

Geographic Information Systems

How GIS Works- Layering

One analogy for seeing how GIS works probably comes from food.

Much like fancy cakes, sub sandwiches and baklava, all built from layering different ingredients, a GIS map is built by combining layers like aerial photography, roads, parcel lines and address points. Individually, the mapping layers provide limited information, but together, they create a complete picture of what is happening in a given area. This core set of layers combines to create a base map- a map containing geographic features used for locational reference.

Delayering the Neapolitan Cheesecake-

Vanilla
Raspberry
Fudge
Chocolate Cookie Crust



Delayering the Sandwich-



Top Bun
Mayo
Sprouts
Peppers
Onion
Tomato
Ham
Cheese
Turkey
Lettuce
Bottom Bun

Delayering the Taco Pizza-

Crust
Refried Beans
Spices
Sour Cream
Salsa
Cheese
Lettuce
Tomatoes
Olives



Photograph taken by Nicole King for
<http://www.forfood.rezimo.com/>

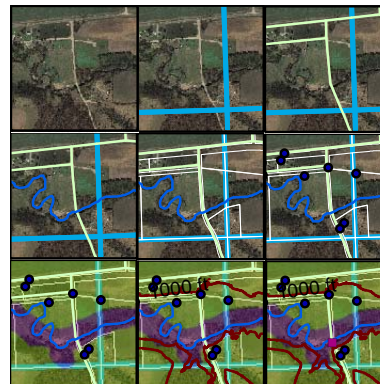
Delayering the Map-

Base Map Layers

Aerials
Sections
Roads
Streams
Parcel Lines
Address Points

Additional Layers

Flood Plain
Contours
Bridges



Geographic Information Systems

How GIS Works- Database

GIS Database Functionality

Behind every GIS feature in a map (whether an address point, road section or parcel outline) exists a database entry containing specific information about that feature. With the information stored, the symbology (how it appears on the map) of the features can be changed to reflect specific attributes. By using the data about a feature to control how it appears, the map as a whole becomes easier to interpret.



Figure I- This shows a few of the new homes in Jefferson County



Figure II- The new homes are color-coded by the year they were built. Seeing this information provides a way to visually track housing trends in the county.

Attributes of Homes03_06point	Attributes of Homes03_06point	Attributes of Homes03_06point	Attributes of Homes03_06point	Attributes of Homes03_06point	Attributes of Homes03_06point	Attributes of Homes03_06point	Attributes of Homes03_06point
NBHD	TAX	YRBLT	PROPERTY_A	ZIP_1	STYLE	PARCELID	
0431	165	2003	2132 ADAMS ST	66429	18	2441901005004000	
043	081	2004	7399 70TH ST	66512	6	1762300000003000	
073	102	2005	6587 ANGEL LN	66066	2	1942000000002130	
043	166	2003	4664 CLARK RD	66512	18	1783300000007010	
023	061	2003	11895 FERGUSON RD	66070	2	1351600000013000	
023	061	2005	10052 118TH ST	66070	2	1351600000012000	
073	046	2004	15884 MOONEY CREEK RD	66097	17	1041900000007000	
021	002	2006	428 PRAIRIE BEND DR	66512	2	1611201001009000	
021	002	2005	426 PRAIRIE BEND DR	66512	2	1611201001008000	
021	002	2005	424 PRAIRIE BEND DR	66512	2	1611201001007000	
021	002	2005	422 PRAIRIE BEND DR	66512	2	1611201001006000	
0831	056	2006	9254 VALLEY VIEW DR	66070	17	1392903004011000	
043	071	2006	9602 VILLAGE GREENS RD	66512	17	1483400001039040	
081	009	2004	509 THIRD ST	66097	2	0972603019014000	

Figure III- This information about the new homes exists in the database. Each point depicted on the map corresponds to a line of information in the database.