

A COMPARISON OF GPS PROGRAMS DNRGARMIN AND WAYPOINT+/ AVGARMIN AND CONVERSION OF GPS DATA TO ARCVIEW SHAPES™

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Interface between Global Positioning System (GPS) and Geographical Information Systems (GIS) has historically required expensive equipment and extensive training. The need for quick and reliable interface between these technologies has lead to the development of many GPS/GIS interface (shareware and commercial) programs. I evaluated two shareware programs that simplify the transfer of data from Garmin GPS units to ArcView. Waypoint+ and DNRGarmin may be used as standalone programs, however, DNRGarmin may be launched directly from ArcView. Waypoint+ requires the intermediary Arc View extension AVGarmin to convert GPS data into ArcView shapefiles. Both programs incorporate multiple projections and datums. Both programs will convert waypoints to point shapefiles and track logs to line and polygon shapefiles from track log data. GPS attributes vary by program and by shape. Only DNRGarmin will allow the conversion of both waypoint and track log data to ArcView graphics. Waypoint+ generates new waypoints from entered text. DNRGarmin originates new waypoints and track logs from graphics created in an ArcView View or from ArcView shapefiles. Waypoint+ stores GPS data as comma

delimited text files with a descriptive header, thereby allowing the storing of coordinate information in several projections and datums. DNRGarmin also stores GPS data as comma delimited text files however, coordinate information is recorded only as geographical decimal degrees. Coordinates of waypoints did not vary between the two programs.