

City-Parish Advances With Geographic Information System

A geographic information system (GIS) can be defined, very simply, as a computerized mapping system linked to a large “database” of various kinds of land and property information. At the touch of a few buttons, a GIS can graphically display requested information (on maps), and it can also sort and tabulate large quantities of data in number or text form.

A GIS has applications in geography, landscape architecture, transportation, environmental science and urban planning, or any subject that can be related to land. This is because attributes about features such as soil types, land contours, aquifers or land uses can be represented graphically on a map and described as part of a database. At the Planning Commission, GIS is used to track land information, including land use and zoning. Simple queries can be made to the GIS, such as, “What are the addresses of the churches in Planning District 8?” or “What parcels of land are zoned as light industrial in Council District 11?” or “What is the percentage of residential land use in the Parish?”.

The development of a geographic information system was part of several “Action Items” in the Horizon Plan -- the comprehensive land use and development plan adopted by the Parish in 1992 as a guide for the future. GIS is addressed in the Land Use, Housing and Public Service elements of the plan. These Action Items call for the establishment of a GIS that includes information on all property and public services: parcel ownership, zoning, subdivision plats, flood zones, rights-of-way and servitudes, infrastructure, permits, inspections, census data, housing data, garbage and recycling, and health and human services. In addition to this land information, the Planning Commission includes Planning Districts, Council Districts, North American Industrial Classification System codes, Horizon land use designations, and city limits. The development, organization and availability of this data throughout the City-Parish will improve services for citizens and assist City-Parish employees in accomplishing their tasks.

Development of the Parishwide GIS Program

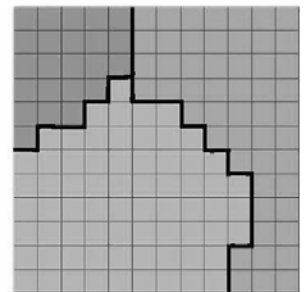
In the fall of 1993, a GIS Committee was formed as appointed by the Mayor-President. This committee was brought together to define and implement a common direction for a GIS program, including the objective of establishing consistent base information, both graphic and tabular. The Committee represented agencies and organizations who are major users, creators or keepers of land and planning information. Today, the GIS Steering Committee members include representatives

from the Office of the Mayor-President, Department of Public Works, Information Services, the Planning Commission, and the Office of Emergency Preparedness.



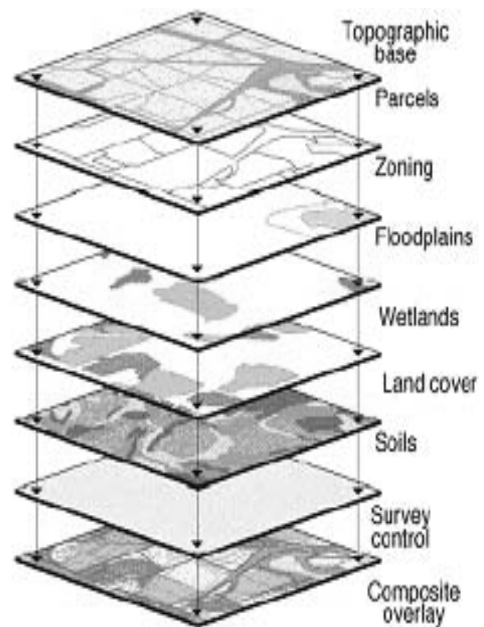
VECTOR

An idealized portrayal of the real world, as digitized into layers within a GIS.



RASTER

An approximation of the real world, generally taking the form of image files.



The GIS Committee initiated the development of a street name list that is used by various divisions of the Department of Public Works, Emergency Medical Services and the Planning Commission. In cooperation with Information Services, this definitive street list of East Baton Rouge Parish is available for distribution to City-Parish departments that use this type of data. This common street roster is updated regularly, and permits different departments to share and reference parcel-based information more readily. The aim is to maintain cohesiveness data for use by various city departments that will eliminate duplication.

In 1993, the Planning Commission Staff began researching geographic information systems that would meet the Parish's needs, and contacting agencies with experienced GIS users, including Louisiana State University, the U.S. Army Corps of Engineers and Capital Region Planning Commission. It was concluded from the research that data compatibility within the city and state, and affordability and support from an established vendor, are important factors. Another criterion for the GIS is an ability to expand as the graphic and tabular database grow. The CPPC now uses an Intergraph Corporation system (GeoMedia Professional 6.1) and an Oracle log database software, which meets the Parish's needs. This software allows for the creation of maps and their features; the projection and location of maps in relation to the surface of the earth; and the linking of databases to the maps.

GIS Data

The GIS requires at least two types of digital data: one graphic (maps) and the other tabular (databases). The graphic data consists of streets, parcel boundaries, rivers, streams, lakes and railroads.

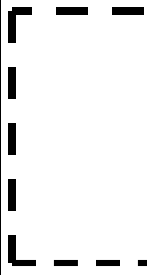
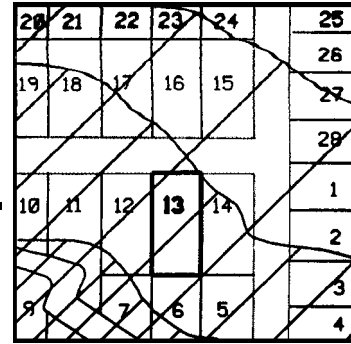
Other map information that has been created in the development of the GIS includes zoning, land use, subdivisions, city limits and Census information. The non-graphic, tabular data consist of a record or series of records for each parcel of land that includes lot name and lot identifier, planning district, subdivision, lot and block, address, Census tract and Census block group, flood zone, council district, zoning and existing and future land uses for every lot in the Parish. Most of the different attributes for each lot have been compiled, organized, entered, and linked by the Planning Commission GIS Staff.

From 1994 to mid-1996, the Planning Commission Staff conducted a lot-by-lot land use survey encompassing the entire Parish. They began the survey in Planning District 16, and continued collecting data sequentially to Planning District 1. This survey provided the foundation of the GIS database. This database provides the informational "glue" for City-Parish departments to do their jobs more effectively for the citizens of the City-Parish.

Benefits of GIS

Under a networked environment, the City-Parish has linked its GIS users to a central database of land information, both graphic and tabular. Different departments throughout the City are able to access the particular information and make appropriate changes, such as adding new streets and new street names, or recording changes in land use for a

LOT GRAPHIC LINKED TO DATABASE



Parcel ID	Subdivision	Lot No.	Street Address	Street	Zoning	Flood Zone
4509.10	Daisy River	10	411	Petal	A1	A
4509.11	Daisy River	11	409	Petal	A1	A
4509.12	Daisy River	12	407	Petal	A1	A
4509.13	Daisy River	13	405	Petal	A1	AE
4509.14	Daisy River	14	403	Petal	A1	AE
4509.15	Daisy River	15	402	Petal	A1	X
4509.16	Daisy River	16	404	Petal	A1	X
4509.17	Daisy River	17	406	Petal	A1	AE

Within the GIS, information can be accessed either by locating a parcel graphically, or by locating the parcel record in the database.

particular parcel. When changes or additions are made at a computer terminal, or "work station," these database alterations may be viewed and accessed at other locations. At these secondary locations, information may be called up and utilized, but for reasons of accuracy and security may not be changed. This also means that at other city departments, the changes do not have to be re-entered; as a result, there is less duplication of efforts and more efficiency.

With the networking of information within the City-Parish, a citizen can walk into an office (for instance, the DPW Engineering Office), and find out the zoning of a particular piece of land, the status of a construction permit, or what utility servitude lies on a lot. This is possible because the land information is accessible by departments that are involved in the maintenance of land records in the City-Parish. This saves time for the citizens of Baton Rouge, because they are able to find the information they need at more than one location in the City.

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