What is GIS?

"GIS" stands for Geographic Information Systems. It has been called "Intelligent Mapping" because it combines the powerful features of a database with the location analysis of a digital map. In short, GIS is a visual decision-making tool that requires hardware, software and professionals trained in this technology.

Why use GIS in Economic Development?

GIS illustrates two important realities in the business world:
- "A picture is worth a thousand words" and
- "Location, Location, Location"

Most databases contain locational information, so adding GIS to the capabilities of an office brings a new level of analysis that helps businesses and governments decide the all important question; WHERE?

- WHERE are communities that need assistance?
- WHERE does a qualified labor force exist?
- WHERE to focus tax credits?
- WHERE to locate a factory?
How does GIS work?

GIS takes layers of information that are tied to locations on the earth and overlays them for viewing and analysis. Since these GIS layers have a database, the map can be "asked" questions and the results displayed for review.

College Education and Selected Manufacturers

Information Tech. Firms

Unemployment Rate

Economic Momentum Index
Show Me an Example!
The best way to understand GIS is to see an example.

WHERE are the Colleges in Missouri?

GIS Function: Geocoding

Bring in a database file of colleges (with zip codes) into the GIS

Bring in a GIS layer of zip codes

Geocode addresses based on zip codes to create new GIS layer of colleges.

Example Continued...

Now that the data is geocoded, the analysis begins.

WHICH colleges are in an area of young people?

GIS Functions: Assign Data by Location, Symbolize Data

Use the GIS to add block group information to the GIS layer of colleges.
Each college will have information from the block group it is in added to the college database.

Census block groups

Now Colleges can be Symbolized to see which have the YOUNG! population

Finally, the colleges can be labeled

Example Continued...

Getting close to an answer.

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How does GIS work?
Example Continued...
Now that the data is geocoded, the analysis begins.

WHICH Colleges are within 15 miles of a Smaller City (Population between 10,000 to 80,000)?

GIS Functions:
Query
Buffer
Select By Theme

Query the database of Cities for populations between 10,000 and 80,000.

Selected Cities Highlighted in YELLOW

Create a 15 Mile Buffer around Selected Cities

Select Colleges within the 15 Mile Buffer and create a New GIS Layer

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Example Continued...

Getting close to an answer.

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**WHICH** colleges are in an area of young people?

GIS Functions: 
Assign Data by Location
Symbolize Data

Finally, the colleges can be labeled

Now Colleges can be Symbolized to see which have the YOUNG! population

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