Crime Mapping News

A Quarterly Newsletter for GIS, Crime Mapping, and Policing

The topic of this issue of *Crime Mapping News* is interactive crime mapping efforts on the Internet. The articles in this issue cover topics including 1) an evaluation of the ARJIS mapping Web site in San Diego County, California; 2) a description of an Internet mapping application under development in Austin, Texas; and 3) a list of law enforcement agency Web sites that provide interactive mapping capabilities. In this issue, we have also included an article about the use of GIS technology for the CBS television show, *The District,* and an article about the CrimeMap Tutorial, recently released by NIJ. Lastly, we are introducing a new feature, *Map Yap,* which allows readers to respond with questions and feedback.

Inside this Issue

Evaluating a Crime Mapping Web Site
by Julie Wartell, Senior Research and Technology Associate
Institute for Law and Justice

Background of ARJIS

San Diego County's Automated Regional Justice Information System (ARJIS) was created in the 1970s to allow all law enforcement agencies in the county to maintain and access consistent crime and arrest information. The system, developed initially as an internal, law enforcement only, mainframe system, is now migrating to enterprise Web applications.

Crime mapping has been conducted within individual agencies in San Diego County for over ten years, and the San Diego Police Department (SDPD) was a pioneer in 1996 in putting crime maps on the Internet. With SDPD's assistance, ARJIS developed the first multi-agency, interactive crime mapping
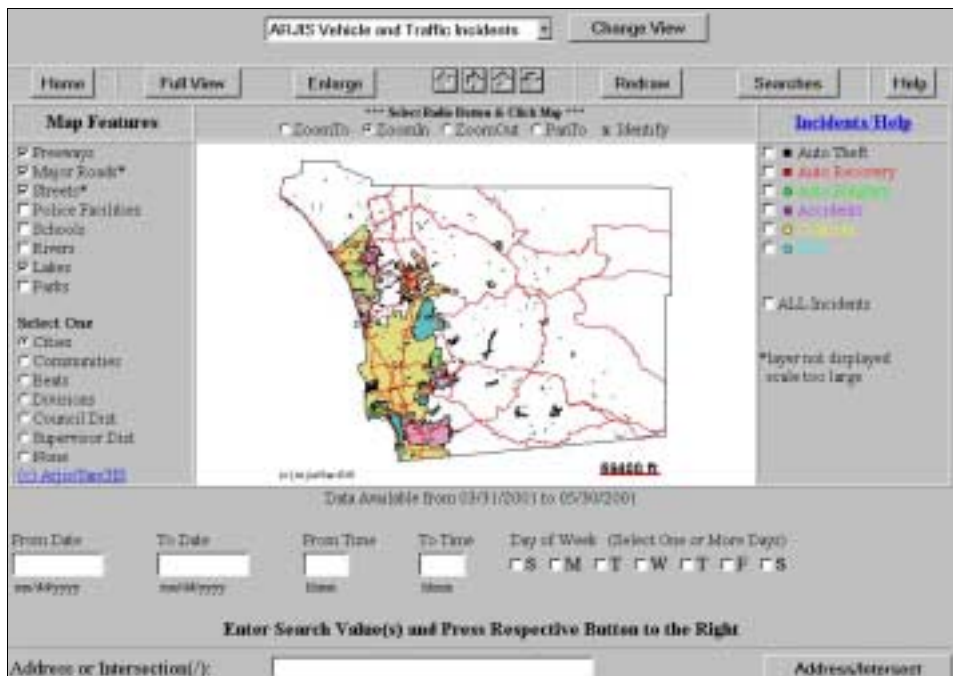
The initial screen that appears when the user chooses "vehicle and traffic" from the disclaimer page. Geographical searches can be reached by scrolling down the page.

Web site in the country in late 1999. Now, anyone in the world can query and view certain crime, arrest, call, and traffic data for anywhere in San Diego County. Searches can be geographic—by street, neighborhood, police beat, city, or council district—as well as by incident type, time of day, and day of week.

Background of the Evaluation

As more and more law enforcement agencies have acquired technology and shifted to community policing, many are finding themselves in a position of making crime data and maps available to the general public. Through the use of the Internet, law enforcement can relatively quickly, easily, and cheaply provide a wide variety of useful information. Although there has

Tracking the number of visitors to the ARJIS site in blocks of 27 days.

been a recent surge in putting crime maps on the Internet, we are not aware of any formal evaluations of these types of sites. People can only guess and debate whether there should be crime maps on the Internet, who should put them up, what should they look like, and the positive and negative consequences.

The ARJIS Web site is in a position to serve as a model for others doing crime mapping on the Internet. ARJIS itself is a unique model for law enforcement, and the extension of making regional, interactive crime maps available to the public is noteworthy. This effort is being evaluated because ARJIS and its members want to know the effect their creation has on the community and public safety. Other law enforcement agencies and criminal justice researchers can also utilize this study in preparation for their own sites and to further support similar efforts.

Evaluation Strategy

The evaluation began in May 2000 and will be completed in June 2001. An evaluation committee was formed to brainstorm measurement ideas, develop a survey, and provide feedback from their respective fields—policing, GIS, research, and the community. Through the use of surveys and focus groups, a

substantial part of the evaluation is to get user feedback. Presentations and surveys started in November 2000 and will continue through the end of May 2001. Current and potential users of the interactive crime maps are the target audience. Some of these groups include, but are not limited to: law enforcement; community members; health and education administrators; people working in fields relating to real estate, planning, and development; private security; and politicians.

In addition to the survey feedback, other data are being examined for the evaluation. These data primarily include crime rates and Web site tracking statistics. Economic and environmental factors will also be assessed. Changes to the ARJIS Web site will be made at the completion of the evaluation. These changes will be based on the survey and focus group results as well as the other data that are collected.
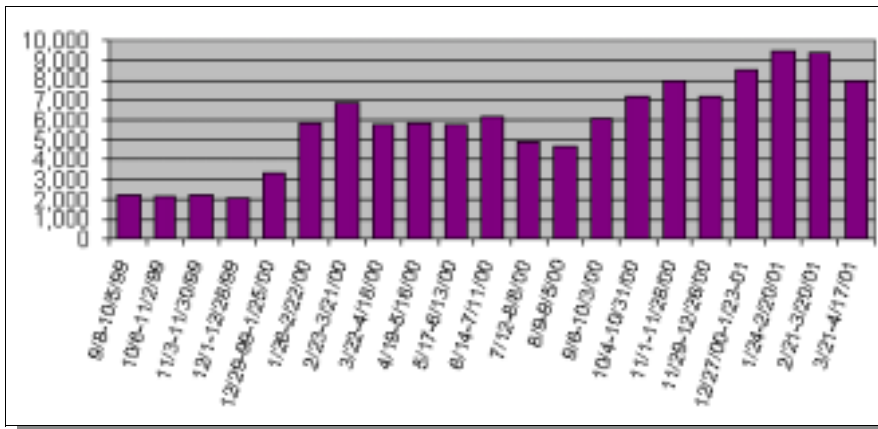
Preliminary Findings

ARJIS uses a program called WebTracker to track a variety of statistics about the use of the site. As noted in the chart, use of the overall Web site increased significantly after the Interactive Mapping Application (IMA) was added to the site. Use also has continued to grow since the increased marketing and education from this evaluation.

While it is difficult to ascertain exact numbers of users of the crime mapping application, one gauge is that there were 27,062 hits on the map disclaimer page over a period of about 14 months (and I only accounted for about 500 of those!).

About 20 presentations to over 400 people have been completed, including law enforcement officers, community groups, apartment managers, the real estate association, the regional domestic violence council, a business improvement district, city code compliance, and library staff. Each group has been very excited about this resource and provided excellent input and suggestions for improvements to the site.

There are two surveys currently being conducted. The first, a "pop-up" survey which shows
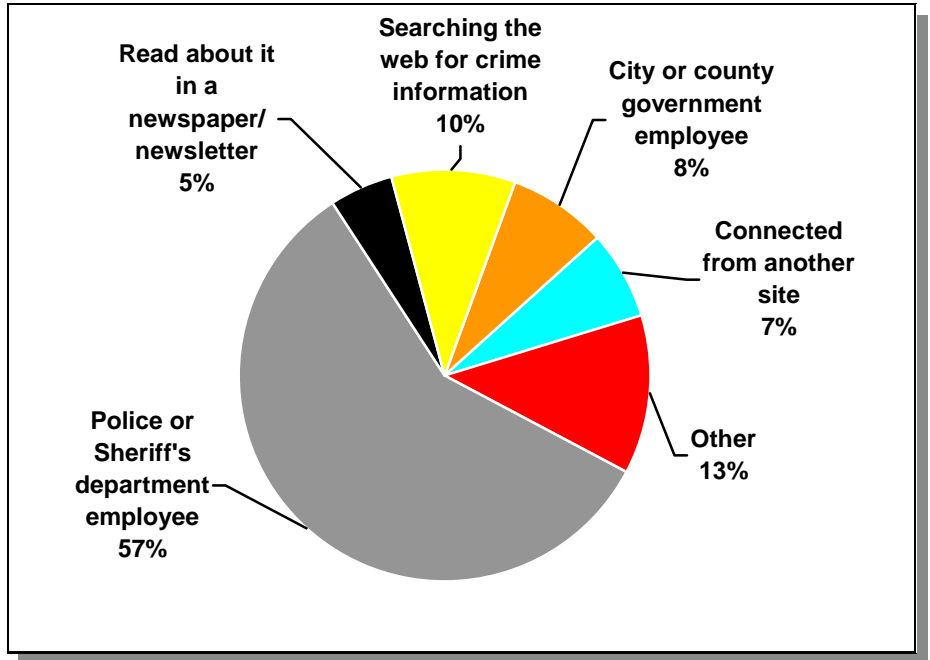
up the first time the computer goes to www.arjis.org, has five easy questions, and we have had over 700 responses. We have only received about 25 responses from the longer survey, reached by clicking on a bullet on the Web site, and data have not yet been compiled. Based on an analysis of 574 responses to the pop-up survey as of February, there have been some interesting results.

The first question, "Where did you hear about this site?", revealed that over half of the people had heard about it through a police or sheriff's department employee. This figure shows the entire breakdown of responses.

When asked why people were using the site, the predominant answer was to find out about crime in the area they live or work, but a large number were also interested in moving to the area.

We were very encouraged by the responses to "How often do you use the Internet to look at crime information?" Almost half of the respondents are regular users, going to the site at least once a week.
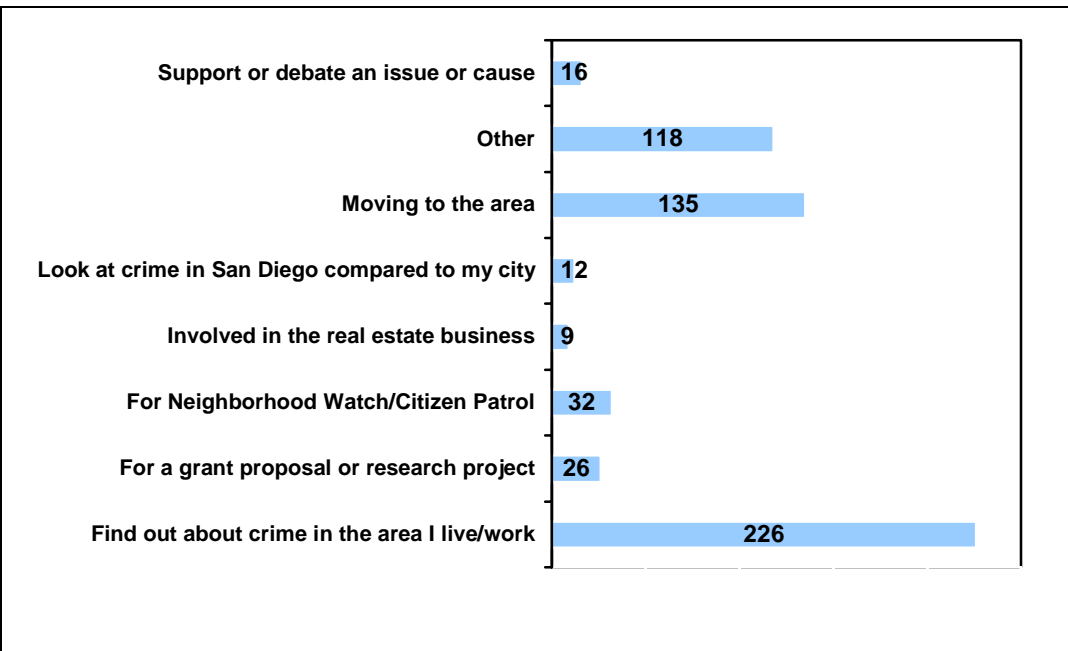
Finally, we wanted to ascertain in what parts of the county the users lived. The map on the following page shows San Diego County and the number of survey respondents by zip code, with the 11 zip codes labeled that had the most responses.

In addition to San Diego County, there were a large number of survey respondents from other law enforcement agencies around the state and country and even a handful of international users.

Responses to the question, "Where did you hear about this site?" from a survey that "popped up" the first time the computer went to www.arjis.org.

Based on research, interviews, and user feedback, a number of other evaluation findings have emerged. These can be categorized as:

■ Not a lot of people knew about the site (even though it has been online for over a year).

■ People find the application relatively user-friendly.

■ There appear to be no negative effects (on public safety, real estate, etc.) by making this information available in this format.

■ Users want more and better data.

Responses to the question, "Why are you using this site?" from the pop-up survey. "Other" included answers such as curiosity, law enforcement, and information.

Preliminary Recommendations

The results of this evaluation are not quite complete, but a number of preliminary recommendations have been formulated and presented to the ARJIS Board of Directors. These include:

- Add more data types and calls for service from other agencies (currently, only San Diego PD provides Computer Aided Dispatch data).
- Provide an option for looking at one year of data (60 days is presently the limit).
- Change the symbols (black and white print outs make it difficult to discern crime types).
- Expand incident identification to include landmark identification and lists of incidents resulting from the query (currently, only one incident at a time can be identified).
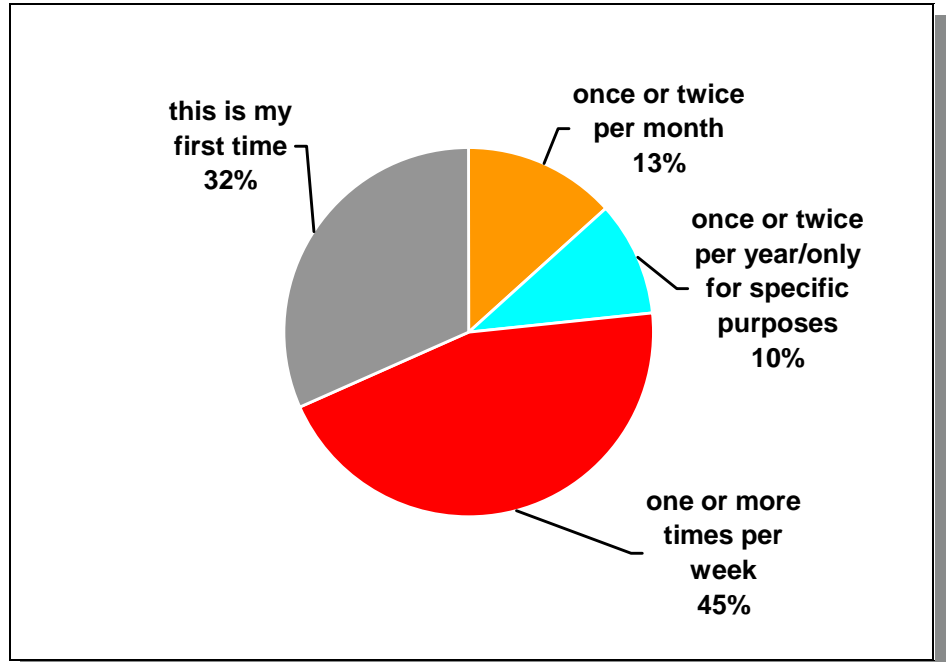
Responses to the question, "How often do you use the Internet to look at crime information?" from the pop-up survey.
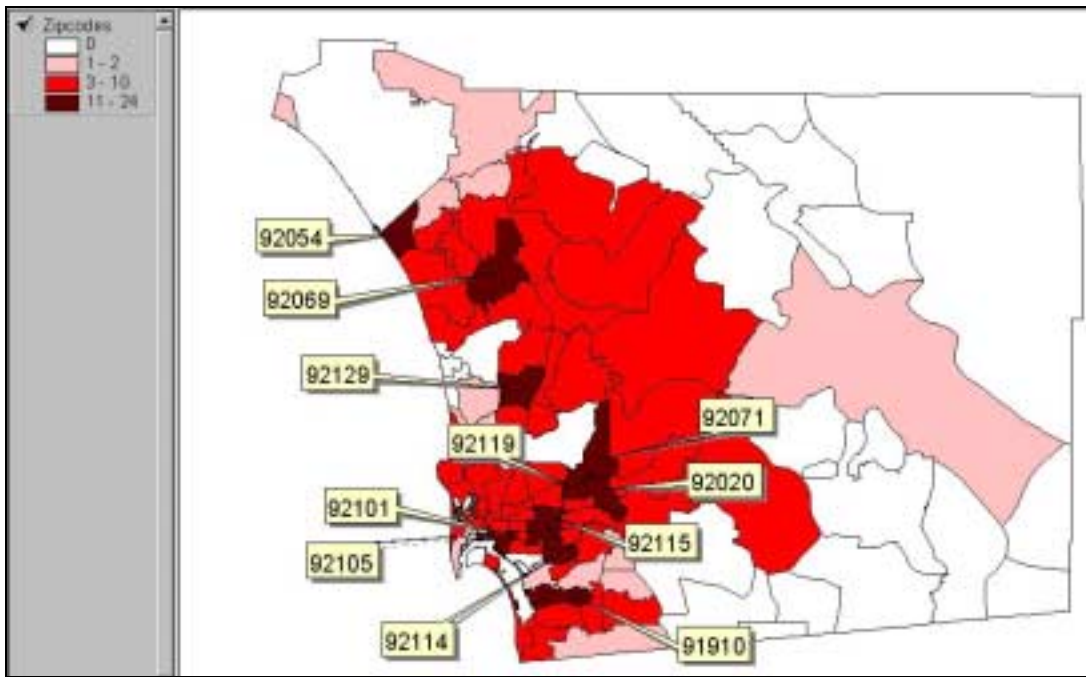
In the pop-up survey, respondents were asked for the ZIP code in which they live. Eleven ZIP codes spread throughout the county had between 11 and 24 respondents.

- Improve and link crime statistics (there is a separate crime statistics application on the Web site but it is not linked with the maps and only has Part 1 crimes aggregated by beat).
- Market the site in a more formal fashion (ARJIS has not yet actively promoted the excellent resource that they provide).

We realize, of course, that not every suggestion received from users can be implemented, but ARJIS hopes to make significant changes to expand the user base and continue to assist the San Diego community in progressive public safety initiatives. We welcome your continued feedback, and be sure to look for a new and improved ARJIS IMA by the fall!

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NEXT ISSUE

The topic of the next issue of *Crime Mapping News* will be analysis and mapping of drug activity by drug and/or law enforcement agencies. We look forward to your participation in submitting articles for the upcoming issue.

If you are interested in contributing to the next issue or any future issue, please contact the Crime Mapping Laboratory at:

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or (202) 833-1460

Mapping in Action:
The Austin Police Department's Crime Mapping Viewer
by Al Johnson
Crime Information Systems Supervisor
**Austin, TX Police Department**
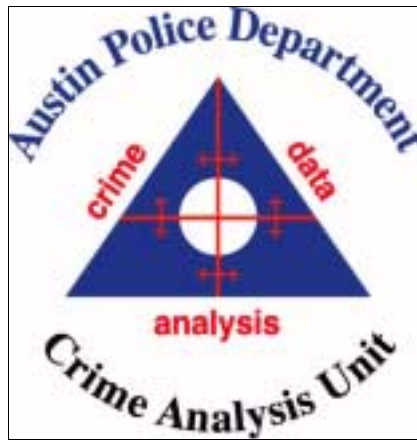
The Austin, Texas Police Department (APD), is set to unveil a unique approach to crime mapping on the Web. Instead of dots on a map, the agency will deliver aggregated crime data using Geographic Information Systems (GIS). APD's interactive crime viewer will use GIS to deliver a variety of information rather than simply showing the location of incidents. The approach came about after a realization that dots on a map may not tell the public what it really wants to know—how much crime is in a neighborhood.

APD's interactive application will provide aggregated data by various user-selected polygons: police patrol areas, ZIP codes, census tracts, and neighborhood associations. One of the most useful tools will be the ability to see crime totals within 500 feet of any user-inputted address. In addition, a rectangle may be drawn anywhere on the map and crime totals will be returned based on the drawn rectangle. Another useful tool will be an *identify* function that will show various bits of neighborhood information: police districts, APD neighborhood policing representatives, census tracts, ZIP code information, etc. The *crime by address* function will be particularly useful for
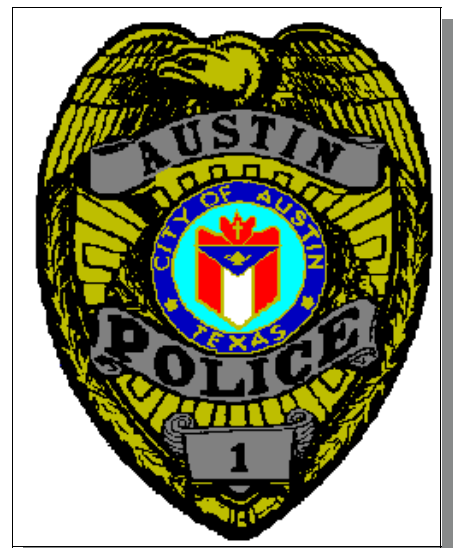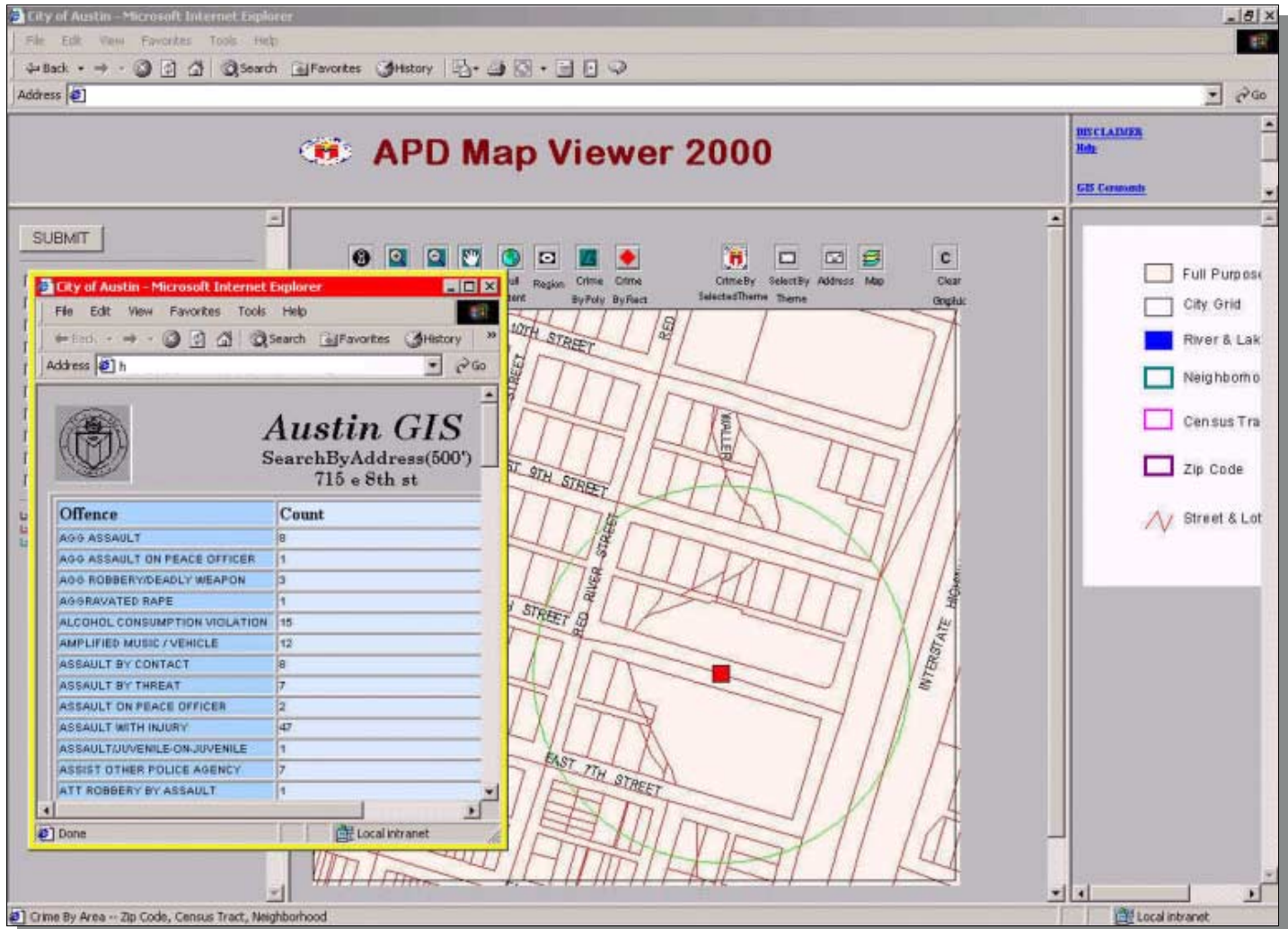
schools, prospective homeowners, and businesses looking at new locations.

Once the new Internet-based mapping system is operational, the amount of information delivered to Austin neighborhoods and neighborhood associations will triple from what is currently available. The new system will put the power to obtain information about neighborhood crime into the hands of individual users; they will not have to make a formal request to get the data they want. It will also free analysts to devote more time to analyzing crime instead of providing reports to citizens.

The GIS project at APD has involved several City of Austin Departments. In addition to the Police Department, the Departments of Information Systems Support and the Information Systems Office provided support.

The viewer was still being fine-tuned at the time this newsletter went to press. To check when the application is ready, you can visit the Austin Police Department's Web site at www.ci.austin.tx.us/police.

Al Johnson is the Crime Information Systems Supervisor for the Austin, TX Police Department. He can be contacted via e-mail at Al.Johnson@ci.austin. tx.us.

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 made to the articles in order to keep each author's voice and tone.

Crime Mapping Goes Hollywood
CBS's *The District* Demonstrates Crime Mapping to Millions of TV Viewers
by Jesse Theodore, Environmental Systems Research Institute (ESRI)

Digital crime mapping and cartography are nothing new. Leading law enforcement agencies across the country and around the world delve into the realm of geographic information to perform all sorts of analyses with the results being safer communities and less crime. Yet, while many Americans know of the successful efforts of law enforcement in general, chances are that most of the public is unaware of the power that crime mapping can have in law enforcement.

But this is changing, and Hollywood is one place where the public is being shown what crime mapping can do. Today, millions of TV viewers are getting a basic understanding of the geographic analysis of crime and the use of computer mapping in law enforcement through the TV show *The District*, which debuted October 7, 2000, and runs every Saturday at 10:00 p.m. Pacific and Eastern time, 9:00 p.m. Central and Mountain time. CBS's television show has been a showcase for geographic information systems (GIS) technology, with the Environmental Systems Research Institute's (ESRI) ArcView GIS software featured each week.

The District features Craig T. Nelson as Police Chief Jack Mannion; an aggressive, unorthodox Police Chief who uses innovative methods, including technology, to control and prevent crime. Lynne Thigpen stars as Ella Farmer, Mannion's Director of Crime Analysis, who uses GIS and its various applications.

At the core of Chief Mannion's tech-arsenal is "COMSTAT," a real-life set of data analysis tools and management processes used by law enforcement agencies throughout the country. *(Editor's note: The terms "COMSTAT" and "COMPSTAT" are used interchangeably to refer to this management and data analysis process.)* Geographic information systems are used within COMSTAT for data mining and statistical analysis that ultimately enables police commanders to have a detailed

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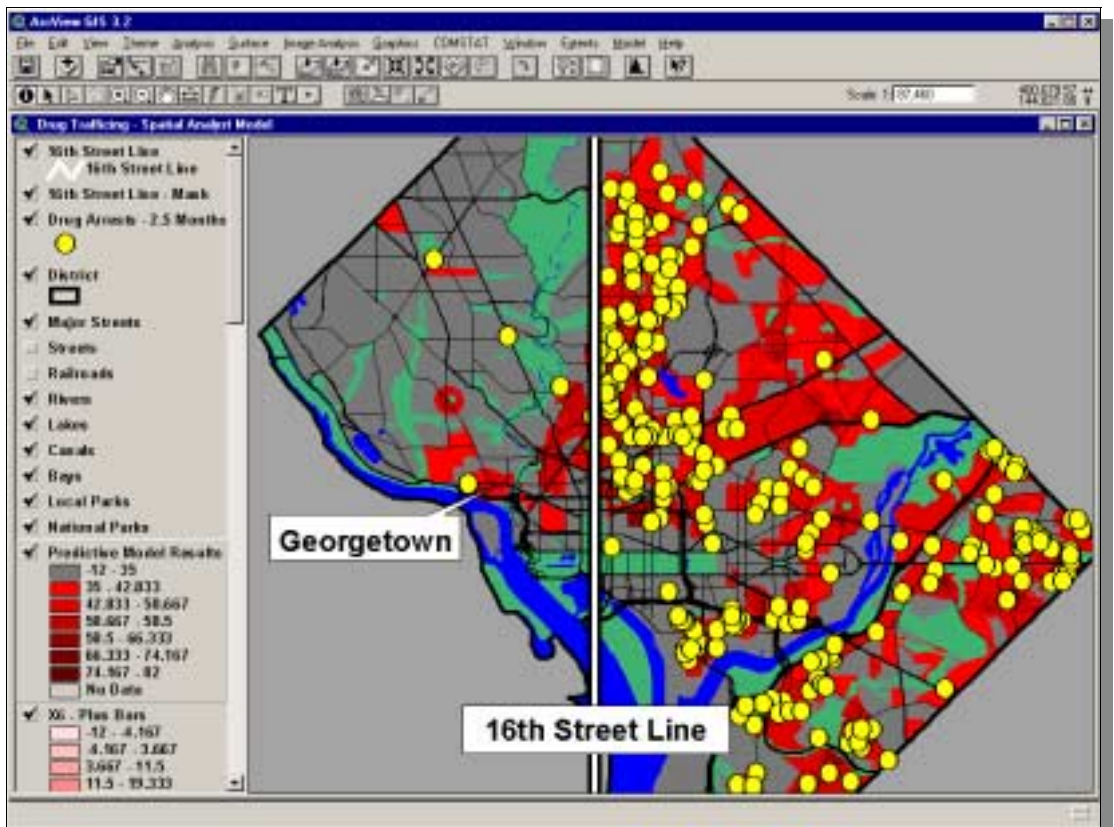
Episode 8—"Pot Scrubbers." Predictive modeling of street-level drug trafficking.

understanding of law enforcement activities and crime patterns in their precincts. COMSTAT was developed by Deputy Police Commissioner Jack Maple while he was with the New York Police Department.

In *The District*, COMSTAT encourages the fictional Washington DC police department to map crime incidents; overlay additional information such as demographic and resource data; and perform sophisticated analyses, modeling, and visualization. More specifically, geographic profiling, hotspot density visualizations, predictive modeling of street-level drug trafficking, and incident mapping are performed with a GIS on the show. The result is a futuristic geographic approach to viewing crime patterns.

> "TV audiences are seeing the same computer mapping applications that are applied in their own local communities. It's a crime drama, so there is the element of fiction to the show, but for the most part, what viewers are seeing for the first time is the real-world, complex computing that helps catch criminals."
> -- Lew Nelson, Law Enforcement Solutions Manager, ESRI

recognized the potential value in bringing GIS to mainstream television audiences." Rather than just provide a box of software, ESRI deployed a full-time GIS professional to help with the show. John Calkins, a GIS professional who has worked for ESRI for a number of years, was assisted by former chief of police turned law enforcement marketing professional Lew Nelson. Nelson, who instituted GIS while leading the Redlands, California Police Department, worked with Calkins to provide training and contact with experienced crime analysts to understand law enforcement mapping techniques as well as share his insights on the use of GIS in real world law enforcement gleaned from 30 years of work experience and graduate study in GIS.

ESRI Teams Up with Producers of *The District*

The District's producers wanted to bring high-level computer mapping to the show, but were not exactly sure what was involved and how the software could actually be used. Originally, they looked at graphics packages with the idea of creating static maps that were in no way based on real law enforcement software applications.

"The show's producers wanted to use real software for the show, and we jumped at the chance to help," says Linda Hecht, director of marketing at ESRI. "We sent our law enforcement industry manager and technical support staff to show the producers the extent to which they could use digital mapping as part of the show. We wanted to provide them with everything they would possibly need because we

Many Maps for Each Episode

In every episode of the show, crime mapping is used in the process of identifying a problem, visualizing and analyzing information, and mitigating and solving the problem.

"TV audiences are seeing the same computer mapping applications that are applied in their own local communities," says Lew Nelson. "It's a crime drama, so there is the element of fiction to the show, but for the most part, what viewers are seeing for the first time is the real-world, complex computing that helps catch criminals."

For instance, Episode 4— "The Real Terrorist"—included ArcView GIS, ArcView Network Analyst, ArcView Tracking Analyst, ArcView 3D Analyst, and the Geography Network, all in one 45-
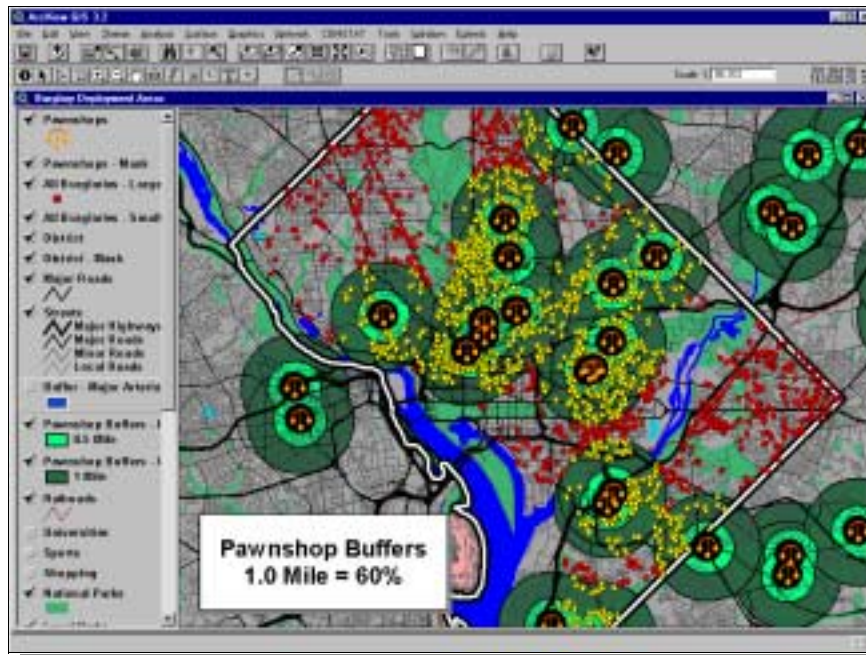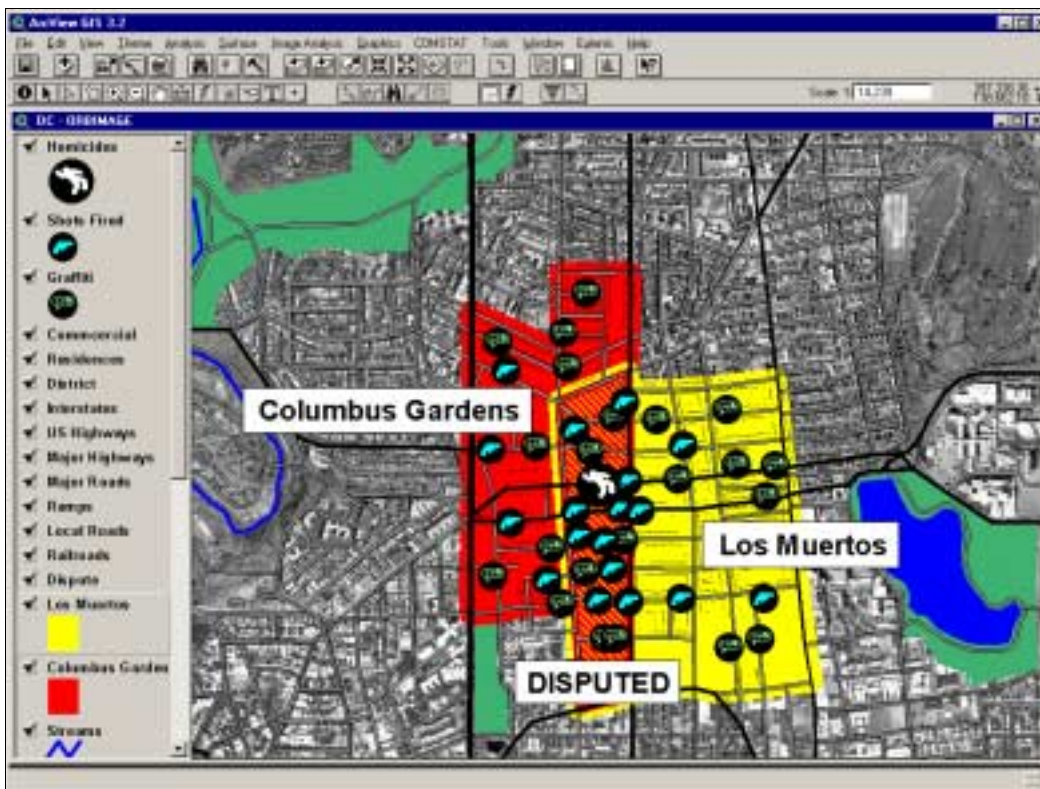

Episode 15—"A Southern Town." Prevalence of residential burglaries within one mile of pawn shops.

minute episode. Desktop GIS, network analysis, three-dimensional mapping, and Internet geographic overlay were some of the GIS processes seen. Digital maps of FBI terrorist deployment plans including checkpoints and roadblocks were developed for the episode.

Much of the data used for the show's fictional crime analysis is based on real-life data. For example, in Episode 8— "Pot Scrubbers"—street-level drug trafficking areas are predicted based on a number of environmental and social parameters. In Episode 14—"The Most Dangerous Job"—cab-related robbery hot spots are analyzed in proximity to Rock Creek Park. In
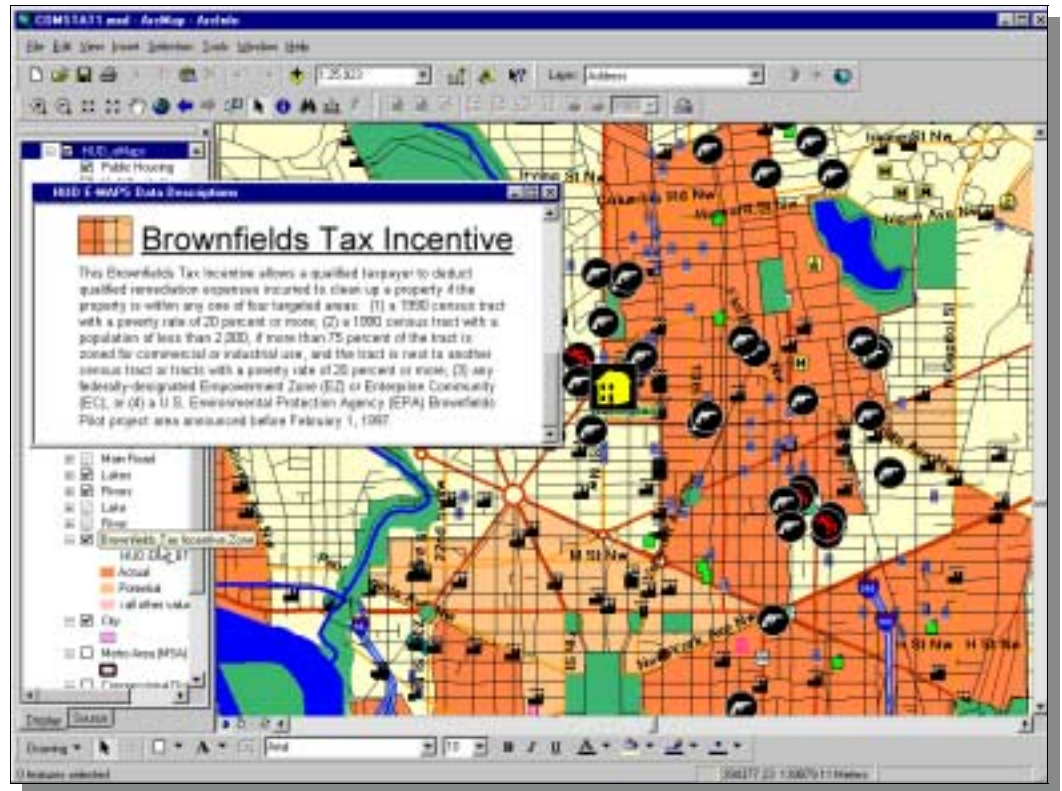
Episode 16—"A New World." Integrating local crime data with housing and environmental data from the Geography Network and the HUD E-Maps site.


Episode 18—"Night Moves." Disputed gang territory and correlation with gang-related crimes.

Episode 15—"A Southern Town"—60 percent of residential burglaries are shown to occur within one mile of pawnshops. *The District* has also been taking advantage of geographic data sources on the Internet and the Geography Network, as the crime analyst examines crime patterns and tax incentives around a home in Episode 16—"A New World."

ESRI's newest software, ArcGIS, was used in Episode 19, entitled "The Agony and the Ecstasy." This episode featured several digital maps depicting the explosion in use of the illegal drug, MDMA (ecstasy), which is used today by many of the

nation's youth. According to the National Drug Intelligence Center, "MDMA and club drugs may pose a greater immediate threat to adolescents and young adults than any other illegal drugs." ArcGIS, ESRI's next generation software, was used in Episode 19 of *The District* to map ecstasy use among 12th grade students, U.S. Customs seizures of MDMA in the top 20 U.S. cities, and known urban areas that have MDMA readily available. Also used for the episode was a GIS model that illustrates how ecstasy abuse may spread across the United States in the next few years.
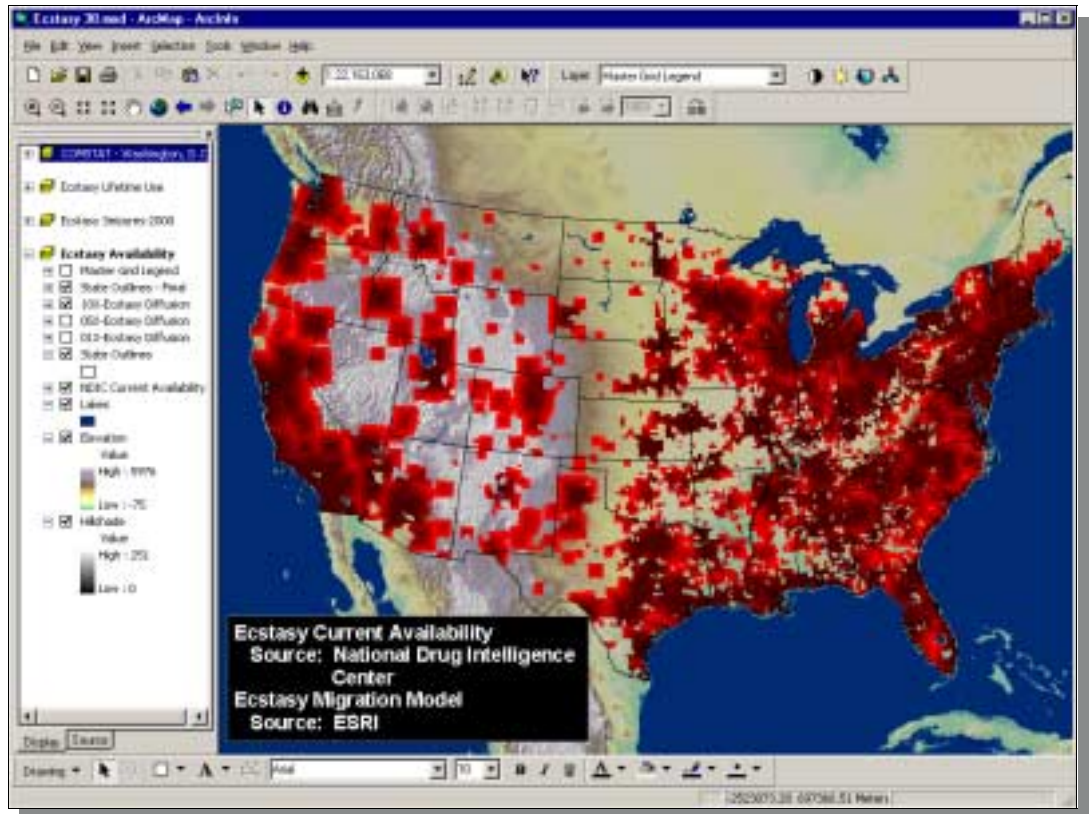
Episode 19—"The Agony and the Ecstasy." Predictive model of MDMA (ecstasy) growth in the United States (Source: ESRI).

Bringing Geographic Analysis of Crime to the Public

Episode 2 was the prime-time debut of real-life ESRI GIS for *The District*. For the first time, computerized crime mapping and crime analysis were being televised to the public. ESRI's support of *The District* began with the idea of making the show as real as possible while at the same time helping to educate the world about GIS and geographic concepts.

The preparation of each episode starts with research into an idea. The initial script is developed, then several significant revisions take place. The script development takes place one, two, or three weeks prior to shooting the episode, which is filmed in just eight days. TV viewers are seeing what real-world police agencies are doing today. Different applications include crime pattern analysis, line-of-sight generation, traffic analysis, community policing mapping and analysis, beat generation, parolee monitoring, and more.

But what exactly are TV viewers really witnessing in terms of GIS? Aside from the visually

compelling maps, there are fundamental GIS concepts that are demonstrated when watching *The District*. They are:

- Mapping the real world with GIS
- Geographic databases
- Thematic mapping
- Geographic questioning
- Analysis and spatial relationships
- Network analysis
- Spatial modeling
- Visualization: time and space
- Information synthesis
- Sharing of geographic knowledge

Each of these concepts has been introduced to millions of TV viewers over the 22 episodes this season.

"Whether it's performing a spatial query or an attribute query with the results visually depicted in a data-accurate map, the many different geographic concepts presented in *The District* are presented in a fictional setting yet are based on real-life applications," says Calkins. "We're proud of the work that's taken place at *The District*, and we can only imagine the many millions of people who have been exposed to crime mapping. It's really incredible when you think about it."

Jesse Theodore works for the Environmental Systems Research Institute (ESRI). He can be contacted via e-mail at jesse_theodore@esri.com.

CrimeMapTutorial

By Lauri M. Velotta
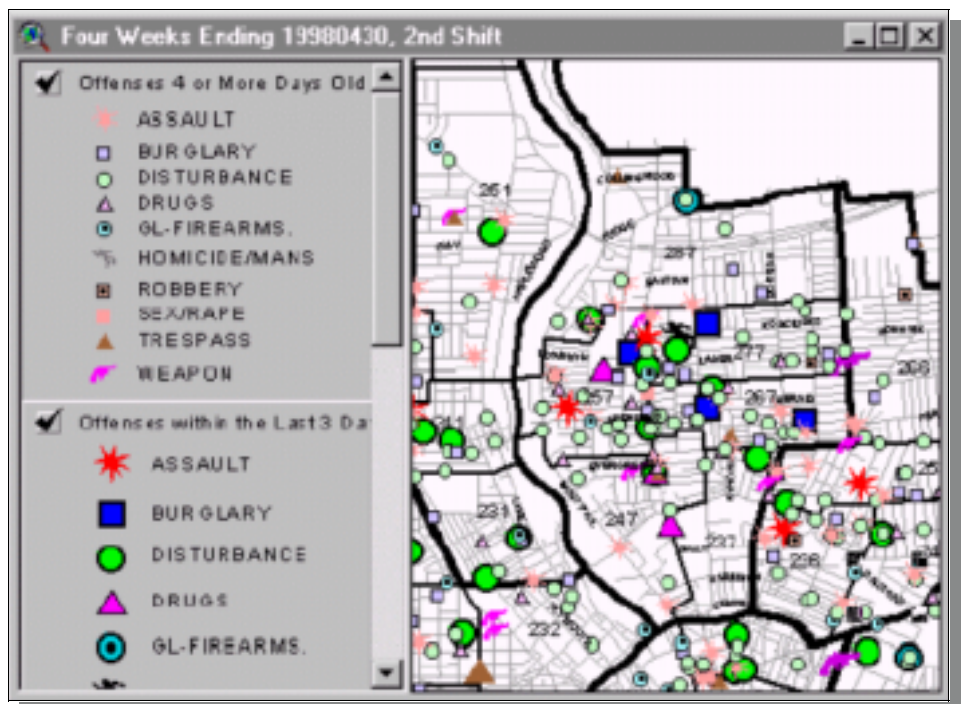**Crime Mapping Research Center, National Institute of Justice**

Since the early 1990s, computerized mapping has been replacing pin maps in police departments across the country and abroad. The development of Geographic Information Systems (GIS) allows users to store and display geographically referenced data. This new technology is making the typical police pin map obsolete. Though training in GIS is offered privately as well as through government programs, its use far exceeds its availability. The National Institute of Justice's Crime Mapping Research Center (CMRC) recognized the growing demand for widely available crime mapping training in law enforcement. In 1999, the CMRC commissioned the development of the *CrimeMap Tutorial* from an expert in the field, Carnegie Mellon University's Professor Wil Gorr. With the execution of this new training mechanism, the tutorial will not only educate users, but it will also allow easy access to mapping technology.

> With the execution of this new training mechanism, the tutorial will not only educate users, but it will also allow easy access to mapping technology.

Although interest in the development of this training module to use with a GIS system is spread across many professions, crime analysts and justice researchers are among its strongest advocates. Possessing the knowledge to make daily maps allows for the early distribution of maps to officers so that they may know where the past days'/weeks' crimes occurred geographically. Justice researchers are increasingly using GIS technology to evaluate new practices and policies.

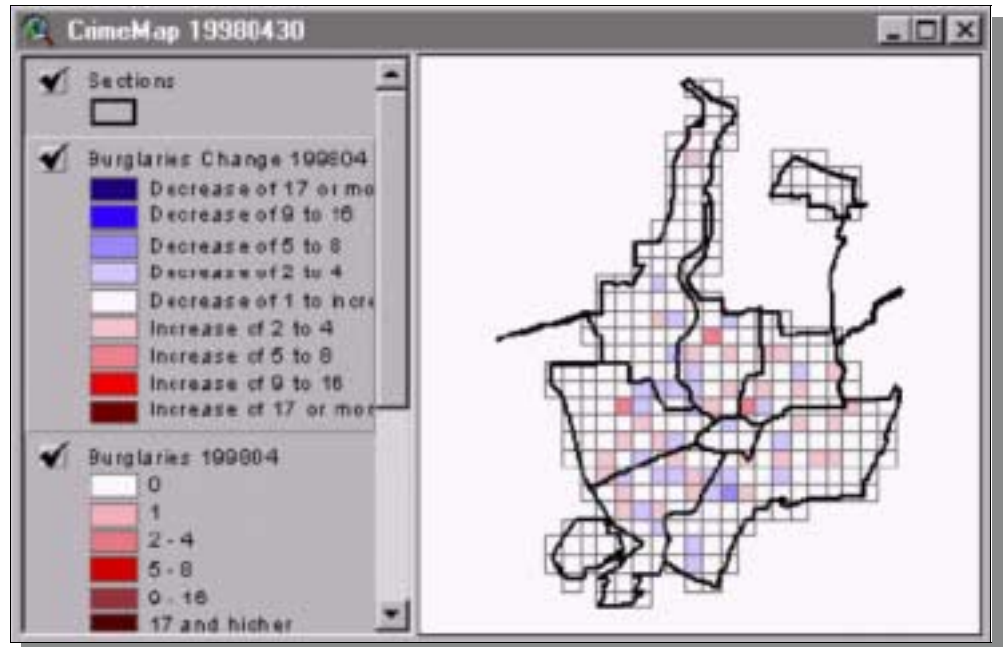The tutorial is three-tiered, and it does not require one to learn each area of knowledge. They are categorically divided to appeal to three different areas of interest in mapping. The first section instructs users in the basics of GIS. Users learn the 'how to' of mapping, allowing one to create maps with multiple layers and utilizing data such as modus operandi as well as identifying features, themes, and map queries. The second section assists in the preparation and processing of data, including address mapping and aggregating crime counts. The final stage deals with the construction of a functional crime map. Each segment ends with an exercise for the user to practice what he or she has just learned. The tutorial provides sufficient instructions to allow users to experience, display, query, and use crime maps. Students will be enabled to produce vector-based maps from crime incident data and base maps. The two maps included here are examples of those that students will learn how to construct in the tutorial.

Gorr offers this pin map depicting the offenses committed over a four-week span of time in April, 1998.

Though only publicly released in April 2001, the tutorial received over 1,600 hits in thirty days, nationally and abroad, and it continues to receive high recognition. The *CrimeMap Tutorial* is available for download from the CMRC's Web site at www.ojp.usdoj.gov/cmrc/training/welcome.html#crimemap. Users will need to purchase and install ArcView GIS Version 3.x or MapInfo Professional 5.5 or higher, if one of those packages is not already on their PC. You can also access the tutorial from the Web site for the Heinz School of Carnegie Mellon University. Gorr also offers an expanded GIS Tutorial for ArcView at www.heinz.cmu.edu/gistutorial.

Here, Gorr shows an example of burglaries using color-shaded grid cells in a choropleth map.

CrimeMap Tutorial is an instructional guide, steering users through a step-by-step tutorial to teach the mechanics on how to operate a geographic information system via ArcView GIS or MapInfo Professional GIS. It could be used in a classroom/lab environment with an instructor serving as a guide to teach a group, or as a self-paced tool one can learn on his or her own. In the near future, a link will also be provided to a publisher who will provide hard copies for instructors who wish to use the tutorial in classes.

The tutorial also provides detailed information on the required equipment for the implementation of a mapping system, such as the necessary operating system, amount of RAM, costs of products, and Web sites to research the tools used in the tutorial. The *CrimeMap Tutorial* serves as an effective means to self-teach GIS for crime mapping.

Sample data were provided by the Pittsburgh Police Department, the Pittsburgh City Information Systems, the Rochester Police Department, and the Rochester Bureau of Data Processing.

Lauri M. Velotta works in the Crime Mapping Research Center at the National Institute of Justice. She can be contacted via e-mail at velottal@ojp.usdoj.gov.

Other Training Opportunities:

- *Police Foundation Crime Mapping Laboratory* - Technical assistance is provided through eight training courses provided at no charge each year in Washington DC. For additional information, please visit www.policefoundation.org.

- *Crime Mapping and Analysis Program (CMAP)* - A one-week introductory course, as well as courses in more advanced applications, are offered at CMAP's Denver, Colorado location. For course schedules and other information, visit www.nlectc.org/cmap.

- *The Carolinas Institute for Community Policing (CICP)* - A series of courses are offered that emphasize crime mapping technology as an element of community policing. The course program is offered in six cities in North and South Carolina. For course schedules and information, please visit www.cicp.org.

Crime Mapping on the Web

In place of the *Web Site Reviews* that are normally included with each issue of the newsletter, we have provided a list of agencies that maintain interactive Internet mapping applications that allow the public to view and query law enforcement data. We encourage you to visit each site to see how law enforcement agencies throughout the United States have employed interactive Web mapping applications. If you know of any additional sites, or if we have excluded your agency's Web mapping application from this list, drop us a line at pfmaplab@policefoundation. org, and we will include your site in our next issue.

- Charlotte-Mecklenburg, NC Police Department
    http://cmpd.cicp.org

- Chicago, IL Police Department
    www.cityofchicago.org/CAPS

- Illinois State Police
    http://samnet.isp.state.il.us/ispso2/
    samintro.htm

- Jefferson Parish, LA Sheriff's Office
    www.jpso.com

- Lansing, MI Police Department
    www.lansingpolice.com

- Lincoln, NE Police Department
    www.ci.lincoln.ne.us/city/police

- Oakland, CA Police Department
    http://city.oakcc.com/maproom/crimewatch

- Pierce County, WA Sheriff's Office
    www.co.pierce.wa.us/abtus/ourorg/sheriff/

- City of Port St. Lucie, FL
    http://pslgis.cityofpsl.com

- Sacramento, CA Police Department
    www.sacpd.org

- San Diego County, CA
    www.arjis.org

- Scottsdale, AZ Police Department
    www.ci.scottsdale.az.us/police/CAU/
    Crime_data_by_beat.asp

- Tulsa, OK Police Department
    www.tulsapolice.org/crime_mapping.html

Map Yap!

The Crime Mapping Laboratory is pleased to announce the debut of Map Yap. This new feature of *Crime Mapping News* is an opportunity for crime analysis and mapping professionals to submit comments, critiques, or other feedback on articles that have appeared in previous issues. In addition to serving as a forum for discussions on crime analysis and mapping, Map Yap will serve as a resource for responding to technical questions regarding the practices of crime analysis and mapping. It is our hope that by providing a "grass roots" outlet for your technical concerns, we can inform others about the most salient issues in the field today as well as the future direction of the disciplines of crime analysis and mapping.

We strongly encourage you to submit any questions, comments, or ideas for future *Crime Mapping News* or Map Yap topics to pfmaplab@policefoundation.org. Please reference "Map Yap" in the subject header, and provide your name, agency name, and contact information such as your e-mail address or phone number. Thank you and we look forward to productive "Map Yappin" in the future!

Upcoming Conferences and Training

July

Twenty First Annual ESRI International User Conference
>July 9-13, 2001
>San Diego, CA
>Information available at:
>www.esri.com

National Symposium: Data Systems for Policing in the 21st Century
>July 19-20, 2001
>Baltimore, MD
>Information available at:
>www.policeforum.org

Annual Conference on Criminal Justice Research and Evaluation
>July 22-25, 2001
>Washington, DC
>Information available at:
>www.nijpcs.org/R&E/conf2210.htm

Carolinas Institute for Community Policing (CICP): Crime Mapping for Community Policing
>July 24-25, 2001
>Columbia, SC
>For more information:
>www.cicp.org or (877) 726-0555

August

Carolinas Institute for Community Policing (CICP): Introductory & Advanced Topics in GIS
>August 6-8, 2001
>Charlotte, NC
>For more information:
>www.cicp.org or (877) 726-0555

Crime Mapping and Analysis Program (CMAP): ArcView Class
>August 20-24, 2001
>Denver, CO
>Contact: Danelle Digiosio,
>ddigiosi@du.edu or (800) 416-8086

General Web Resources for Training Seminars and Conferences

http://www.urisa.org/meetings.htm
http://www.ifp.uni-stuttgart.de/ifp/gis/
>conferences.html
http://www.geoinfosystems.com/calendar.htm
http://msdis.missouri.edu/
http://magicweb.kgs.ukans.edu/magic/
>magic_net.html
http://www.nsgic.org/
http://www.mapinfo.com/events
http://www.esri.com/events
http://www.ojp.usdoj.gov/cmrc/training/
>welcome.html
http://www.nlectc.org/nlectcrm/
http://www.nijpcs.org/upcoming.htm
http://www.usdoj.gov/cops/gpa/tta/default.htm
http://giscenter.isu.edu/training/training.htm
http://www.alphagroupcenter.com/index2.htm
http://www.cicp.org
http://www.actnowinc.org
http://www.ialeia.org

Early Reminders!

International Association of Law Enforcement Planners (IALEP) Annual Conference
>September 9-14, 2001
>Kansas City, MO
>Information available at:
>www.ialep.org

International Association of Crime Analysts (IACA) Annual Conference
>September 18-21, 2001
>Long Beach, CA
>Information available at:
>www.iaca.net/conference2001.html

The COPS Internet –

Information on COPS and Community Policing is just a *Click* away

ABOUT THE POLICE FOUNDATION

The Police Foundation is a private, independent, not-for-profit organization dedicated to supporting innovation and improvement in policing through its research, technical assistance, and communications 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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