Crime Mapping News

A Quarterly Newsletter for Crime Mapping, GIS, Problem Analysis, and Policing

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The topic of this issue of *Crime Mapping News* is how mapping and GIS can be applied to planning for major events. This issue begins with an article that discusses the coordination of federal, state, and local agencies with emphasis on data, mapping, and GIS to prepare for a major political event. The second article describes a similar application with the coordination of state and local agencies to prepare for a major sporting event. The third article describes a new module in the recently released *CrimeStat III* spatial statistics program that will further aid crime analysts and researchers in their crime mapping efforts. The last article is part of our new series called the *Crime Mapping News Spotlight* where we highlight a particular program, crime analysis unit, or special event involving GIS, crime mapping and/or crime analysis, and provide a brief snapshot of the key components, ideas, or strategies. This issue's spotlight focuses on a crime analysis unit in Florida.

GIS for a Homeland Security Event: The Democratic National Convention

by Lauren McLane, Department of Homeland Security's Federal Emergency Management Agency and Johanna Meyer, Massachusetts Emergency Management Agency

Introduction

The Democratic National Convention (DNC) GIS Working Group coordinated planning and support for local, state, and federal geographic information system (GIS) operations for the Democratic National Convention, a National Special Security Event (NSSE), held at the Fleet Center in Boston, MA, on July 26-29, 2004 (Figure 1). This working group was created to coordinate geospatial issues, increase communication among response organizations, and address GIS specific problems for this event.

The DNC GIS Working Group focused on three main issues:

- Data development and sharing
- Unified modeling
- Mapping support

The group found separate data sources existed in city, state, and federal databases, which resulted in GIS products that displayed different and conflicting information. Also, some of the data sources used by response organizations were not always accurate, resulting in incorrect maps. Another problem was that data changes rapidly, particularly in urban areas. For example, traffic on Route 93 through the center of Boston was recently moved from elevated highways to underground tunnels as part of the Central Artery Project, commonly known as the "Big Dig." To address these data issues, the DNC GIS Working Group created a common data set accessible to all GIS personnel working this event. These data were gathered from several sources, vetted for accuracy and content, and then distributed within the working group. This dataset served as a resource for this event and will continue to serve for future events or response operations in Boston.

In the past, model results were released displaying differing and often conflicting information, causing confusion among responders. In an effort to resolve this

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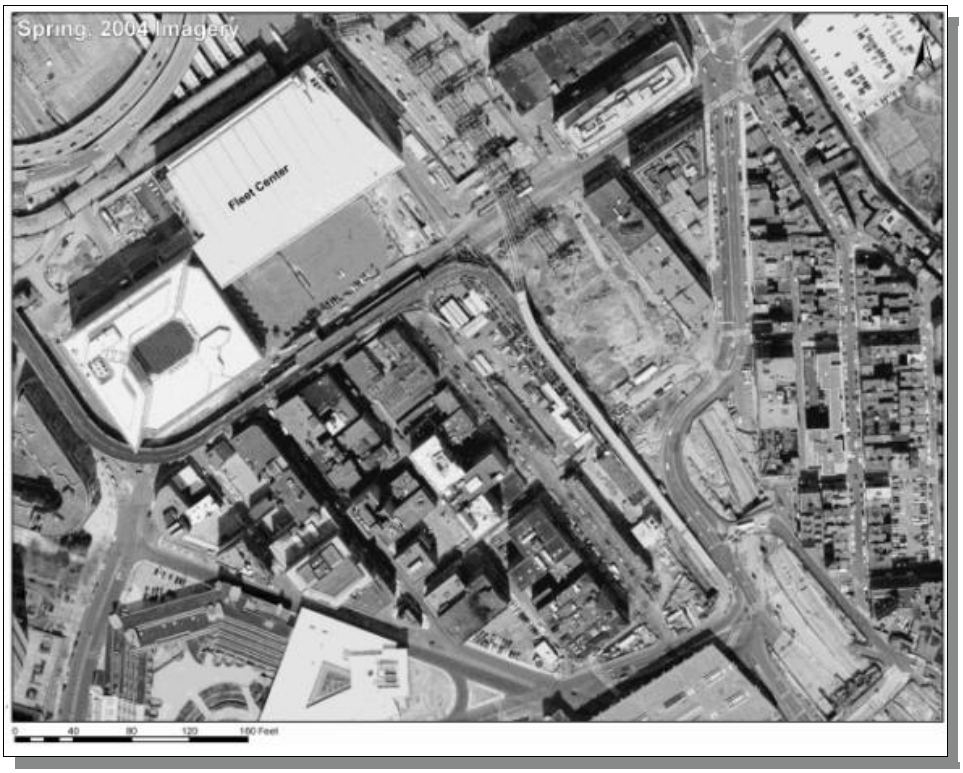

Figure 1. The Fleet Center, where the DNC was held.

confusion, the Department of Homeland Security (DHS) is in the process of establishing the Interagency Modeling and Atmospheric Assessment Center (IMAAC) to provide single air dispersion models to emergency responders. The DNC GIS Working Group provided a similar service, releasing one model for use in all operations. In addition to air dispersion models, the working group also coordinated the development of other models to support response operations to hurricanes, earthquakes, and floods.

A primary goal of the DNC GIS Working Group was to provide GIS map production support to local, state, and federal response organizations supporting DNC operations. Because many of the maps required by these organizations were the same or very similar, there was a strong potential for duplication of efforts. The working group addressed this by developing a set of common maps pre-event, including standardized base maps for distribution to each of the approximately twenty command posts.

Coordination

The DNC GIS working group met monthly from December 2003, through July 2004. These meetings were attended by approximately twenty federal, state, and local agencies of public safety, emergency management, and other supporting entities, as well as representatives from the private sector. These included the Boston Police Department, Boston EMS, Boston Emergency Management Agency (BEMA), Massachusetts Emergency Management Agency (MEMA), Massachusetts National Guard Civil Support Team, Massachusetts State Police, Federal Emergency Management Agency (FEMA), US Environmental Protection Agency (EPA), US Secret Service, US Coast Guard, National Geospatial Intelligence Agency (NGA), Naval Undersea Warfare Center (NUWC), US Geological Survey (USGS), US Army Corps of Engineers, Department of Homeland Security (DHS), USNORTHCOM–CBIRF (Chemical Biological Incident Response Force) and JTF-CS (Joint Task Force Civil Support), National Oceanic and Atmospheric Administration (NOAA), the City of Cambridge, FEMA's Urban Search and Rescue Massachusetts Task Force 1, and ESRI. Minutes were created and distributed for each meeting.

To guide this collaborative process, a concept of operations document was produced, describing the agreed upon operating and information sharing procedures for the event. It included information on data format and type, naming conventions, data and map sharing procedures, documentation requirements, procedures for the modeling group, and contact information. It also established procedures for distributing data and maps during the event using an EPA File Transfer Protocol (FTP) site and an EPA message board capability for sharing general information on updates.

Data and Mapping

A single set of data was distributed to the emergency GIS planners from the federal, state, and local levels participating in this emergency planning. This 10 gigabit (GB) dataset included over 8 GB of imagery and approximately 170 vector files. The major contributors of data were MassGIS, Boston Police, EPA, DHS groups, and MEMA. The working group established data requirements early in the process by creating a list of necessary datasets that were subsequently vetted through the GIS and key operational representatives to ensure completeness. Each agency then provided the source, vintage, and scale for their available dataset. These lists were collated by the data coordinator and the most appropriate source for each dataset was assimilated into the database. The data were collected and reformatted to a common projection. A symbology standard was created for this dataset and vetted through key operations personnel and through GIS personnel for comment. Once completed, an ArcGIS style was created and distributed along with layer files for most of the datasets.

Additionally, new datasets were developed with DNC specific data. These included information such as DNC event venues, location of medical and hazardous materials response teams, security zones, staging areas, transportation changes including closings of roads and public transportation,

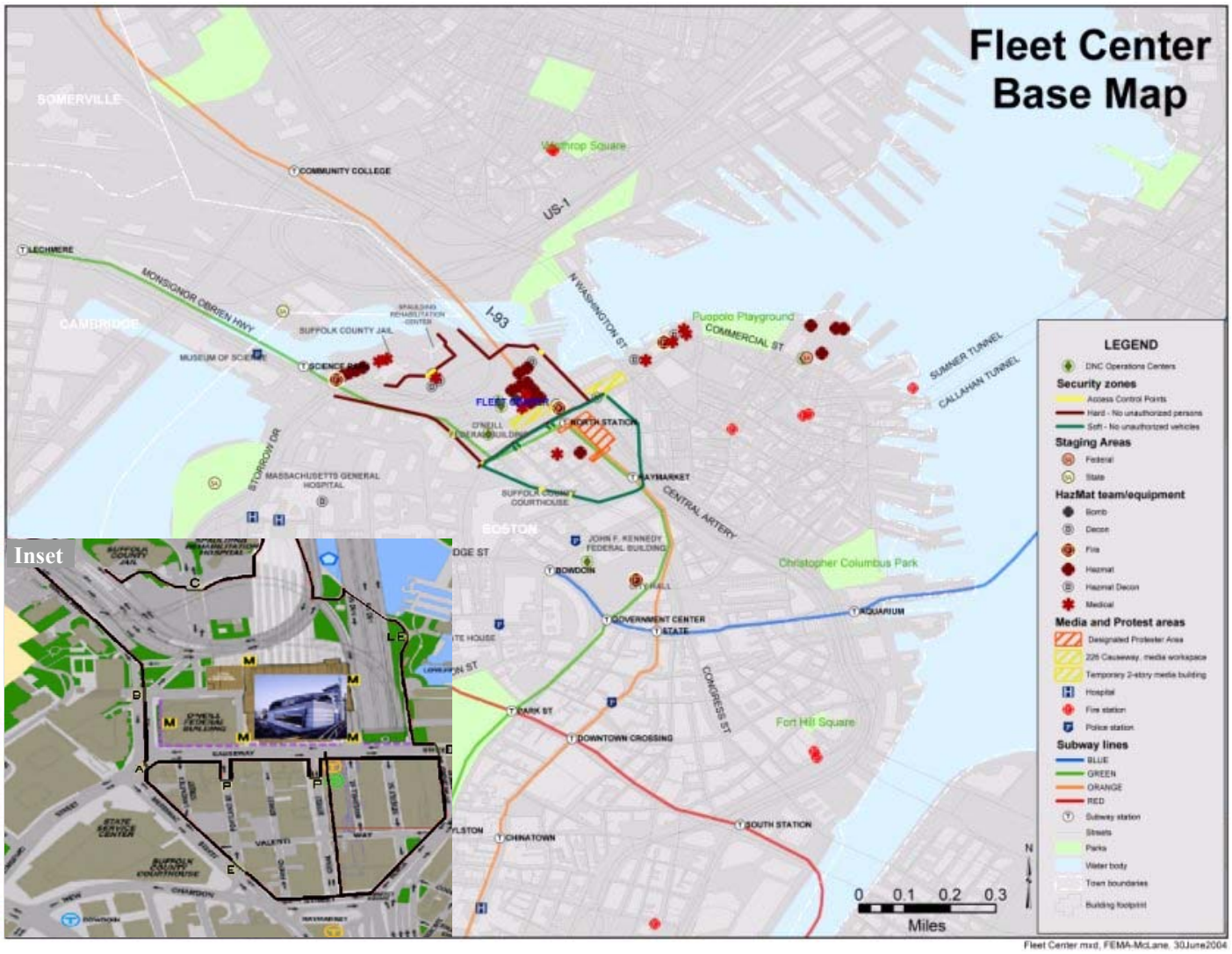

Figure 2. Fleet Center Base Map with inset of security zones.

and emergency operations centers. A short time before the DNC, the main phase of the Central Artery Project was completed, resulting in the rerouting of traffic on Route 93 from the elevated highway to the underground tunnel. Because the Fleet Center, the venue for the DNC, is in extremely close proximity to the new tunnel and the demolition of the elevated structures, the landscape around this venue was changing rapidly in the months before the DNC. In response, aerial orthophotos were taken in the spring of 2004 and distributed to the group.

In an effort to reduce duplication of effort, over 30 maps were produced pre-event for both the ArcGIS 8.x and ArcView 3.x platforms. Also, in order to ensure that all of the operations centers were viewing and making decisions using the same information, five base maps were created 9 (Figure 2). These were vetted for comment and approval through both the GIS personnel in this group and through several key operations groups from FEMA, MEMA, and the Boston Police Department. These base maps were published in the Field Operations Guide (FOG) produced by FEMA for the Consequence Management Subcommittee. Thirty additional maps were produced and included critical facilities, demographics, security areas, and DNC event specific information. These maps were distributed to members of the Consequence Management Subcommittee through a reference CD-ROM produced by FEMA.

All data and maps were designated "For Official Use Only" until August 15, 2004, because of the sensitive nature of some data, including specific locations of field response teams. Once completed, the data and maps were distributed to twenty agencies on fifteen CDs and one DVD.

Note from the editors: *The opinions expressed in the articles of this newsletter are those of the authors and do not necessarily reflect the views of the Police Foundation or the COPS Office. In addition, only light editing has been done in order to keep each author's voice and tone.*

Modeling

The DNC GIS Working Group's Centralized Modeling Group convened at Boston Police Headquarters during the event, and included modelers from the Boston police, EPA, NOAA, and the National Atmospheric Release Advisory Center (NARAC). They used three primary air dispersion models, Aerial Locations of Hazardous Atmospheres (ALOHA), Hazard Prediction and Assessment Capability (HPAC), and NARAC's Web-based or reach-back air model. The procedure for this group was to run each model according to agreed upon inputs, then choose one and disburse those results via the NARAC Web site. The models were sent to each GIS representative to share with the appropriate responders in their agency or operations center.

Additional meteorological support for the modeling group was also provided. Twelve portable anemometers and one surface level wind detection device, which are used for monitoring upper level atmospheric weather for weather analysis, were positioned at pre-determined locations throughout the city by the Boston Police Department in consultation with NOAA. All meteorological data for the area was consolidated and distributed through the Defense Threat Reduction Agency's (DTRA) weather service for modeling, a part of their HPAC support suite.

Hardware and Software

The ESRI software platforms were used for this event. Although much of the group was using ArcGIS 8.x, a significant number were using ArcView 3.x and, as a result, all maps were created in both platforms. Due to these factors and easy translation of the shapefile into other forms, the shapefile was chosen as the data distribution standard. Completed maps were also distributed in Adobe Acrobat PDF and in JPEG formats for easy printing and sharing.

One concept scoped during the course of this working group was that of a common operational picture and GIS portal using ArcIMS and other technologies. This would have allowed for real-time data updates and a common operational GIS picture. Unfortunately, time and financial resources did not allow for the realization of this goal.

Personnel

Several weeks before the DNC, an invitation was distributed to local contacts and through the ESRI business partners to be included on a list of available personnel or equipment resources to be called upon in case of a significant event during the DNC. The response to this invitation was outstanding, with twelve organizations replying back, resulting in a pool of approximately 30 additional personnel with various expertise and resources to be activated if needed. Although there were no significant incidents during the DNC, a large disaster would have quickly overwhelmed resources, and these additional personnel would have been invaluable.

Conclusion

This collaboration was highly successful because of the close cooperation of all participants. The coordination and communication involved throughout the process of this working group was outstanding and proved to be the primary reason for the success of this effort. Similar working groups are recommended for NSSEs or other planned events. The working group found that one set of data and maps were extremely valuable to ensure that all agencies were looking at common information. Additionally, the Unified Modeling Group successfully resolved conflicting plume models by providing a consistent result.

Acknowledgements

All of the agencies and organizations involved in this working group contributed significant amounts of time and energy to this collaboration. Specifically, Johanna Meyer of MEMA served as the data coordinator to produce the dataset; Carl Walter of the Boston Police Department coordinated the Modeling Group; and Lauren McLane of FEMA did overall coordination, including the concept of operations, the symbology standard, the event-specific data, and the common maps.

This article and these images were authorized by Lauren McLane, GIS Coordinator with Federal Emergency Management Agency, and Johanna Meyer, GIS coordinator with Massachusetts Emergency Management Agency.

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The inset image was courtesy of Carl Walter, Director of Tactical Analysis, Boston Police Department.

Influential Mapping Using GIS in a Small City: How to Convey Your Plans Clearly and Concisely

by Chief Mark W. Bowersox
Polk City Police Department

In 2003, a new Arnold Palmer signature golf course called the Tournament Club of Iowa opened for business in the middle of Polk City, Iowa. The course was designated as the new home of the Allianz Golf Championship, a PGA Champions Tour event that had previously been held in nearby West Des Moines. Polk City and its population of 3,000 needed to be ready for the 40 - 50,000 visitors expected during the weeklong event. Handling the influx of visitors and traffic became an immediate concern especially to Polk City's six-person police force. Fortunately, the chief and the city were in the process of installing GIS capabilities for citywide application.

Through past contacts and with the use of aerial imagery and mapping capabilities, the city was able to put together a plan to handle the expected traffic demands of the tournament. Very early in the process, we contacted Iowa State University's Center for Transportation Research and Education and asked for help, and a comprehensive engineering study that served as a class project for senior engineering students was developed. Together with Pat Franklin, General Manager of Tournament Club of Iowa, we provided the students with the information and support for the project. Upon completion of the engineering project, we enlisted the support of the Polk City departments of fire, public works, and administration.

Using maps developed in cooperation with Alan Jensen, GIS coordinator for Iowa, and with Polk City resident and computer consultant, Bob Schultz, we created detailed maps to assist in planning with Allianz officials. At subsequent meetings with the Polk County Secondary Roads department and the Iowa Department of Transportation (DOT), a traffic plan was devised that all parties agreed upon (Figure 1). The maps painted a clear picture for all parties and gave instant creditability to the plan. The plan was simple in concept and was designed to split traffic flow and direct a portion of the traffic away from Polk City's main intersection. Polk County assisted by posting signage throughout the northwest portion of the county that helped direct the traffic into the venue. Iowa D.O.T. supplied changeable signage on area interstates and state roads and this was instrumental in guiding visitors into Polk City.

Figure 1. Organizations and resources consulted by Polk City planners.

We believed that for the tournament to be well received by the community it needed to have a minimum effect on the daily routines of citizens. We used maps to inform citizens and alleviate any anxieties they had during the months prior to the tournament. With Alan Jensen's help, a Microsoft® PowerPoint® presentation was developed that featured aerial views of Polk City and included a map that illustrated potential problem areas if no traffic plan was used (Figure 2). A second map showed the same areas and how traffic-related problems would be minimized with the use of the traffic plan (Figure 3). The PowerPoint® presentation was used numerous times at city meetings and informational meetings, where citizens were allowed to see the traffic plan and gain an understanding of how it was going to work. In addition, we used the presentation to brief other area law enforcement agencies about what Polk City planned to do.

The Des Moines area media was at first skeptical about the ability of a small city like Polk City to handle such a large volume of traffic. However, because we were able to clearly and visually articulate Polk City's plans, the media slowly began to realize that we were prepared.

The PowerPoint® presentation addressed numerous issues other than just traffic. It presented plans for street closures and parking information. The city was going to require the use of permits for residents to park on streets close to the golf course. The maps used in the presentation clearly defined the areas that required a permit and made it very understandable to the public. The maps dispelled many rumors and eased concerns expressed by some citizens. Local school officials were concerned because an elementary school was located just down the street from the entrance to the golf course. With the use of maps, we were able to sit down with school officials and actually show them in detail how tournament-related traffic would be routed and this helped ease their concerns. After two years of planning, the tournament was held May 30 through June 5, 2005. The Allianz officials were very happy with the first year at the new location. Official attendance at the tournament was 47,500 over the three

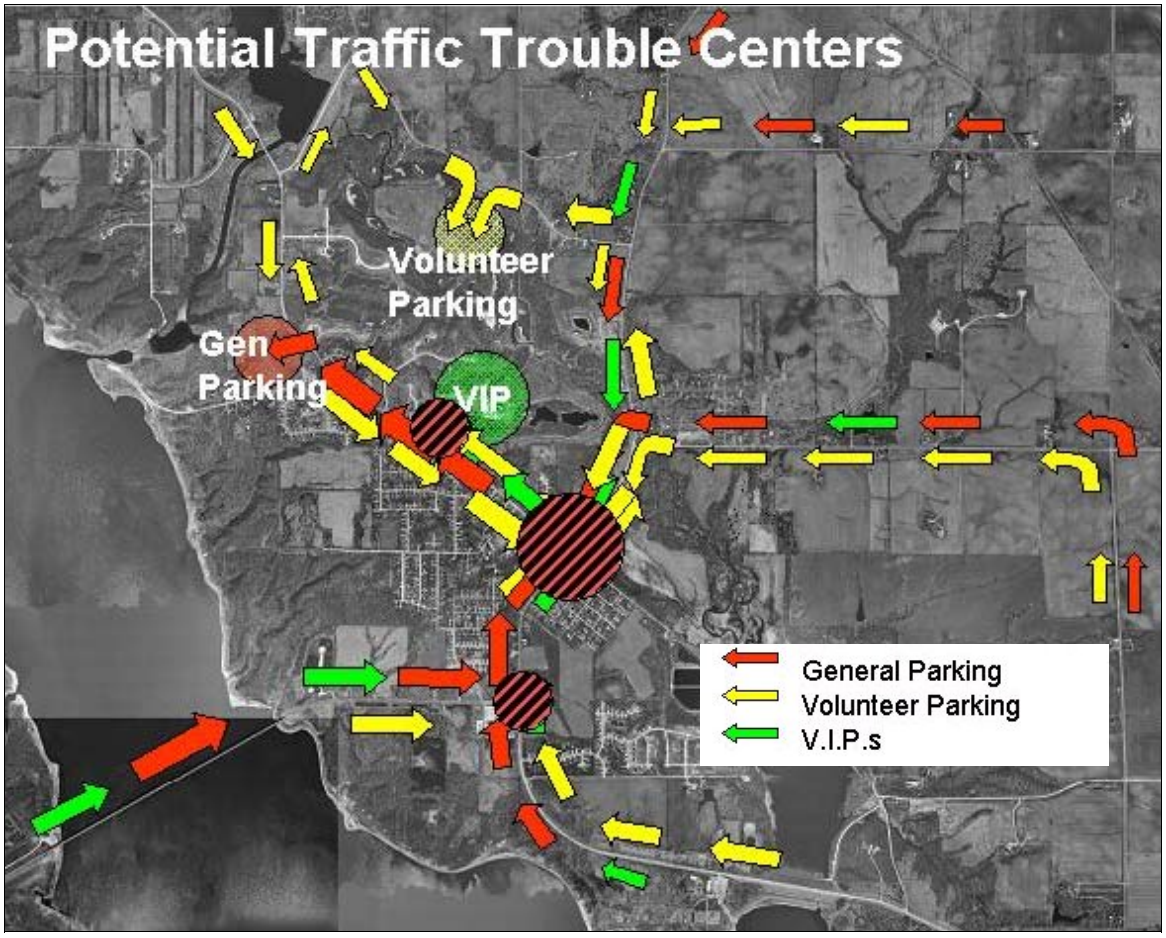

Figure 2. Potential traffic trouble centers without a sound traffic plan.

Figure 3. Final traffic plan devised for the Allianz Golf Championship.

days of actual tournament play. Maps were used during the tournament as well. Several officers were brought in to help Polk City police provide security. Officers from other cities were given an aerial view of the golf course and its 6.5 miles of cart path. The maps helped visiting officers orient themselves to the venue. The Polk City Fire Department also used the maps to assist medical personnel in responding to any calls for assistance.

Much to the delight of all of us involved in the months of planning, the event went off without a hitch. The city received numerous compliments and very few complaints. Expected traffic problems never materialized. The ability to plan and clearly present the traffic plan was made possible by the use of maps, which allowed several governmental agencies to work together to formulate an effective plan. The maps made it easier to educate the public and ease any apprehension they had about what was going to happen. Since the conclusion of the tournament, we are still using the PowerPoint® presentation. As part of the Iowa Law Enforcement Academy's Law Enforcement Executive Training program, I am traveling around the state of Iowa showing it to the command staffs of smaller police departments. The ability to generate informative maps and use them as a tool to convey a clear, concise message to tournament officials, other agencies, and the public was instrumental in contributing to the success of the 2005 Allianz Golf Championship.

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CrimeStat III

by Ned Levine, PhD
Ned Levine and Associates, Houston, TX

With the recent release of *CrimeStat III* (version 3.0 of the *CrimeStat* program) by the Mapping and Analysis for Public Safety program at the National Institute of Justice (NIJ), a new direction was taken for the program. *CrimeStat* is a stand-alone spatial statistics program for the analysis of incident locations. It was developed by Ned Levine & Associates from research grants from the National Institute of Justice, which is the sole distributor of *CrimeStat* and makes it available for free to law enforcement and criminal justice analysts and researchers.

The program is Windows-based and interfaces with most desktop GIS programs. The purpose is to provide supplemental statistical tools to aid law enforcement agencies and criminal justice researchers in their crime mapping efforts. It reads point locations that could represent both incidents as well as proxies for a zone, such as the centroid of a census tract. It has a range of spatial statistical routines that are useful for researchers and crime analysts, including those for identifying elementary spatial characteristics, hot spots, broad regional trends through interpolation, and a series of tools for analyzing the behavior of serial-offenders—journey to crime (geographic profiling) estimation and space-time analysis aimed at predicting the direction and time of next events.

Version 3.0 has introduced a module for modeling the behavior of offenders over an entire metropolitan area. Called Crime Travel Demand modeling, the module is an adaptation of travel demand modeling, widely used in transportation planning, to crime behavior. Virtually all large metropolitan areas in the United States and throughout the world have transportation planning organizations that model travel behavior over a wide metropolitan area. The purpose is to provide an analytical framework for coordinating the billions in Federal transportation dollars that are spent each year on roadway improvements throughout the United States. A travel demand model provides a baseline from which the effects of new roadway projects can be evaluated. If a model is first estimated using known travel data, it becomes possible to estimate the likely effects of making particular improvements by changing various parameters in the model. This "what if" quality of the travel demand model makes it useful for analyzing potential interventions which could reduce crime.

Of course, crime travel behavior is different in many respects from ordinary travel behavior. Thus, the crime travel demand module requires a lot of adjustments in order to make it more appropriate for crime analysis. Prior to running the model, the user has to compile a sizeable amount of data. The model is run at a zonal level so the user has to first decide on which zone framework to use (e.g., census geography, traffic analysis zones, zip codes, grid cells) and, second, compile crime, socioeconomic, land use, and network data for these zones. Crime data is the most critical and a database of incidents must be obtained that has both the locations of the crimes as well as the offender origin locations (usually the residence location when arrested). The residence locations are assigned to zones to produce a distribution of *origins* by zone, while the crime locations are separately assigned to zones to produce a distribution of *destinations* by zone. Additional socioeconomic and land use data are obtained to allow the modeling of the origins and the destinations.

The crime travel demand model is made up of four distinct stages that are conducted in sequence. First is *trip generation* in which separate models are developed to predict the number of crimes that will originate in each zone (an origin or production model) and the number of crimes that will occur in each zone (a destination or attraction model). Particular types of crimes (e.g., commercial robberies, residential burglaries) can also be modeled. Since, however, the distribution of crimes is highly skewed—most zones have

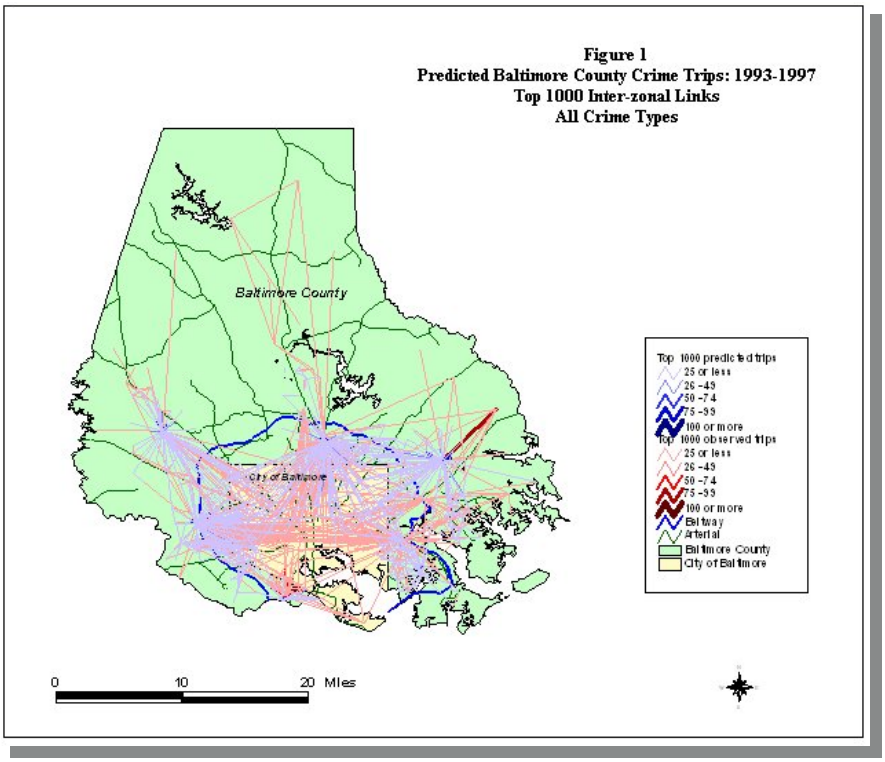
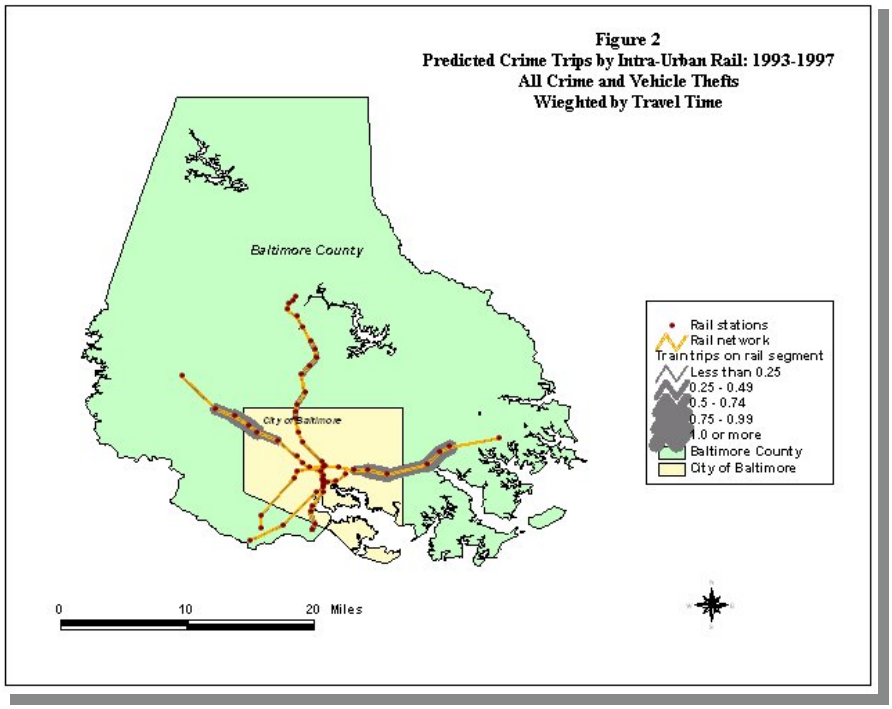


Figure 1
Predicted Baltimore County Crime Trips: 1993-1997
Top 1000 Inter-zonal Links
All Crime Types

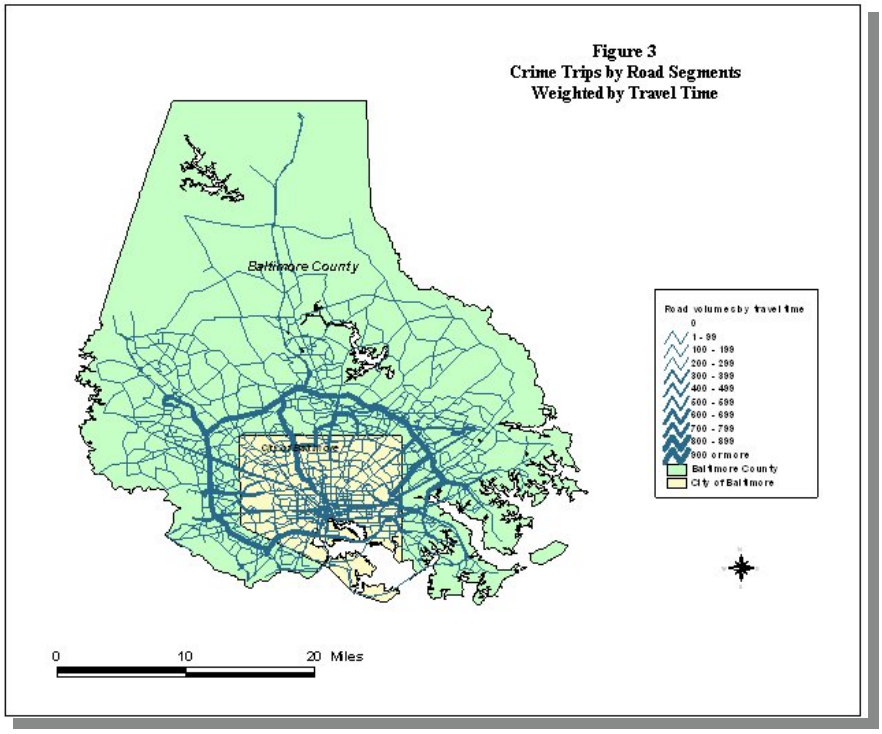


few crimes that either originate or end in them, while a handful of zones have many—a skewed regression model must be used. *CrimeStat III* has a stepwise Poisson-regression routine that allows the development of these models.

The second modeling stage is *trip distribution* in which the predicted trips are distributed from each origin zone to each destination zone. *CrimeStat III* has a gravity-type model for doing this and also allows a comparison of the predicted distribution with the actual trip distribution. Figure 1 shows a map of the predicted inter-zonal crime trips that occurred in Baltimore County, MD, between 1993 and 1997 and compares them with the actual trips.

The third stage of crime travel demand modeling involves separating the crime trips from each origin zone to each destination zone into separate travel modes. A relative accessibility model is used to do this in which the relative frequency of each travel mode is evaluated with respect to the cost (or impedance) of travel. Figure 2 shows the predicted number of crime trips occurring in Baltimore County that went by the Baltimore urban rail system; note how the trips follow the layout of the rail lines, a necessary condition of taking a rail trip.

The fourth, and last, stage of crime travel demand modeling is the assignment of crime trips to a travel network; the network can be weighted by travel time, speed, or even travel cost which provides a more realistic model of travel than mere distance. Figure 3 shows the likely crime trip volumes that occurred on the major roads in Baltimore County and Baltimore City between 1993 and 1997. Note how the predicted trips follow the circular Baltimore Beltway (I-695), which is one of the major freeways in the metropolitan area. Even though travel on the Beltway is a little longer than direct arterials, it is usually much faster than travel on arterial roads, which are characterized by intersecting driveways and roads, traffic lights, and lots of stop-and-go traffic.



Using the Model for Estimating Interventions

Once the four modeling stages have been estimated for a metropolitan area, the model can be used to estimate the likely effects of particular interventions. Currently, various researchers are using the model to estimate the likely effects on DUI crashes of intervening to reduce alcohol dependency in neighborhoods with many DUI offenders (Phil Canter and Ned Levine); evaluating the consequences of improving security around El stations in Chicago (Dick Block); estimating the likely effects of Hurricane Katrina on drug shipments from Mexico to the United States (Dan Helms); targeting neighborhoods with many offenders who have committed robbery/homicides in Washington DC (Elizabeth Groff); and targeting housing projects with many drug offenders in Charlotte-Mecklenburg, NC (Jim LeBeau). In these cases, the model is being used to simulate the likely effect of implementing these interventions, assuming

they are all successful.

Plans for the Next Version

The next version of the program will include new tools for spatial regression modeling and incident detection, as well as improved tools for crime travel demand modeling.

In the meantime, version 3.0 can be downloaded from the archivist of the National Institute of Justice (see footnote 1). The program is accompanied by sample data sets and a manual with 17 chapters that gives the background behind the statistics and instructions for using them. A number of researchers and analysts have contributed examples on the use of various *CrimeStat* routines and Dick Block and Dan Helms have contributed a chapter applying the crime travel demand model to Chicago and Las Vegas, respectively. There is also an appendix of Poisson and Ordinary Least Squares regression written by Luc Anselin. In future versions, hopefully more chapters will be written by other researchers to illustrate the background behind various spatial statistics and how they are being used in crime analysis.

[1] The program and documentation are available from: http://www.icpsr.umich.edu/crimestat

Ned Levine, PhD, is the Director of Ned Levine & Associates. Technical questions relating to the CrimeStat software, sample data, or manual should be directed to crimestat@nedlevine.com.

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NEW

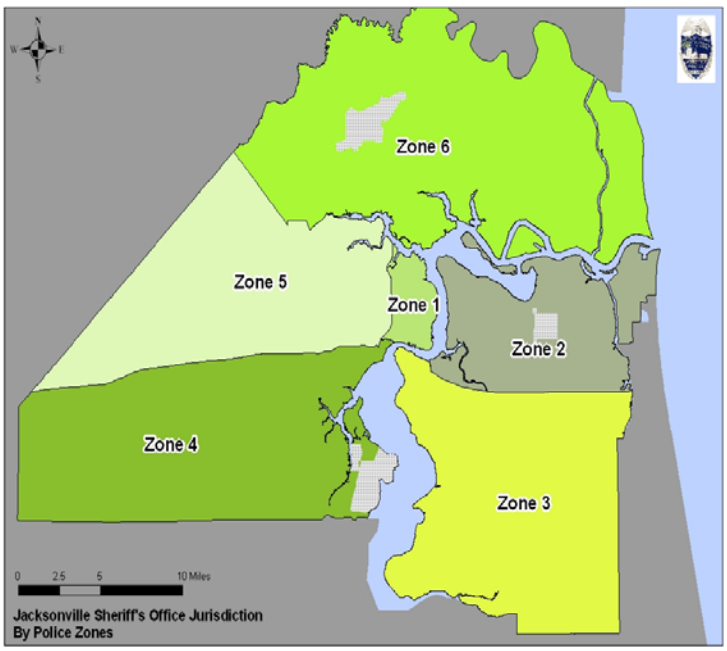
CRIME MAPPING NEWS SPOTLIGHT:

Jacksonville Sheriff's Office

This issue's spotlight focuses on the improvements that resulted from a recent mapping transition undertaken by the Jacksonville, Florida Sheriff's Office Crime Analysis Unit. The unit leveraged existing tools and changed the way they conducted business to enable far more efficient and flexible analysis. Re-thinking the utility of their existing mapping technology was fundamental to the proven success of their new business model.

The Jacksonville Sheriff's Office (JSO) serves as a consolidated police and corrections law enforcement agency for all of Jacksonville and the vast majority of Duval County. Jacksonville ranks twentieth in population and has the largest geographical city limits in the continental U.S (see figure below). The JSO employs approximately 1,600 sworn officers, eleven civilian analysts in its Crime Analysis Unit, and handles well over a million calls for service a year.

The Jacksonville Sheriff's Office has had mapping tools for years. Typically, analysts would produce maps when needed and the JSO even developed a basic Web-mapping application for officers. But in the summer of 2003, the out-going sheriff, John Glover, initiated the process of hiring Matt White, formerly of the Charlotte-Mecklenburg Police Department, to run Jacksonville's Crime Analysis Unit. Under the newly elected sheriff, John Rutherford, staff improvements to crime analysis were encouraged and supported. White envisioned that changes in the way they were conducting business—primarily a fundamental reversal in the nature of their use and treatment of geographic information systems (GIS) as an analytical tool—would produce dramatic improvements in the speed, flexibility, and quality of their work.



The JSO had many different tools for conducting crime analysis but there were some concerns about the efficiency and effectiveness of using each of these different tools for varying crime analysis functions (e.g., Access for database, ArcView for mapping, link software for charting, etc.). Analysts often repeated elaborate processes, which included switching back and forth between multiple software products, exporting and importing tables, handwriting information, searching various web sites, all in an effort to gather the data required to complete a single crime analysis assignment. At the time, GIS was used primarily as a niche product to fulfill requests specifically to generate maps, and the geocoding process was very laborious. Talented analysts were working hard but were frustrated by the time spent performing mundane tasks that prevented them from providing real crime analysis to the JSO.

The JSO essentially reversed the way it conducted business as GIS was brought to the forefront and became the foundation of their crime analysis operations. Data processes and geocoding were handled before analysts arrived to work, eliminating hours of time consuming prep work each day. Thus, data were always cleaned, classified, and geocoded for the analysts each day. The result is that analysts now arrive at work, open GIS as their primary tool, and can visualize events and other data in the city from the previous days, weeks, or months. In addition, analysts can find definitions of incidents, field interviews,

arrests, and other data to view any pertinent information and even read narratives with one click. Instead of reviewing incidents randomly or by beat, they can review by cluster, business type, MO, or any combination of these and other factors without ever having to change software tools. In GIS, they can easily access tabular information and create more elaborate link analysis utilizing pre-processed linkages to other police and non-police data. In keystrokes alone, the unit was saving substantial time each day. When people need information fast, analysts simply use a host of canned reports to produce consistent and need-formatted outputs based on simple GIS selections that combine geographic considerations with traditional database protocols. Best of all, analysts became fluent with GIS so that anytime more sophisticated GIS analysis can be of benefit, they are already up to the challenge.

By using GIS as an information system rather than a niche mapping tool, the requests that once took the JSO days, weeks, or months now routinely take seconds, minutes, or hours. The result is that analysts are far more capable and far better situated to help further the goals of the agency they serve. Most importantly, developing a streamlined system for crime analysis reports has freed up more time for analysts to support problem-solving initiatives. While still reporting on crimes that have already occurred, analysts now have the extra time to be more strategic and thus more proactive and focused on crime prevention.

This article was authored by Matt White, Crime Analysis Supervisor, Jacksonville Sheriff's Office. He can be contacted via e-mail at Matt.white@jaxsheriff.org

CRIME MAPPING NEWS
CALL FOR AUTHORS

UPCOMING TOPICS INCLUDE:

- Crime Mapping in Smaller Agencies
- Crime Mapping in Public Transportation
- Crime Mapping in State Agencies
- Mapping in Courts and Corrections
- Multijurisdictional Mapping Efforts
- Mapping Intelligence Data for Homeland Security

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Highlights of Recent Crime Mapping Conferences

by Greg Jones, Research Associate,
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International Association of Crime Analysts Conference

The 15th Annual International Association of Crime Analysts (IACA) Training Conference, was held in Arlington, VA, from September 21 through 24, 2005. The conference was attended by over 200 individuals representing local, state, and federal law enforcement agencies, universities, and nonprofit organizations from the United States and abroad. Guest speakers included Dr. John Jarvis from the FBI's Behavioral Science Unit, Gloria Laycock, Executive Director of the Jill Dando Institute of Crime Science, and Rana Sampson, an international crime consultant who works extensively with the Center for Problem Oriented Policing.

Two new additions to the conference this year were the Problem Analysis Track and the IACA Certification Exam. Sally Olterman and Michele Kennedy successfully completed the exam and are the first analysts ever to become IACA certified. There were also three panel sessions that addressed the future of crime analysis, how to effectively manage a crime analysis unit, and understanding crime analysis from an international perspective. Other tracks that were offered included Tactical Analysis, Special/Advanced Topics, and Technical Lab, which included several hands-on training sessions. Some of the presentations given in these various tracks included the following: The Role of Crime Mapping in Problem Analysis, Implementing Problem Analysis in a Law Enforcement Agency, Statistics and Crime Analysis, Sexual Assault Analysis, Temporal Analysis of Crime, Identifying High-Risk Offender Reentry Using GIS, Combatting Alcohol-Related Crimes, and Information Sharing in Law Enforcement: Lessons Learned. Pre-conference training classes were also offered in ArcGIS 9.x and Getting Started with Automated Tactical Analysis of Crime (ATAC).

Dr. Rachel Boba, an assistant professor at Florida Atlantic University, was awarded the 2005 IACA Membership Award. The winner of the Best Overall Bulletin was Steve Walter who is a crime analyst for the Oceanside Police Department in California. Jim Mallard, a crime analyst for the Gainesville Police Department, was given the IACA Executive Award for his extensive work on the IACA website. For further information about this conference and related presentations, go to www.iaca.net

NIJ MAPS Crime Mapping Research Conference

The Eighth Annual Crime Mapping Research Conference sponsored by Mapping and Analysis for Public Safety (MAPS) at the National Institute of Justice, was held in Savannah, GA, from September 7 through 10, 2005. The conference was attended by over 300 individuals representing universities and research institutions, law enforcement and correctional agencies, technology centers, software vendors, nonprofit organizations, and more. The keynote speakers were Lisa Godbey Wood, U.S. Attorney for the Southern District of Georgia, and Michael J. Costigan, Special Advisor to the Assistant Attorney General.

Some of the concurrent panels offered at the conference were the following: Corrections, Parole & Probation; Crime Forecasting; Crime Mapping and Analysis; Geography of Crime; Spatial Data Analysis; Geographic Profiling; GIS Applications; and Crime Travel Demand Modeling. New panels at this year's conference included Forensic Mapping, Sex Offender Mapping, Terrorism, and Tactical Crime Analysis. The conference roundtable focused on Geographic Profiling where panelists engaged in a passionate debate on the usefulness of various geographic profiling software and discussed what can be done to further advance geographic profiling research. Pre-conference training classes were offered September 5th and 6th for both Crime Mapping with ArcGis 9.x as well as Crime Series Analysis and Spatial Statistics with ArcGIS 9.x.

The winner of the Best Overall Map in the 6th Annual Crime Map Competition was Steven Rose who works for the Birmingham Community Safety Partnership in the United Kingdom. Other winners included Ge Lin Xiannen Chen, West Virginia University, for best analytical map; Phil Mielke, Redlands Police Department, for best cartographic design, and Joyce Knowlton, Minnesota Department of Corrections, for most innovative use of mapping. For further information about this conference and to download specific presentations, go the NIJ MAPS web site at www.ojp.usdoj.gov/nij/maps/conferences.html.

Upcoming Conferences and Training

DECEMBER

MapInfo Professional: Introductory, Intermediate, and Advanced Training in select cities:
Atlanta, GA; Dallas, TX; Denver, CO; Newport Beach, CA; Toronto, ON; Troy, NY
http://www.mapinfo.com/

JANUARY

CMAP Introductory ArcGIS 9.1 Training:
January 9 - 13, 2006
Denver, CO
http://www.crimeanalysts.net/

ESRI Training: Working with ArcGis Spatial Analyst 9.x in select cities:
January 17 - 19, 2006
West Palm Beach, FL
and
January 18 - 20, 2006
Boston (Danvers), MA
www.esri.com/training/index/html

Advanced Analysis with ArcGIS 9.x in select cities:
January 9 - 11, 2006 in
Gahanna, OH and Redlands, CA
www.esri.com/training/index/html

MapInfo Professional: Introductory, Intermediate, and Advanced Training in select cities:
Atlanta, GA; Dallas, TX; Denver, CO; Newport Beach, CA; Washington, DC; New York, NY; Troy, NY
http://www.mapinfo.com/

GENERAL WEB RESOURCES FOR TRAINING SEMINARS AND CONFERENCES

http://giscenter.isu.edu
http://msdisweb.missouri.edu
www.actnowinc.org
www.alphagroupcenter.com
http://www.cicp.org/course_sched.html
www.cops.usdoj.gov
www.esri.com/events
http://www.iaca.net/Training.asp
www.ialeia.org
www.ialep.org
www.mapinfo.com/events
www.nijpcs.org/upcoming.htm
www.nlectc.org/nlectcrm
www.nsgic.org
www.urisa.org/meetings.htm
http://ocpe.gmu.edu/certificate_programs/gis.html
http://www.worldcampus.psu.edu/wc/GISCertificate.shtml
http://www.csufextension.org/Classes/Certificate/

Looking Ahead to 2006!!

ESRI Federal Users Conference
January 31 - February 2, 2006
Washington, D.C.
http://www.esri.com/events/

CMAP Introductory ArcGIS 8.3 Training:
February 6 - 10, 2006
Northeast Counterdrug Training Center, PA
http://www.crimeanalysts.net/

The mission of the U.S. Department of Justice, Office of Community Oriented Policing Services (COPS) is to advance community policing in jurisdictions of all sizes across the country.

COPS provides grants to tribal, state, and local law enforcement agencies to hire and train community policing professionals, acquire and deploy cutting-edge crime-fighting technologies, and develop and test innovative policing strategies. COPS also provides a wide range of original publications, tools, and products designed specifically for law enforcement and community members who wish to enhance their community policing capabilities.

This broad range of programs and products helps COPS offer agencies support in virtually every aspect of law enforcement, and it's making America safer, one neighborhood at a time.

Visit ***www.cops.usdoj.gov*** to:

Obtain information on COPS funding opportunities

Read up on the most relevant issues in community policing today

Learn about training opportunities

Visit our resource room online or call the U.S. Department of Justice Response Center at ***800.421.6770*** for a full selection of COPS publications and other resources.

www.cops.usdoj.gov

COPS

COMMUNITY ORIENTED POLICING SERVICES
U.S. DEPARTMENT OF JUSTICE

ABOUT THE POLICE FOUNDATION

The Police Foundation is a national, nonpartisan, not-for-profit organization dedicated to supporting innovation and improvement in policing through its research, technical assistance, communication, and professional services programs. Established in 1970, the foundation has conducted seminal research in police behavior, policy, and procedure, and works to transfer to local agencies the best new information about practices for dealing effectively with a range of important police operational and administrative concerns. Motivating all of the foundation's efforts is the goal of efficient, humane policing that operates within the framework of democratic principles and the highest ideals of the nation.

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