What is GIS?

"GIS is an Information System designed for capturing, storing, checking, integrating, manipulating, analyzing and displaying data that is spatially referenced to the Earth"

"Coordination and analysis of information about a variety of "features" (parcels, houses, people, etc.), from a variety of sources, which share the same geographic space"

These are a couple of definitions out there, but what does that mean in layman's terms?

GIS stands for Geographic Information System. But what does *that* mean? Let's break it down.

INFORMATION

Information is everything, and everything is information. Yes, everything you can possibly think of can be considered as information.

GEOGRAPHIC

Any piece of information can be referenced to a point on Earth, using three or four dimensions, X is your distance east or west from a specific point, Y is the distance north or south, Z is a distance above or below Sea level, time being the fourth dimension, and Marilyn McCoo the Fifth Dimension. This means that every piece of information can be "geographically" referenced.

SYSTEM

Throw together a couple Billion Dollar NASA computers, some Top-Secret CIA software programs, a classroom full of MIT professors and you can build yourself a system to take all this information and geographically reference it all together so you can build yourself a GIS.

OR, you can be thankful that you don't have to do much of the work and that your $300 used computer might just be good enough.

HOW DOES GIS WORK?

A GIS takes all the "georeferenced" information, and builds you a MAP. A really big, really full map. Remember we are talking WORLD here. The GIS software lets YOU decide how much or how little information you include in your map. You do this by turning on or off "layers" of information. There are a lot of sites you can go to and use their software running on the internet and build your own maps without you buying a thing. You probably have used a GIS without even knowing it. Ever go to Mapquest or Yahoo Maps or Google Earth? New York State has an Interactive Mapping Gateway that is great for looking at orthoimagery of the entire state (that's pictures from a plane) (can you find your house?) and ~~coming soon~~ ***NOW AVAILABLE***, is Chautauqua County's own interactive GIS which can be found at www.chautauquagis.com. But GIS is more than just mapping, *"It's also an information management system that can be used to track materials, analyze data, and even predict when maintenance may be needed based on prior performance"* as one of my colleagues working on the Chautauqua County GIS puts it.

WHY USE GIS?

Why? Why not! I've already mentioned some uses of GIS as an end user. You can get directions from your house to Disneyland, Niagara Falls, or the Office here at South and Center Chautauqua Lake Sewer Districts. You can view your house from a mile up, or a hundred feet up. You can find out what school district you live in, what fire district, what economic zone, anything you can think of. As a GIS map builder, (if you checked out my maps,) I showed you where SCCLSD is in New York State, where the boundaries for our Districts are, where our pump stations are located and even what type of sewers are in certain areas. The possibilities are endless as long as the information exists. For my map building, I use ESRI's ArcGIS 9. ESRI stands for Environmental Systems Research Institute and is one of the leaders in GIS. For a lot more information on GIS visit www.esri.com or www.gis.com.