NATIONAL LAW ENFORCEMENT AND CORRECTIONS TECHNOLOGY CENTER A program of the National Institute of Justice

TECH b.e.a.t

Dedicated to Reporting Developments in Technology for Law Enforcement, Corrections, and Forensic Sciences

From Fall 2008 TechBeat

'Calculate' Repeat Crime

A fter a long hard day, a resident pushes open his front door and stares in disbelief at the mess. Again. The second time in just a few days. The first time they took the television, the computer, and the stereo, but left the hunting equipment. He quickly moves toward the closet where it was stored: Gone.

"If your house has been broken into, there is an increased risk that your house will be broken into again within a very short time," says Jerry Ratcliffe, professor of criminal justice at Temple University. "It may be that the burglars have become familiar with the home and come back a few weeks later to get the 'good stuff' they couldn't carry the first time, or they may think you've replaced it by then and they use their knowledge of the house to go back after the same type of items."

New research, conducted in Australia, the United Kingdom, and the Netherlands, has found that this increased risk is transmitted to neighboring properties as well. Using funding from the Office of Justice Programs' National Institute of Justice to build on this research, Ratcliffe used this new knowledge to develop the Near Repeat Calculator, a free software package available for download from www.temple.edu/cj/misc/nr/. Users enter coordinates and dates for any type of crime, violent and nonviolent, most commonly burglaries and other property crimes. Once the data has been entered, the user receives information telling them how much the risk of a "near repeat" crime will be increased, the geographical area affected by the increased risk, and the duration of the threat.

As an example, during the software development stage, Ratcliffe studied shootings in Philadelphia. He determined that when a shooting occurs in the city, the chance of another shooting happening on the same block increases by one-third for a period of 2 weeks; this could be attributed to instances of gang-related retaliation or an ongoing neighborhood disagreement. About 50 percent of shootings in Philadelphia occur within two blocks of a victim's home address, and although police may have known about the increased threat, they were unable to gauge its scope. Ratcliffe says the department would sometimes post additional patrols for periods ranging from 4 weeks to 3 months. By using the Near Repeat Calculator, administrators can now gauge the duration of time that extra patrol cars will be needed.

"Clearly, this has real possibilities as a crime prevention tool," he says. "Officers could warn residents that they are at increased risk and extra patrols might be able to catch some of the perpetrators. There is a real prevention and detection benefit. It really has quite significant value in providing finite dimensions of risk."

The Near Repeat Calculator, a stand-alone executable program, requires no special hardware to run; it does, however, work best with high-volume crimes such as vehicle theft and burglary.

Ratcliffe cautions that this isn't a "silver bullet" that will lead straight to perpetrators, but it does provide another valuable tool within the law enforcement crime mapping portfolio.

"This is an extensive field, an emerging field, a field that is very current in what's going on," he says, giving credit to researchers such as Mike Townsley of Griffith University in Australia and Shane John of University College in London for helping to provide the foundational data on which the Near Repeat Calculator is based. This international group recently used data from the military to find near repeat patterns in improvised explosive device attacks against coalition forces in Iraq. As new research results become available, the tool will be updated, and users who downloaded earlier versions will receive an e-mail informing them that an update is available.

For more information about near repeat crime, visit the following Web pages:

- http://jratcliffe.net/
- http://www.jdi.ucl.ac.uk/british_academy_network/history/
- http://bjc.oxfordjournals.org/cgi/content/abstract/43/3/615
- http://wcr.sonoma.edu/v5n3/manuscripts/bowers.pdf

INTELLIGENCE-LED POLICING

Professor Jerry Ratcliffe of Temple University has recently authored a book titled *Intelligence-Led Policing*, the first book to introduce law enforcement practitioners to this emerging field.

"Intelligence-led policing is a business model and managerial philosophy where data analysis and crime intelligence are pivotal to an objective, decisionmaking framework that facilitates crime and problem reduction, disruption, and prevention through both strategic management and effective enforcement strategies that target prolific and serious offenders." (p. 89)

The book serves as a comprehensive guide, including the history of intelligence-led policing, how and why to do it, and possible issues. William Bratton, chief of the Los Angeles Police Department, has said that intelligence-led policing is "crimefighting that is guided by effective intelligence gathering and analysis, and it has the potential to be the most important law enforcement innovation in the 21st century."

For more information, visit http://www.amazon.com/ Intelligence-Led-Policing-Jerry-H-Ratcliffe/dp/ 1843923394/ref=pd_bbs_sr_1?ie=UTF8&s=books&qid= 1213197072&sr=8-1/.

The National Law Enforcement and Corrections Technology Center System Your Technology Partner www.justnet.org 800-248-2742



This article was reprinted from the Fall 2008 edition of *TechBeat*, the award-winning quarterly newsmagazine of the National Law Enforcement and Corrections Technology Center System, a program of the National Institute of Justice under

Cooperative Agreement #2005–MU–CX–K077, awarded by the U.S. Department of Justice.

Analyses of test results do not represent product approval or endorsement by the National Institute of Justice, U.S. Department of Justice; the National Institute of Standards and Technology, U.S. Department of Commerce; or Lockheed Martin. Points of view or opinions contained within this document are those of the authors and do not necessarily represent the official position or policies of the U.S. Department of Justice.

The National Institute of Justice is a component of the Office of Justice Programs, which also includes the Bureau of Justice Assistance; the Bureau of Justice Statistics; the Community Capacity Development Office; the Office for Victims of Crime; the Office of Juvenile Justice and Delinquency Prevention; and the Office of Sex Offender Sentencing, Monitoring, Apprehending, Registering, and Tracking (SMART).