

GPS Data Collection and Transfer

- ❖ Download current Trimble GPS almanac:
 - FTP from: <ftp://ftp.trimble.com/pub/eph/current.ssf>
 - Save to: c:\Program Files\Common Files\Trimble\Almanacs replacing the existing file.
- ❖ Under Pathfinder Office GPS software, check for Satellite Coverage:
 - Start Pathfinder Office
 - Select Ok for Default set up.
 - Select Utilities > Quick Plan
 - Select date on calendar
 - Under Keyboard, enter latitude/longitude for Salem, MA (42°28'12" N, 70°58'48" W).
 - Select Graphs > PDOP
 - If your overall position dilution of precision (PDOP) is below 6.0 you should be good to go. If it is higher than you need to select an alternative time to collect GPS data.
- ❖ A Quick and Easy Way for Collecting Point Positions with Trimble GeoExplorer II GPS Units:
 - Turn On (Bottom Black Button)
 - Esc back to Main Menu
 - Scroll to 3. GPS Status (Select with yellow diamond)
 - Scroll to 1. Satellite Tracking (Select with yellow diamond)
 - Continue when a strong lock (double bar) is established on 4 satellites.
 - Esc back to Main Menu
 - Scroll to 2. Position (Select with yellow diamond)
 - Make sure Position is recording (watch display change).
 - Esc back to Main Menu
 - Scroll to 1. Data Capture (Select with yellow diamond)
 - Scroll to 1. Open Rover File (Select with yellow diamond)
 - After a period of time (collect ~200 readings), select 3. Close File (Select with yellow diamond)
 - Select Yes (Select with yellow diamond)
 - Turn Off System (hold in Bottom Black Button for 5 seconds)
- ❖ Under Pathfinder Office GPS software:
 - Start Pathfinder Office
 - Select Project Window
 - a. Press New...
 - b. In the Project Folder window:
 - Enter Project Name
 - Enter Project Folder location
 - Select Utilities > Data Transfer

- In the Data Transfer window:
 - a. Device GIS Datalogger.
 - b. Port: COM 1.
 - c. Direction: Receive.
 - d. Sort By: Name.
 - e. Press Connect (if it does not connect automatically).
 - f. Selected Files: Add All or select files and then Add.
 - g. Select Transfer.
 - h. Close when files are transferred.
 - i. If problems occur try again. Sometimes it takes a few tries!
- ❖ Open files that were just downloaded:
 - Select File > Open
 - Select files that were transferred, and then Open.
 - a. Locations should display on Map screen.
 - b. Zoom in closely to see scattering of raw data points.
 - Select Utilities > Differential Correction
 - a. For Base Files, click on Internet Search.
 - b. Update your correction file, if asked.
 - c. Select a Base Provider: CORS, Woburn.
 - d. Yes it all the way through!
 - e. Confirm base station files.
 - f. Set output folder for corrected files.
 - g. Processing: Smart Code and Carrier Phase Processing
 - h. Run correction.
 - Select Utilities > Grouping
 - a. Sort: Chronologically
 - b. Set: Output File
 - c. One group per input file
 - d. Create Feature Type: Points (for this exercise)
- ❖ Open files that were just corrected and grouped:
 - Select File > Open
 - Select file that is grouped (grouped.ssf), and then Open.
 - Under Data, select Feature and Position Properties.
 - Select individual points and look at positional accuracies.
- ❖ Export files to ArcView shapefiles:
 - Select Utilities > Export
 - a. Choose output folder.
 - b. Choose an Export Setup (Sample ArcView Shapefile Setup).
 - c. Run export.
- ❖ Bring up your corrected GPS point coverage in ERDAS Imagine.