



Crime Mapping Puts Focus on Police Mission



By Eugene Mueller

Chief Casady believes that crime mapping technology empowers officers' investigative and preventative efforts, and thus is a basic police tool that helps officers to carry out the department's mission. He reminds everyone that the officer is the crime fighting expert. It's his or her training and experience that ultimately solves cases and interrupts crime trends. However, crime mapping provides a powerful lens that maximizes the effectiveness of the officer's "street" trained eyes.

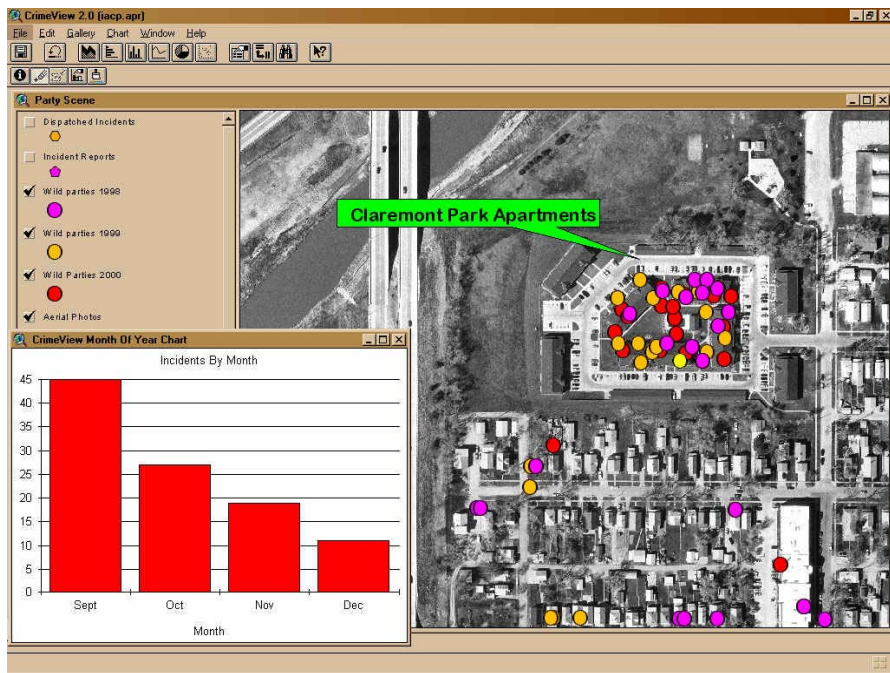
With a metropolitan police department of over 300 sworn officers and more than 100 civilian employees serving a city with a population of over 225,000, it would be understandable if police managers focused on administrative matters such as budget, personnel, local politics, equipment purchases and revision of department procedures and policies. However, "Police work is about solving crimes, preventing crimes and protecting the quality of life in neighborhoods," says Tom Casady, Chief of Police, Lincoln, Nebraska. As far as Chief Casady is concerned, the mission of the Lincoln Police Department (LPD) is crime prevention and reduction, and a focus on these issues by management is essential to success.

Chief Casady believes that maintaining focus on the mission requires that the crime fighting expertise and knowledge of his officers be systematically applied to the analysis of crime data. LPD has long believed that its officers on the streets are the best at investigating and clearing cases. As the Chief puts it, "He or she is the one who knows the local places and is out there mixing it up with the victims, offenders, convenience store clerks, cab drivers, and street kids." Therefore, when it comes to focusing on crime analysis, the officer "is the one who needs to know that the offense he or she just worked is related to several other reports." However, while LPD has a very extensive records management system (RMS) that provides volumes of available data, the problem has been almost too much data, making it difficult to piece any of it together into discernible crime patterns. Chief Casady began looking for an analytical tool that would allow his officers and crime analysts to easily navigate the rich yet formidable database.

Recognizing that the basic component of crime data is geographic location, Chief Casady knew that he needed a GIS application to serve as the starting point for analysis of the crime data. In 1998, Chief Casady instituted monthly meetings of his officers to analyze the data by tapping into existing shared and common ArcView files that were already available from the planning and engineering departments on the city and county wide network server. The meetings became known as ACUDAT, an acronym for Analyzing Crime Using Data About Trends. At the ACUDAT meetings, attended by commanders, supervisors, detectives, investigators and officers, discussion of current trends, known offenders, suspects, specific crimes and intelligence was initiated by looking at the computerized interactive crime incident map produced from the queries submitted by police staff to the GIS software. The crime incident maps graphically revealed where specific kinds of offenses were concentrated. LPD then strategically deployed officers to target these crime patterns and successfully interrupted them through both investigative and preventative measures.

The early successes of crime mapping analysis encouraged LPD to find ways of doing a lot more, more quickly, with even more detailed accuracy. In March 1999, while attending a crime mapping conference, Chief Casady found and implemented soon thereafter what his department was looking for in CrimeView®, a GIS application created by The Omega Group, Inc., San Diego, CA, ESRI's 2002 Foundation Business Partner Award recipient. CrimeView® is an extension to ESRI's ArcView platform that allows the type of RMS tabular data typically collected by police departments in the ordinary course of business to be easily converted to geographic visual display. Whereas tabular data often seems disparate and unwieldy, the data from the crime incident maps leaps out at the user in the form of recognizable patterns.

Chief Casady explains that computerized crime mapping is a "great way to process a large amount of data visually that would be difficult to conceptualize in tabular form alone. "Now officers can link cases that would have been hidden-submerged among the 400 or more incidents LPD handles daily. For example, officers at the ACUDAT meetings have linked suspects from different types of sexual offense reports such as indecent exposure and sexual assault on a child that occurred in the same vicinity. This connection may have previously escaped officers' attention until the two crimes appeared as adjacent icons on a GIS crime incident map. Although the monthly ACUDAT meetings provide a focal point for discussing crime trends, the key is to get the officers to frequently interact with the crime data. To further employee access, LPD incorporated CrimeView® Internet (CVI), a browser based application using ESRI' ArcIMS server software that allows officers at multiple and remote locations to conduct crime mapping analysis. With CVI, officers can independently and immediately get answers to their questions. The street officers no longer are reliant on the analysts in the department's Crime Analysis Unit.



Officers only need to confer with the analysts for advice when they have stretched their own capabilities, rather than asking the analysts to do the basic research for them. Consequently, officers are able to produce their own up to the minute relevant crime maps without the delay of submitting a request and waiting for a crime map to be created for them which may be obsolete by the time that they get it back. In essence, the LPD officer has become his or her own crime analyst in many situations, and the crime analysis staff freed for more demanding and complex analyses. Thus when officers make arrests out on the streets of Lincoln, they are often asking themselves "Do we have any similar offenses and where?" This information is available to officers during post-arrest interrogation and follow-up immediately. "The ability to locate similar offenses quickly at any time of day or night can be quite valuable in leveraging a single case into a multiple clearance", says Casady. For instance, by running GIS queries using keywords related to specific aspects of the modus operandi, LPD officers have been able to clear additional cases during the suspect interview.

LPD officers use crime maps in providing information to community and neighborhood groups about crimes trends. For several years, LPD has provided weekly crime maps to the Lincoln Journal Star for printing in the paper. Recently, LPD took the next step in their partnership with their community by providing members of Lincoln public access to The Omega Group's newest release, CrimeView® Community, also based on ESRI's ArcIMS web server software. After its debut, the police department's Internet site reached a new plateau, receiving over 100,000 hits per month. Using this site, citizens can learn about what kind of crime is going on in their neighborhoods on a real time basis. The availability of this information has reinforced the LPD's community based policing efforts.

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