

What Is GIS?

A GIS Is a Geographic Information System

GIS software represents features on the earth, such as buildings, cities, roads, rivers, and states, on a computer. People use GIS to visualize, question, analyze, and understand this data about the world and human activity. Often, this data is viewed on a map, which provides an advantage over using spreadsheets or databases.

Why? Because maps and spatial analysis can reveal patterns, point out problems, and show connections that may not be apparent in tables or text. We call this The Geographic Advantage™.

Geography Matters

Cities, streets, and rivers are not the only physical locations that can be mapped. GIS can be used to map dynamic events such as the path of a hurricane or



Integrate data in various formats and from many sources using GIS.

the spread of a disease outbreak. Businesses can map demographic data to learn more about their customers. For example, a clothing store that targets older patrons can create maps showing where older people live so they can target their marketing activities to just those areas.

By using GIS to reveal these hidden patterns, organizations obtain insight that can improve their performance and save them money through greater efficiency, better decision making, improved communication, and more accurate geographic record keeping.

GIS isn't new, although many people haven't heard about it. On any given day, millions of people around the world use GIS in many different ways.

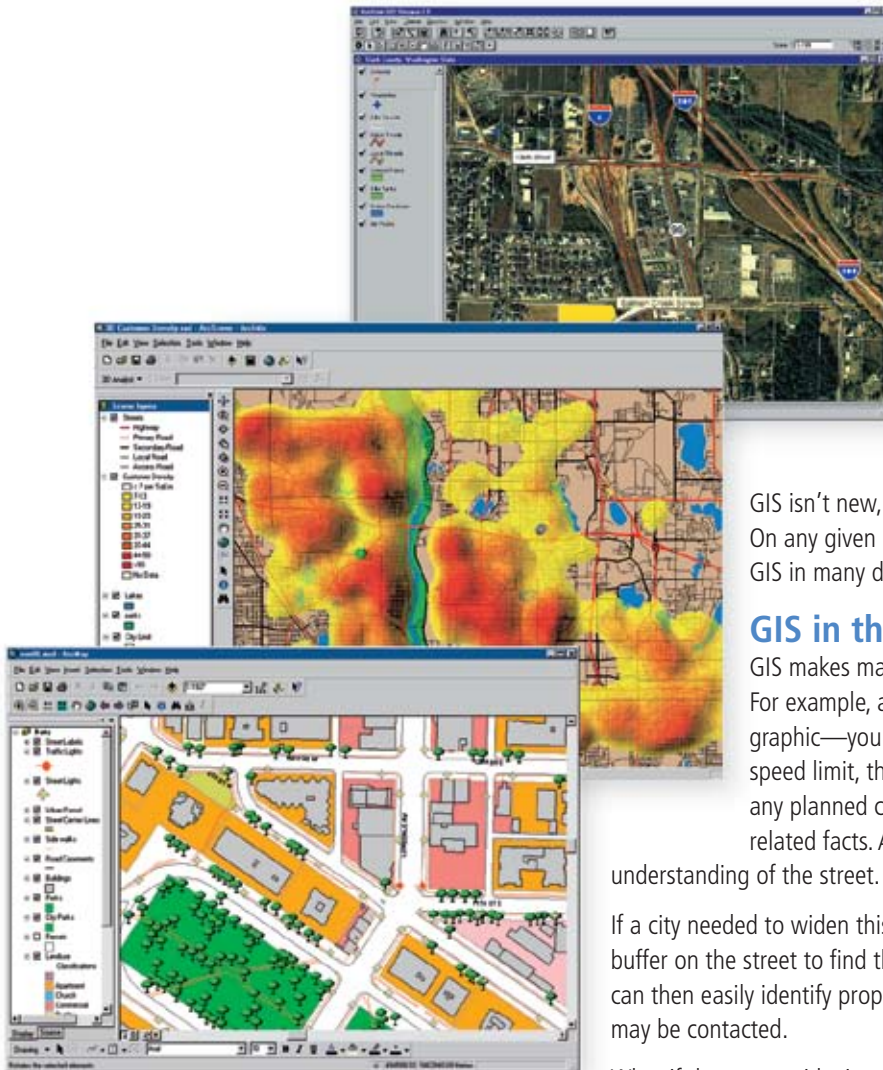
GIS in the Real World

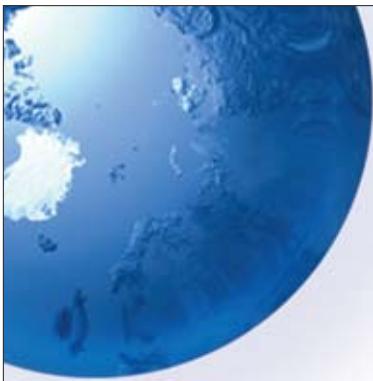
GIS makes map data interactive and, thus, more useful. For example, a GIS shows a street as more than a screen graphic—you can click on a GIS street map to find out the speed limit, the number of lanes, the last time it was paved, any planned construction, and a multitude of additional related facts. All this information provides an accurate

understanding of the street.

If a city needed to widen this street, it could use GIS to create a 50-foot buffer on the street to find the properties that fall within the buffer. GIS can then easily identify property owners affected by the project so that they may be contacted.

What if the street widening project diverts traffic to another area? Which delivery truck routes or school bus stops are affected? How should the deliveries be routed? Where can school bus stops be safely relocated? GIS combines layers of data to find the best alternatives, saving invaluable time for a government or a company.





GIS Solves Problems

The Geographic Advantage™

Planners of all kinds—business analysts, city planners, environmental planners, and strategists from all organizations—create new patterns or reshape existing ones every day. Their job is to lay out a framework so growth can occur in a managed way and benefit as many people as possible while respecting our natural resources.

Every day, businesses need to deliver goods and services to clients all around a city. Each truck driver needs a route of how to most efficiently visit each client. GIS provides tools to create efficient routes that save time and money and reduce pollution.

In the military, leaders need to understand terrain to make decisions about how and where to deploy their troops, equipment, and expertise. They need to know which areas to avoid and which are safe. GIS provides tools to help get personnel and materials to the place where they can best do their job.

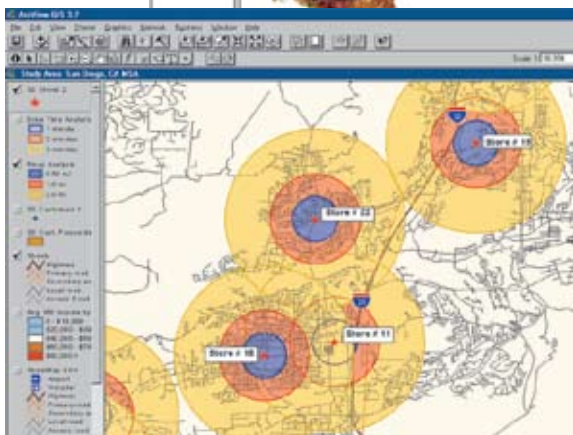
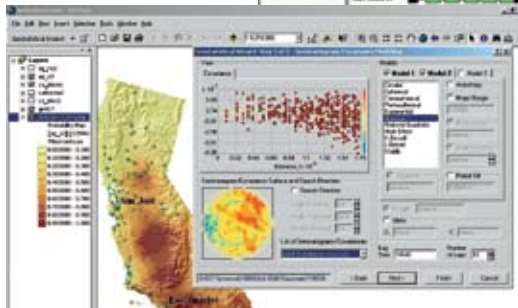
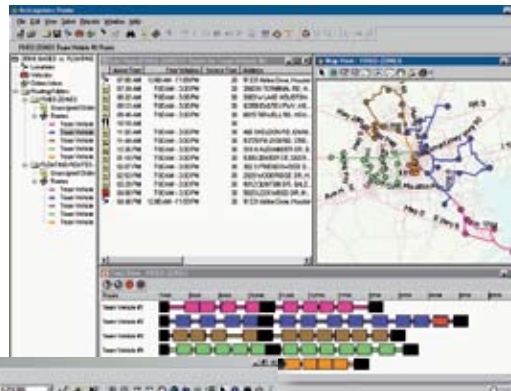
During floods and hurricanes, emergency response teams save lives and property. GIS provides tools to help locate shelters, distribute food and medicine, and evacuate those in need.

In forestry, caring for existing and future trees ensures a steady supply of wood for the world's building needs. GIS provides tools to help determine where to cut today and where to seed tomorrow while minimizing negative impacts on our natural resources.

In many areas of business such as manufacturing and banking, organizations must meet government regulations regarding pollution and interstate trade. GIS provides tools to help companies comply with local, state, and national regulations.

In telecommunications, when phone service is out, it means part of the network may be disconnected. GIS provides tools to help find out what part of the network is affected and brings that information to the field so workers can get everyone talking again.

For detailed case studies that describe GIS in action, visit esri.com/casestudies.



For more information about GIS, visit gis.com.

Esri is the world leader in GIS. For more information about Esri and Esri's GIS products, visit esri.com.



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