

Plotting GPS Points

Recently a person queried a listserv about simple programs for plotting GPS points. Several folks asked for a summary of the replies, so here they are (below).

The following programs were mentioned:

- 1) ArcView www.esri.com
- 2) Delorme TopoUSA
- 3) ExpertGPS <http://www.expertgps.com>
- 4) iMap (currently Mac-only) <http://www.kuleuven.ac.be/bio/sys/imap/home.html>
- 5) GPS Trackmaker Professional <http://www.gpstm.com/>
- 6) spreadsheets

I used Delorme TopoUSA for my maps and therefore got all sorts of ancillary data. It was relatively simple to enter the data and format the map. You aren't going to be able to do things like geostatistics, but it doesn't sound like you need to anyway. It only cost me \$100.00 and I got topos for the entire country. If you only need a small region, you can get a the regional version for about \$35.00. The topos work well if you want to make a map of an area of a few square miles or greater, but are not as good at finer resolutions. You can purchase USGS topos to go with this package and may be able to get higher resolution if you need it. I found it worked well for a map I made of the Virginia portion of the Chesapeake Bay. I made my own symbols to represent different cell counts and then placed them on the map based on lat and long. Because the program does not try to do everything, it is much easier to find out how to do the things that I did need to do. I have used arc info, ArcView and played around with Grass (freeware GIS which seems about as powerful as ArcINFO), but getting data into the program was 90% of the battle even with ArcINFO export files. With this program, the data is provided with the package.

OK, you're right about the learning curve for ArcView...but my friend Tom Orum put together a web site that let even me make maps:

http://ag.arizona.edu/PLP/GIS/Case_Study_Af/Opening.html

A program like ArcView is relatively straightforward for making simple maps and can be learned in a couple of days. It is the analysis and more advanced workings of a GIS that tend to take a while longer to learn. I recommend the online ESRI courses for ArcView. They are about 100 bucks each and will get you going quickly.

Check out ExpertGPS (try expertgps.com or topographics.com). They make three levels of the program: a free version that you can use to manage GPS data up to an \$80 version with online access to USGS maps. I started with the free version, and within a month had purchased the full version. The tech support is pretty good too, although you are unlikely to need it. The learning curve is about 5 minutes long. I don't think they do differential corrections, but that is less of a concern these days than it used to be, depending on what you are doing.

At the very lowest end, you can treat them as x-y coordinates and use whatever software you'd make any other graph with. That's very limited, though, and you'll probably want to move up to a GIS package at some point. ArcView is relatively friendly, and most academic institutions already have a site license.

it's pretty easy to make maps in ArcView for windows (depending on what you wanted to put on them).

Take a look at iMap (<http://www.kuleuven.ac.be/bio/sys/imap/home.html>)

"...are the points still in the GPS unit? If it's a Garmin GPS, you can use Mapsource to download the points. If it is a Trimble GPS, use Pathfinder Office software. Both programs will generate a simple map, and both will allow you to export the points into ArcView as a shapefile. If you have the points written down somewhere in a text file or table, I would just go straight to ArcView."

For a quick map with our remote gps data, we use GPS Trackmaker Professional, a program made by designers in Brazil. I know you can use .bmp, .jpeg or .gif files, but probably more are compatible. The program can operate on Win NT/95/98/2000. You can download the basic version for free by going to <http://www.gpstm.com/>.

The simplest way I can think of to plot GPS points is to use UTM coordinates and plot the points using a spreadsheet or basic stats package. In Excel there is much flexibility for adding text, lines, symbols, etc.
