



TIPS
Technical Innovation
and Professional
Services

Trimble Nomad GIS/GPS Data Logger

TIPS provides customers with Trimble Nomad hardware running TerraSync or ArcPAD software as a customer check-out system. The Nomad is designed as a GPS solution in difficult terrain to enable georeferencing for GIS-building, accurate control for remote sensing, and precision navigation, among other uses. Nomad data is convertible to CAD and GIS formats, and offers the same higher degree of accuracy than navigation/recreation GPS equipment. The Nomad is also a rugged field computer/data collector.

GPS Overview

Global Positioning System technology allows digital capture of three-dimensional locations anywhere on or above the earth's surface with 24/7 availability. This free system is the same one used for vehicle navigation or hiking. GPS horizontal positional accuracy ranges from 2-5 meters for navigation/recreation equipment to around one inch for survey units. Elevation accuracy is generally one half or one third of the XY accuracy. GPS accuracies can be enhanced in real-time by use of commercial or WAAS satellite correction signals or by later post-processing using base station data posted on the Internet. Navigational /recreational GPS is biased towards yield of GPS signals irrespective of accuracy; GIS mapping GPS is biased toward collecting GPS positions of known accuracy.

Field to Map

The Trimble Nomad is a highly portable, all-in-one GPS receiver and GIS feature and attribute data collector running the Windows Mobile Operating System. The Nomad uses signals broadcast from the NAVSTAR GPS system. The Nomad is optimized to collect positions under tree canopy that are georeferenced to commonly-used coordinate systems and datums. These signals can translate mine or reclamation features into GIS or CAD digital file formats. These files are then turned into GIS or CAD maps or used for GIS analysis.

Geospatial Data Portability

GPS data is automatically collected into standard "real-world" coordinate systems that can be easily translated into GIS coordinate systems. CAD system support is provided for geospatially-enabling CAD drawings. Using GPS data exported into standard GIS/CAD formats allows TIPS users to more effectively access and share geospatial data across organizational boundaries.

Hardware:

Trimble Nomad



SMCRA BENEFITS/USES:

- Capture digital field data for permitting and reclamation investigations.
- Use imagery and vector drawings as backgrounds.
- Collect data in standard coordinate systems and datums.
- Provide positions that spatially-enable AML and Title V analysis.

TIPS TRAINING CLASSES:

TerraSync for Advanced GIS Data Collection

NEED HELP????

http://www.tips.osmre.gov/tips_html/mobile_computing.asp

Contact: Robert Welsh
rwelsh@osmre.gov