Rural Louisiana

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Welcome to the Fall 2009 issue of Rural Louisiana. The Louisiana Tech Rural Development Center strives to serve as a linkage between the research and expertise at Louisiana Tech University and rural communities with the overall goal of improving the quality of life in Louisiana's rural areas. To bolster the connection between Louisiana Tech and communities, the Center has a new website, on which you can find information about the Center's current projects, information on Louisiana's workforce development programs, and grant opportunities for communities. Another outlet for connecting communities with the University is through this newsletter, which will feature research and outreach efforts of faculty and staff at Louisiana Tech.

In this issue, Dr. David Long and Wesley Palmer, from the Spatial Data Lab in the School of Forestry, provide an article that describes the use of Geographic Information Systems, or GIS, which has become an increasingly useful tool for rural communities.

For more information about the Center, please contact Aaron Lusby at the number below or visit the Center's website.

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GIS Spreading into Parish Governments

What is GIS?

GIS stands for Geographic Information System. It is a computerized system for helping people work with data that is tied to a location on the land. With GIS, manage a database of geographic data such as roads, land parcels, or utility lines, analyze the data to answer questions like "What parcels are within 100 feet of the rail road track?", and draw maps of the data and results of the analysis.

Drawing maps is the most basic and the most common use of a GIS. Numerous internet sites have been set up to allow users to create maps using GIS. The Lincoln Parish GeoPortal (http://maps.lincolnparish.org/GeoPortal/) is one such site. It contains roads, rivers, parcels, zoning and other information that you can use to draw a map of your land in Lincoln Parish. Simply click on the data sets that you want to use on the map and zoom in or out to adjust the scale of the map to include as much area as you like (Figure

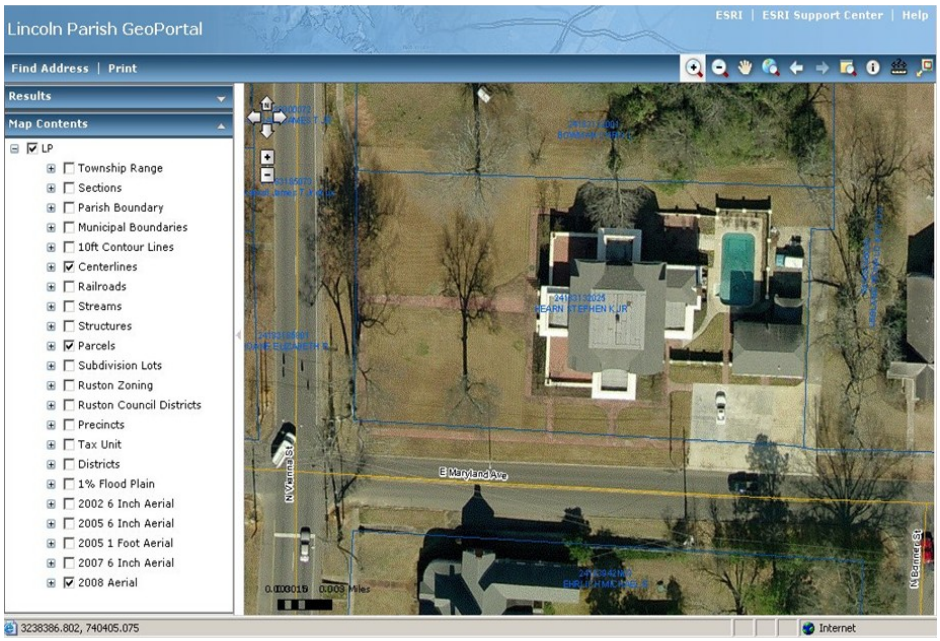

Figure 1. Lincoln Parish GIS web site. Notice the use of high resolution, up-to-date imagery. Parcel number and ownership is displayed on the screen for every parcel. Data can be added or removed from the map by checking the boxes in the legend at the left. The parcel numbers are tied to the online tax records, so one can call up tax information and sale history for any parcel on the map.

How is it used?

A GIS can be used in many different applications. It is commonly used in land-use planning, environmental management, social analysis, business marketing, law enforcement, and utility line management. In fact, it can be used for anything that has a geographic component (GIS can be used to analyze census data because the census records census blocks and tracts which are boundaries on the land). In northern Louisiana, GIS is growing in use for parcel mapping, E911 services, oil and gas line maintenance, and precision farming.

The need for GIS in Local Government

In recent years, quite a bit of interest in GIS has developed in the parishes of northern Louisiana. Parish Assessors and E911 officials are leading the push for parish GIS. Addressing and parcel maps are critical to both, but the creation and maintenance of the data is time-consuming. GIS allows rapid maintenance of the data and quick map making possibilities. But the learning curve for GIS is high and costs for hardware and software is often beyond the parish budgets.

Creation of NorLaGIS

In response to interest shown by parishes in Louisiana for adopting GIS technology a non-profit organization, North Louisiana GIS Network (NorLaGIS) was created. The purpose of the organization is two-fold: First, to promote GIS development in parish governments and second, to encourage data sharing. Several workshops and training events have been held for local parish officials. A nice presentation by Shane Breland of Lincoln Parish on GIS in North Louisiana be found at http://gis.lincolnparish.org/nlagis.aspx. Since the creation of NorLaGIS, several parishes have started GIS development. This technology is rapidly expanding in local government and eventually the results will be available for general public use.

Louisiana Tech University Response

Since many parishes have insufficient funds to purchase a GIS and very little knowledge of the software and its uses, the Louisiana Tech University Spatial Data Lab run by the School of Forestry has developed resources that can be of help. Many GIS data sets such as roads, rivers, and political boundaries along with aerial photographs can be obtained free from the state. The Spatial Data Lab has presented workshops on digitizing parcel maps and setting up a GIS on an internet server. Franklin Parish was the first parish to set up an internet GIS site from our GIS Server workshop (see Figure 2). The server is effective in reducing costs since you only have to purchase one GIS software license and everyone can access this through the internet.

Through educational ties, several students have helped parishes develop GIS data sets for E911 and Parish Assessor's offices. Sometimes special class projects can be developed with a focus on a parish's GIS needs. Anyone interested in learning more about GIS or wishing to explore the possibility of student help should contact the

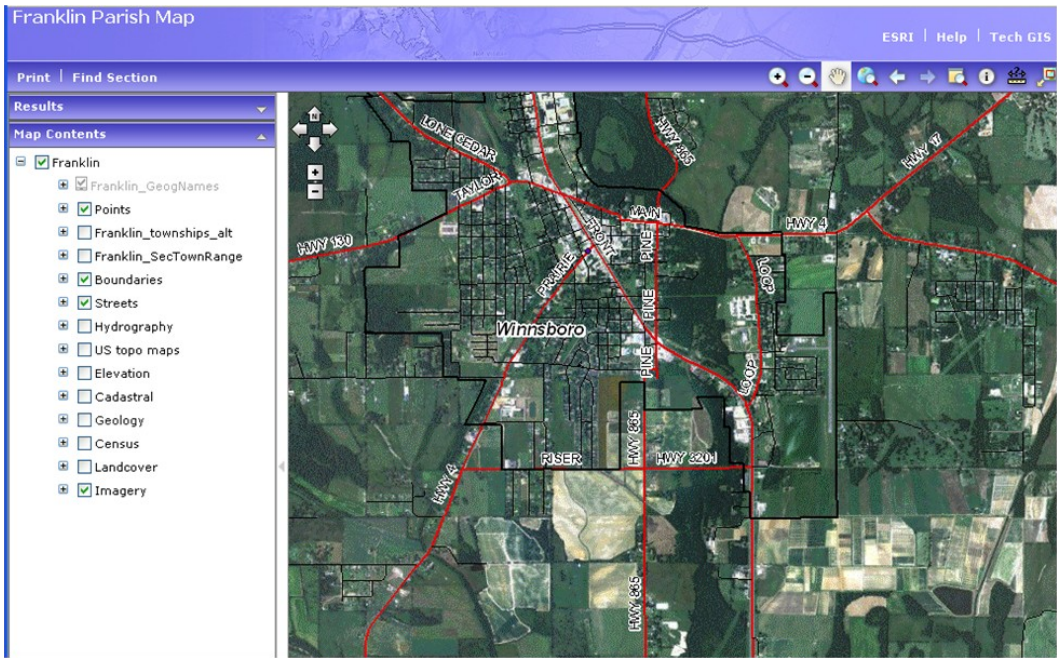

Figure 2. Franklin Parish map http://gis.latech.edu/franklin/ served on the Spatial Data Lab server. Most of the data was obtained free from Louisiana sources. They are in the process of digitizing

GIS Training

The Spatial Data Lab will hold ESRI Authorized Instructor led classes on GIS in November. They are open for anyone interested in learning how to work with GIS.
ESRI ArcGIS Desktop I: Getting Started with GIS, November 16 & 17

ESRI ArcGIS Desktop II: Tools and Functionality, November 18-20
For more information about these courses contact Wesley Palmer .

More Information

For more information about GIS or how you can get started in GIS, contact one of the following people in the Louisiana Tech University Spatial Data Lab:

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