

Case Study:

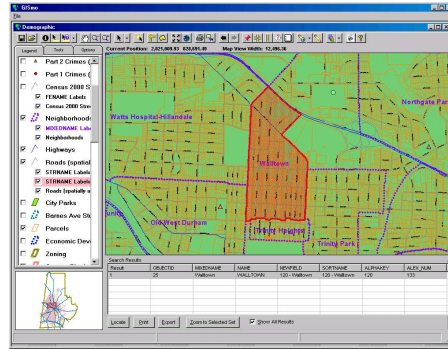
GISmo, Revolutionizes Data Sharing
City of Durham/ Durham County, North Carolina

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North Carolina



When the City of Durham and Durham County first started their GIS, the staff members and management that had been exposed to GIS needed little convincing of the potential benefits of developing a distributed network of GIS data servers that made everyone's best data available to others. However, until Geographic Technologies Group (GTG) introduced the point and click tool, GISmo, use of the software was limited to the GIS professionals.



With GISmo, they were able to put many of the most useful capabilities of the complicated GIS software programs into the hands of GIS novices. One of the many things Durham liked most about GISmo was the ability to add functionality to it using the Spatial Overlay tool, customizing GISmo to do some of the things that staff had to do over and over.

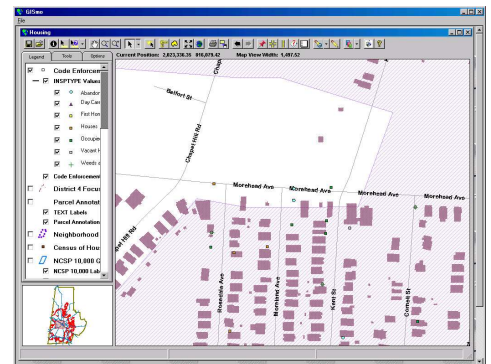
Durham also made this technology available to its citizenry. Durham gave the public the power to summarize the racial make-up of an area's

population by using the Spatial Overlay tool in GISmo. Residents can find everything from voter precincts to tax parcel information using GIS technology.

The housing configuration utilized by the Housing and Community Development Department shows where each of the housing inspector's code enforcement visits were located and a quick check using a customized map tip lets them know whether or not the inspection is in one of the low-to-moderate income census tracts and is thus eligible for HUD funding through the Development Block Grant program. This helps determine grant eligibility quicker and insures eligible homes are accurately identified.

Fire Marshal's Office

GISmo has been a valuable tool for the County Fire Marshal's Office, which includes the Office of Emergency Management. Property identification for fire and chemical investigations is simplified with the assistance of GISmo. It is also being used to map fire and response districts and plan emergency evacuation routes. Mark W. Schell, Emergency Management Coordinator with the Durham County Fire Marshal's Office, noted GISmo's applications are numerous. "Future plans include using wireless communications to transmit emergency information to first responders for real-time use on mobile data terminals with GISmo," stated Schell.



Board of Elections

Joseph Fedrowitz, a Geographer for the Durham County Board of Elections, credits GISmo with straightening out a voting precinct nightmare. Using GISmo to perform quality control on the County's current database, close to 8,000 voters were identified as being assigned to the wrong precinct.

"When a voter registers on a new street, I can now go to GISmo and immediately find the street and assign it to the correct jurisdictions," said Fedrowitz. "This saves us a lot of time and more importantly gives us a database with voters in the correct jurisdictions from the beginning. Needless to say, this sort of accuracy is important in this business – especially in a close election." Another feature Fedrowitz feels is most useful other than day-to-day street location is GISmo's ability to select streets interactively. "When we split precincts I can immediately insure that I stay within census blocks and get immediate

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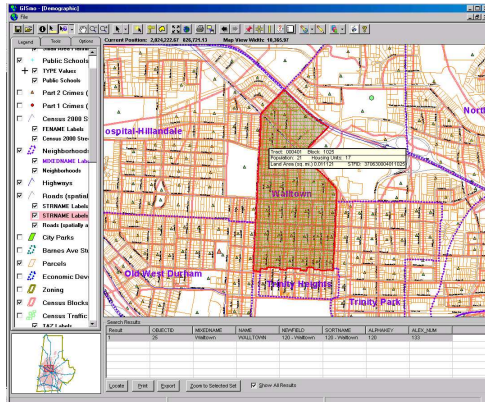
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population breakdowns for potential new precincts,” said Fedrowitz.

One final feature also used frequently by Fedrowitz is the interactive feature. It can be used to select streets in areas where precincts have been split to make new NC legislative districts (something that has been happening every two years in Durham). This feature enables Fedrowitz to quickly, and more importantly accurately, identify the streets to be geocoded for new districts.

Inspections Department

The Inspections Department is responsible for issuing permits for construction within the City and County of Durham. The process of reviewing permit applications includes determining the proper zone and all application zoning overlays for that parcel, which is very time consuming.



GIS technology has changed the way the Inspections Department for the City and County of Durham does business. Prior to the application of GISmo, the plan examiner had to use several paper maps to determine items such as zone, census tract, impact fee zone, flood plain, city or county jurisdiction, opening the door for human error. An Inspections configuration was set up allowing the data to be presented in a single view and now any change in data (such as annexations into the city limits) is immediately reflected on the GIS.

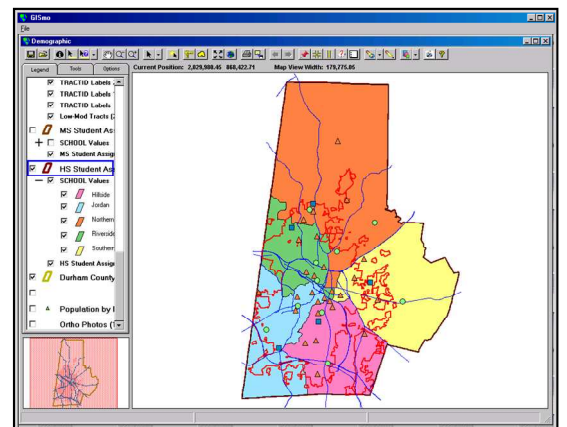
GISmo also made way for an operational change that made better use of human resources within the Inspections Department. Duties that were formerly handled by a Certified Building Code Official are now able to be completed by an administrative support person, allowing the plans examiner to focus on the more technical part of plans examining.

Durham Police Department

The Durham Police Department has found a way to take technology to the streets in an effort to combat crime and better utilize resources. The DPD currently uses GISmo on its mobile computers found in each district supervisor’s vehicle and in each substation.

Some of the many uses include facilitating missing persons searches, suspect pursuits and manhunts, pre-planning for evacuations and large-scale response events, and other intelligence gathering scenarios where conventional maps were ineffective. “The Durham Police Department has found GISmo to be a useful tool in emergency response and investigations,” said Eric Derr, Emergency Information Services Coordinator, Durham Police Department. GISmo has now become the City and County of Durham’s primary tool for accessing their GIS data. Its uses are endless and GISmo may very well become crimes worst enemy.

Derr cited being able to use the technology to pinpoint prescribed Drug Free Zones surrounding schools – bolstering cases against criminal defendants accused of dealing drugs within a school zone. “What I like best about GISmo is the ability to save views and pre-plan just about anything,” said Derr. “We have a chemical processing facility in the area with neighboring schools. With Gismo we can determine which schools are vulnerable in the case of an accident and we can figure in wind direction and other variables when responding to such an incident.”



Crime Reports Generated from GISmo

Durham Public Schools

Durham, one of the fastest growing counties in North Carolina, faces the same challenges of school reassignment as other fast growing communities. However, the City of Durham Office of Geographic Information Systems and Durham Public Schools teamed up to take on several projects which included the opening of a new school, the conversion of an existing school to a magnet school, and making attendance zone information and maps available to the public. The use of GISmo allowed planners to prepare accurate and attractive maps for public hearings and the Board of Education and has helped make the process and specific proposals more concise and understandable. It is almost unheard of for a public school system in a community as diverse and contentious as Durham to present a proposal to change the elementary school assignment of over 500 students and receive a total of two negative comments at a public hearing. Yes, the plan was well crafted, but the communication of the details of the plan was greatly enhanced by the graphic capabilities available through GISmo.

Durham is looking at implementing the next generation of this tool from the GTG GeoBlade series. The new GeoBlade series leverages all of the new ESRI toolsets.

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