

case study

GOVERNMENT: COUNTY

Henry County, GA: MapInfo Enables Crime Mapping Unit to Track Criminal Activity in Mushrooming Atlanta Community

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A major tool in proactive law enforcement today is crime mapping. Using GIS and related location technologies, crime analysts can determine patterns of criminal activity in near real-time and assist police in deploying resources and personnel to areas where events are occurring. By connecting data from repeat events to past criminal behavior, analysts can often determine the number of individuals involved, and in some instances predict where to place patrols to nab the offenders or at least prevent repeat incidents.

At the Bureau of Police Services in Henry County, GA, Crime Analyst Richard Lemmon uses MapInfo technology to keep pace with changes in one of the fastest growing areas in the nation. Fifteen miles from downtown Atlanta, Henry County's population jumped from 58,741 in 1990 to more than 119,000 today.

According to Lemmon, tracking criminal activity in the midst of mushrooming communities and commercial developments requires keeping pace with the proliferation of new roads and streets so crime incidents can be tied to specific addresses and locations. "We have a tremendous growth problem," Lemmon said. "The county is gaining up to 35 new streets a month."



“THIS IS REAL-TIME CRIME MAPPING. I CAN PLOT CRIMINAL ACTIVITY AS IT IS OCCURRING, SHOW HOW IT IS DEVELOPING, HOW IT IS MOVING ACROSS THE COUNTY BOUNDARIES.”

When Lemmon joined Henry County's Bureau of Police Services as crime analyst in 1999, the bureau was reporting only statistical data on paper and using wall maps and pins to indicate past crime events. "No effort was being made to keep the map current," Lemmon said. "We had no up-to-date graphic representation of what was happening in the county. What we needed was a way to get information quickly and visually."

Although the bureau acquired MapInfo Professional® to provide GIS mapping and analysis, crime mapping in the rapidly growing area also necessitated periodic updating of county roads, streets, developments, planimetric features and continually expanding city boundaries. "I explained the problem to a MapInfo sales rep," Lemmon said, "and he recommended MapInfo® MapMarker® PLUS. It fit our needs perfectly." Lemmon said GIS classes conducted by the Department of Justice and MapInfo provided an initial introduction to the systems. From there, he honed his crime mapping skills on the job.

CUSTOMER

Henry County, GA

NEEDS

Intelligence mapping technology to automatically geocode addresses and periodically update county roads, streets, developments and continually expanding city boundaries

PROBLEM

Bureau's paper-based crime mapping procedures unable to track events in rapidly expanding county

SOLUTION

Crime mapping unit uses MapInfo Professional® for mapping and analysis and MapInfo® MapMarker® PLUS to keep street/address database current with quarterly updates from MapInfo

BENEFITS

Combined technologies enable crime mapping unit to stay current with county growth and provide precincts with crime incident data in near real-time. The ability of the unit to identify crime patterns as they are developing allows precincts to respond more quickly than was possible with the previous pin-mapping system. Crime rates in the county are decreasing significantly while the population is increasing dramatically

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MapMarker PLUS is MapInfo's powerful geocoding tool that automatically attaches geographic coordinates to addresses with street level precision. It keeps databases current by matching records in the user's database against quarterly updates of USPS street addresses, street geometry or the latest ZIP + 4 centroids. The software also includes a street display layer for use with the user's geographic area. The data is available on disk or can be downloaded directly. "This is one of the beauties of MapMarker PLUS," Lemmon said. "I'm never more than 90 days currency from new streets and developments."

"THE FACILITY AND SPEED WITH WHICH MAPINFO PROFESSIONAL AND MAPMARKER ALLOW US TO STAY CURRENT WITH THE COUNTY'S RAPID GROWTH HAVE ENABLED US TO PROVIDE PRECINCTS WITH ACCURATE INFORMATION IN REAL-TIME."

Lemmon used MapInfo Professional to build a multilayered county map of police precincts, districts, categories of criminal activity, dates, times, etc. MapMarker PLUS automatically geocodes the addresses, allowing him to track the geographic locations of crime events and connect them to specific addresses.

Incident reports filed by officers on patrol go into a Police Track Database. Lemmon pulls the reports from the database, loads them into MapInfo Professional, and analyzes them for patterns of specific crime types. With the resulting information, he develops thematic maps and related data for distribution to precincts via the county intranet. "This is near real-time crime mapping," Lemmon said. "I can plot criminal activity as it is occurring, show how it is developing, how it is moving across the county boundaries." For special department studies or briefings, Lemmon also uses the information for PowerPoint presentations.

Lemmon does crime mapping on a stand-alone PC tied into a network environment. He runs MapInfo Professional and MapMarker PLUS on Windows NT 2000.

Lemmon said the speed and facility of the system enables the department to be much more proactive in tracking crime events. "If an individual is breaking into vehicles, or if there is a series of burglaries, we can see the cluster start, and actually watch it migrate into other areas. From each event, we can collect pieces of information, including date, time, location—and add these to the MO used. Collectively that information can tell us whether we're dealing with one or more individuals and where to more accurately place patrols to catch or at least deter offenders working in a particular area.

"The facility and speed with which MapInfo Professional and MapMarker allow us to stay current with the county's rapid growth have enabled us to provide precincts with accurate information in near real-time," continued Lemmon. "Since we can see crime patterns developing, our response times are now much faster than they were before we had this capability. We are already seeing the benefits of this system; crime rates in the county have been coming down significantly—at a time when our population is increasing dramatically." ●