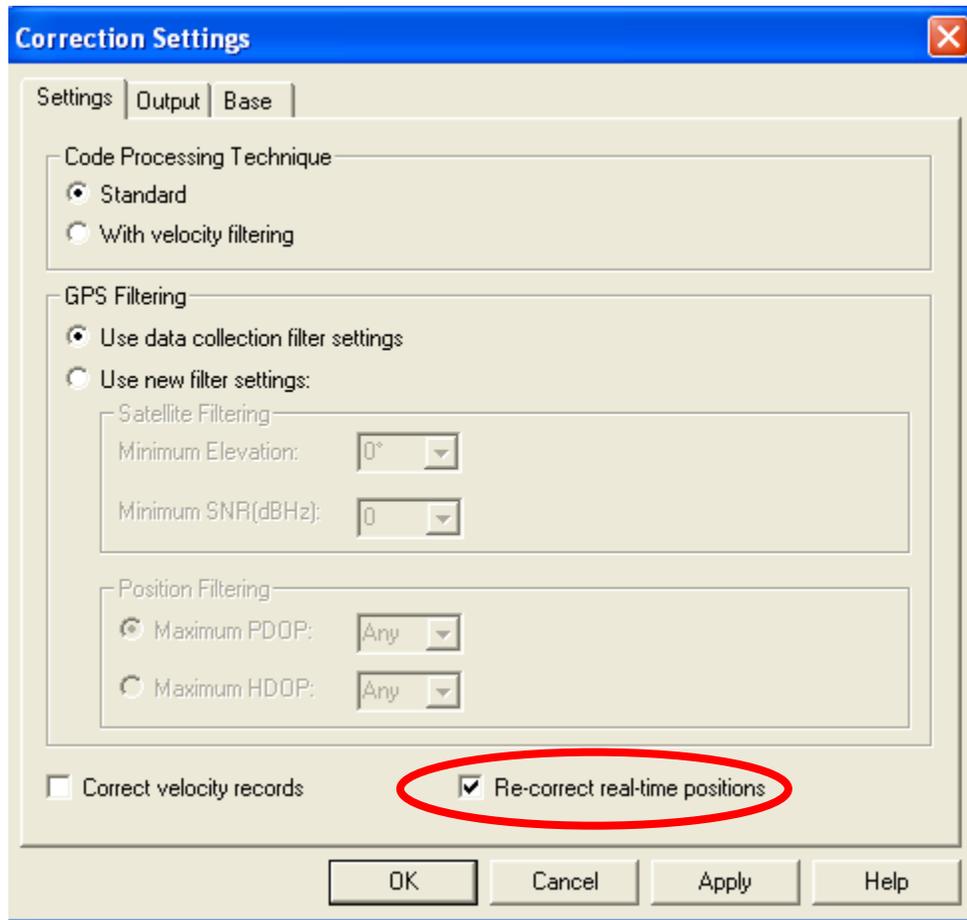
4. Click on the browse  button. Navigate to the **NCTC** project folder and select **GPSCorrect.ssf**. This is the default file name for all GPSCorrect rover files. Click **Open**. You can select more than one .ssf file if needed.



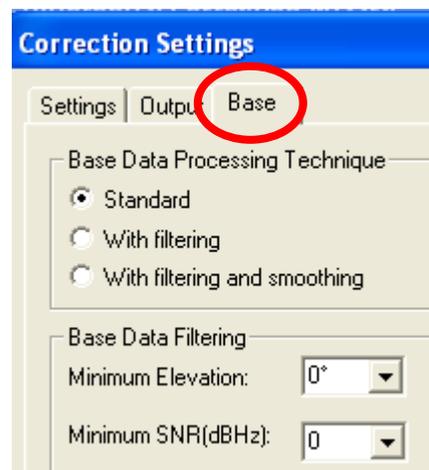
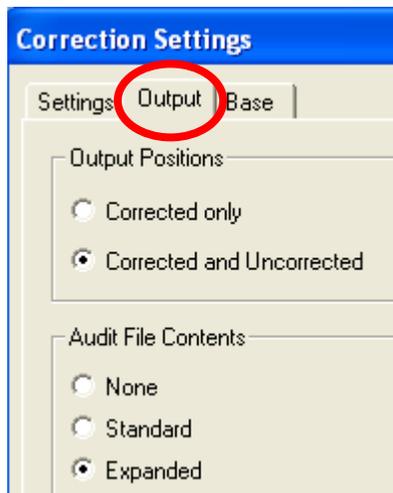
5. Click **Next**. Ensure that the Automatic Carrier and Code Processing are checked. Use multiple base providers if you have an XH unit. Click **Next**.



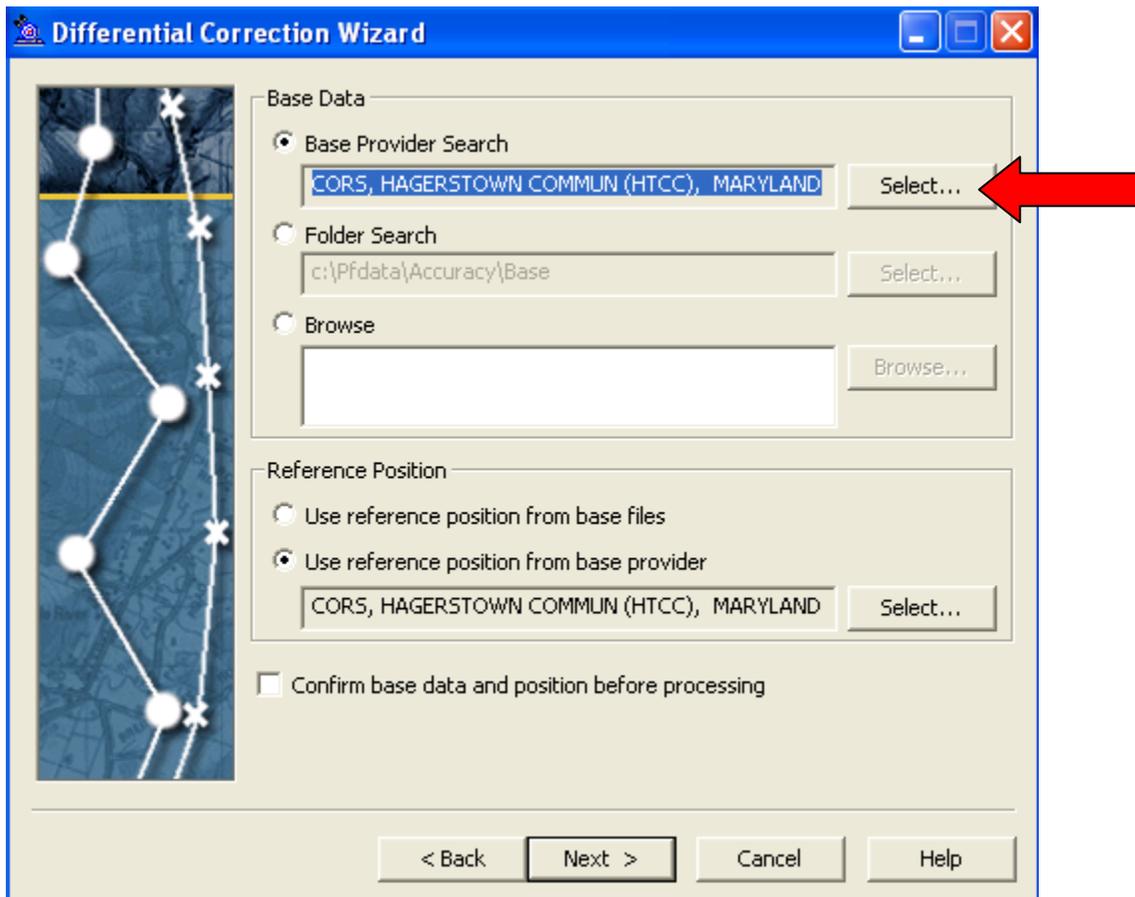
6. Click the **Change**  button on the **Correction Settings** dialog.
7. Establish the following setting in the **Settings** tab. Make sure to check the box to Re-correct real-time positions.



8. Establish the following setting in the **Output** and **Base** tabs:

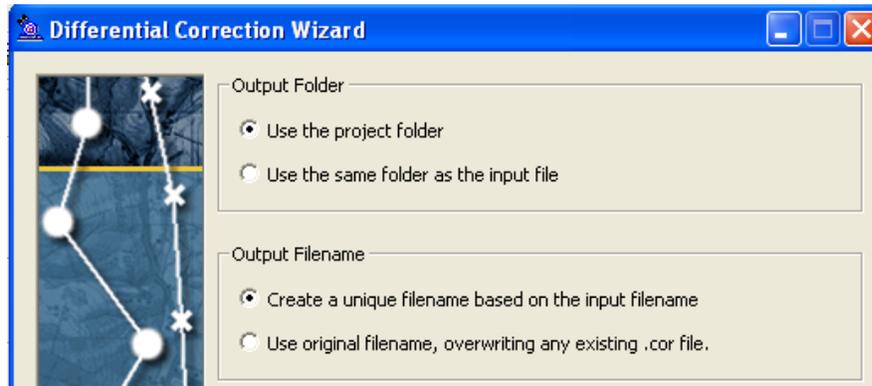


9. Click **Apply**, and then **OK** to accept any changes and return to the **Differential Correction Wizard** dialog.
10. Click **Next** to go to the **Base Provider** dialog.
11. Click the **Select** button.
12. Click the **Update List**  button to download a list of base providers.
13. After the download is complete, select the nearest and most reliable base station. This will take trial and error to determine which the best one is. While at NCTC we use **CORS, HAGERSTOWN COMMUN (HTCC), MARYLAND** base station. Click **OK**.
14. Click **Next**.



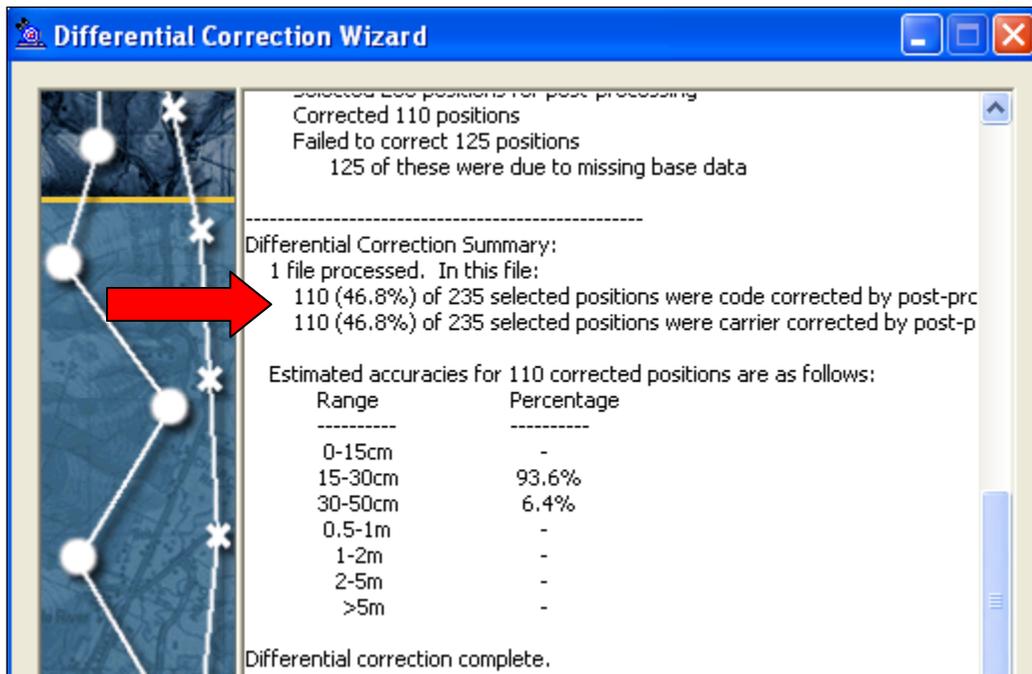
**NOTE:** Not all base stations are created equal! You need to find the most reliable and accurate station near your field site, which requires testing over a survey monument to be sure. If your data is WAAS corrected, you may not need to post-process your data.

15. Ensure that you're settings for **output folder** and **filename** match the screen shot below.



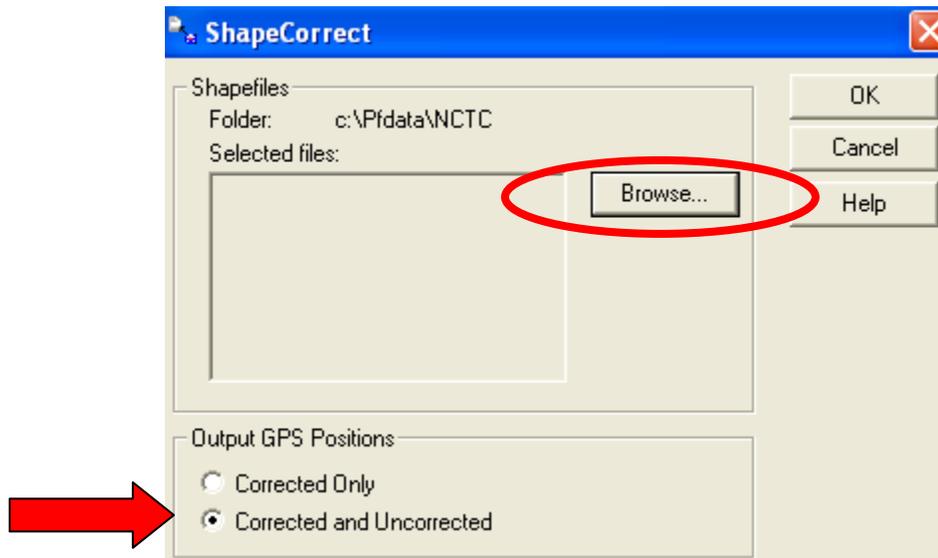
16. Click the **Start** button at the bottom of the dialog. You are notified of the processing results. You should have 100% of the positions code corrected (the example below shows only 46.8%). If not 100%, try a different base station or wait and try again later. Generally, a base station will post the data on their server 10 minutes after each hour, but some wait as long a day to post the data. System wide outages can also occur. Visit <http://www.ngs.noaa.gov/CORS/> to check the status of all CORS base stations.

17. Click **Confirm** and then **Close**.

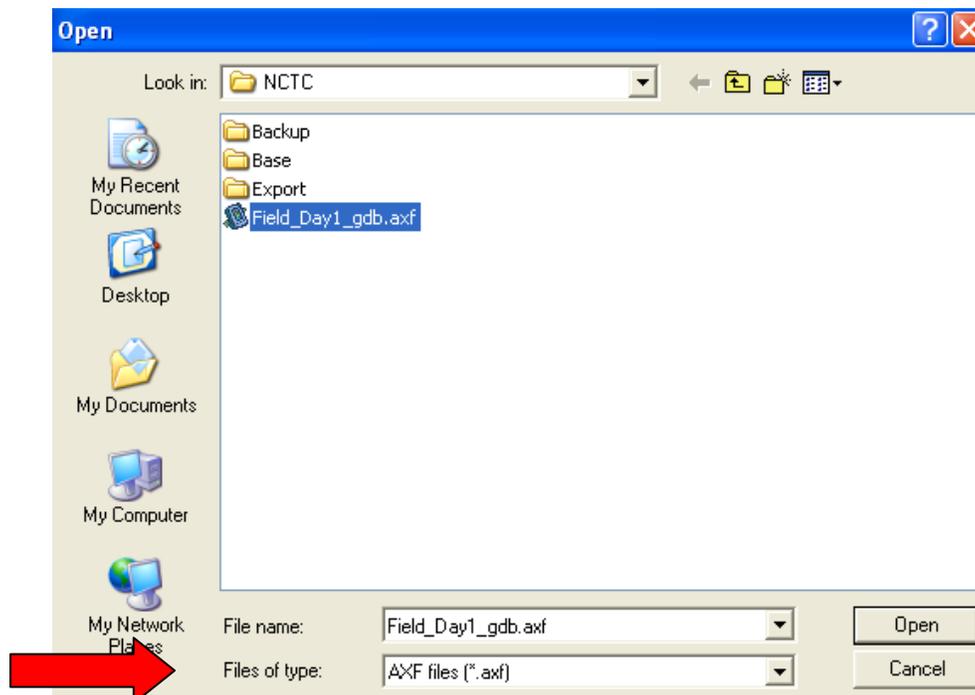


### SECTION 3 – Run ShapeCorrect

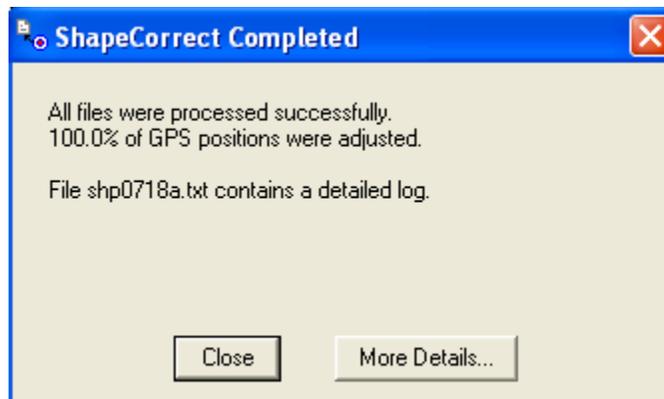
1. From the Pathfinder Office main menu select **Utilities > Other > ShapeCorrect**.
2. Choose **Corrected and Uncorrected** for output GPS Positions. Click the **browse** button.



3. Change the File Type to **.AXF files**. Select your file and click **Open** and **OK**.



4. You are notified with the results of your operation. If problems were encountered view the detailed log. You can copy this log, open ArcCatalog, and paste in your metadata for excellent documentation of your differential correction results.



5. Using Windows Explorer, and navigate to **C:\....\NCTC**. Copy your files and paste them back into your GPS project folder. Replace the files.
6. Open ArcMap and Check-In the ArcPad project as you would have done normally.

