USING GEOLINK™ FOR THE IMPLEMENTATION OF ENHANCED 911, PUBLIC SAFETY MAPPING

Analysis and Planning Services, Inc. utilizes the GeoLink™ GPS system for public safety mapping projects. The use of GPS technology has made comprehensive public safety mapping cost effective for even rural areas. The GeoLink™ system provides rapid and accurate real-time locations, greatly decreasing the time to create base maps and layers for public safety GIS. The ability to collect many different types of information in a single field session allows simultaneous development of layers for roads, habitable structures, bridge weights and limits, hazards and hydrants.

After field collection, the GeoEdit™ processor allows direct input into PC Arc/Info™ with minimal data editing. These Geolink™ produced coverages are the source for layer databases and are utilized to graphicly validate and update third party digital map files. The completed coverages are input into Responder E911™ computer-aided-dispatch, and FIREFOX™ emergency management information and planning systems.

The GeoLink™ GPS provides a rapid and efficient means to collect spatial data. The GPS/GIS integration provides an accurate and cost effective data source for the implementation of Enhanced 911, Computer-Aided-Dispatching and Emergency Management Planning services.
ENHANCED 911 MAPPING AND ADDRESSING

PROJECT APPLICATION

Analysis & Planning Services, Inc. (APS) is a software development and local government consulting firm. The application of GPS/GIS principles and technologies has allowed the firm to offer services to its clients that were not previously economically feasible. Using GeoLink™ and PC Arc/Info™ to produce comprehensive mapping and addressing for Enhanced 911 implementation, APS is helping the counties of Henry and Franklin, Virginia significantly improve their emergency response services, and concurrently setup the framework for county geographic information systems.

Enhanced 911 (E911) service differs from Basic 911 service in that it automatically provides the emergency response dispatcher the location of a distress call. This is accomplished by accessing address databases, based upon the telephone number of the distress call. E911 requires comprehensive addressing of all phone locations and structures in the emergency service areas. Traditionally, comprehensive addressing has been accomplished by sending large crews into the field. Numbers are manually assigned and runners tag these numbers on every house found. This information is transcribed onto existing maps and later keyed into databases. Any new mapping of developing areas must be accomplished separately.

The use of the GeoLink™ data collection system allows a small field crew to collect all address data without stopping the vehicle, with automatic attribute database entry and most importantly with real-time mapping to validate existing maps and draft new information. Addressing, mapping and validation are accomplished in one pass, and all data is automatically setup for GIS development.
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Most importantly, since the GIS data is collected as part of the E911 implementation services it is funded by those monies. In Virginia and many other states, local communities are authorized to utilize monies collected from an Enhanced 911 surcharge for addressing, mapping and implementation services. This surcharge, once adopted by a community, is administered by the telephone service provider, shielding much of E911 funding from the local government budgetary process. In developing a comprehensive base map and other information layers for public safety application, local governments can afford to fund GIS development.

The integration of GPS/GIS has changed our ability to collect geographic source data, moving GIS data layer development from the drafting rooms out onto the streets. In this application, APS uses GeoLink™, along with PC Arc/Info™ to provide local governments with the means to establish a geographic information system through the improvement of their public safety services. The improved technology and increased availability of GPS/GIS has opened new avenues for the creative implementation of geographic information services.
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