

What is GIS?

What is GIS and how can it help you?

A Geographic Information System (GIS) is, quite simply, a tool for displaying and analyzing crucial information as it relates to a geographic location.

If you've ever scribbled notes on a map, added data annotations to a mapping software program, or even maintained a database that contains locational information such as addresses, you've created a simple GIS.

Full-featured GIS software programs such as *XMap 6 GIS Editor* provide a quantum leap in efficiency, delivering the ability to organize, query, and analyze your data, and to ascertain the answers you need for informed decision making and comprehensive research.

How is a GIS created?



Typically, a GIS is created by collecting all available and appropriate data, processing it into a usable form, and overlaying the resulting layers on a base map for a given area. This data may be derived from field-collected GPS log files, an existing spatial database, a list of objects with a known location or address, published GIS data layers, or by using object drawing and attribution tools within the GIS software.

When these data layers are in place, they provide a visual perspective that can help answer your fundamental who, what, where, and how questions. For example: Where are the highest concentrations of old growth forest? Which properties are adjacent to wetlands? Are there specific areas of the city that have higher crime rates? How does average household income relate to life expectancy?

Making GIS Accessible

Until recently, the cost of a full-featured GIS was prohibitive. Between software, labor costs and training, many school departments simply couldn't afford or justify the expense. Today, software and mapping companies like DeLorme are developing GIS products that can run on standard desktop or laptop computers using mainstream database technology with minimal maintenance and training required.

GIS has made inroads into countless fields of study at every academic level. Schools and colleges are now realizing the importance of the spatial characteristics of their data for effective research and study. GIS can be used for:

- Analyzing demographic patterns in social studies research
- Mapping archeological sites in history class
- Examining the tracks of major hurricanes in climatological study
- Determining the optimal location for a business in economics class
- Creating a database of nesting sites in biology field work

Virtually all data has some sort of locational component. A well organized GIS can help to expose these geographic patterns and trends providing a deeper understanding of the subject at hand.

For more information on XMap 6, DeLorme's easy-to-use and affordable GIS solution, call Downtown Design Services, Inc. at 918-592-3374 Ext. 224.