Harnessing Information in a Prosecutor's Office

by Elizabeth Glazer

S uppose you are a Federal prosecutor working with a joint FBI/local police task force determined to stop a slew of deadly crimes committed by a neighborhood robbery crew. You are about to meet with the investigators on the task force to discuss the schedule for carrying out arrests planned for tomorrow. But as the meeting starts, two of the investigators say they've both heard that another Federal agency—they aren't sure which one—has recently executed a search warrant in the same building where you plan to make your arrests. You need to find out quickly who conducted the search and whether it connects to your case. You must know so you can both protect the safety of the officers and determine if the two investigations intersect. What do you do? Your jurisdiction is home to a score of Federal agencies. Can you find the right person in time? If you do, will that person tell you the information you need about the search warrant?

Federal law enforcement officers face this type of scenario almost every day—with varying degrees

of urgency. Many State and local jurisdictions, too, host a variety of law enforcement agencies working on often overlapping targets and topics. This article describes a solution one U.S. Attorney's Office found to integrate seemingly disparate pieces of information and solve problems more effectively. State and local prosecutors with similar kinds of problems may find that the solution works for them as well.

Managing the Information

Is the Drug Enforcement Administration's investigation of a drug ring's local market related to the Internal Revenue Service's examination of money remitters' customers around the corner? Is the gun runner under Bureau of Alcohol, Tobacco, and Firearms' (ATF) surveillance—whose real identity the agency has

not yet determined—possibly the illegal alien the Immigration and Naturalization Service's fugitive squad is seeking? Can FBI knowledge about the criminal activities of the Latin Kings' Supreme Crown be enhanced if agents speak to the Crown's neighbor, whom the Secret Service just picked up on a "clone phone" violation? Computerized mapping technology has now given us a ready way to answer those questions.

Using computers, maps, and a relational database, a team of prosecutors, computer programmers, and clerical staff in the office of Mary Jo White of the U.S. Attorney's Office for the Southern District of New York (USAO SDNY) created a system that, at the press of a button, shows which agencies are working in a particular geographic area.

The system takes advantage of two common facts of life in all large, urban prosecutors' offices:

■ **Criminal communities are usually organized by geography; the agencies investigating them usually are not.** Law enforcement agencies divide investigations by crime, but criminals form networks that do not always respect those demarcations. Criminal relationships in a local community are more likely to be defined by geography than by the nature of the crime. In addition, criminals operating in a particular neighborhood are likely to know one another, even if Federal investigative agencies segregate them by their specialty. For example, a neighborhood drug dealer is likely to know not only who deals drugs in the

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Dictionary of Terms

Money remitter: A person or entity fraudulently transferring money within the United States or abroad by wire or other means without a license (18 U.S.C. §1960).

Car traps: Secret hiding places in cars that can be opened only when certain actions are taken. For example, a trap door might pop open only if the windshield wipers are turned on at the same time as the front seat adjustment lever is pulled.

Smurfing: The act of avoiding banking regulations related to cash deposits of $10,000 or more

(18 U.S.C. §5313, 5324) by repeatedly depositing sums of just under $10,000. Drug lords, for example, try to smurf cash through their accounts to avoid detection of the large sums of money they receive.

Weed and Seed: The Weed and Seed strategy relies upon "weeding out" targeted crime problems and "seeding" in stabilizing neighborhood programs, accomplishing each in partnership with an array of local and Federal agencies. For more information, visit the Executive Office of Weed and Seed at http://www.ojp.usdoj.gov/eows.

neighborhood, but also who puts "traps" in cars, launders money, and carries out hits. He knows this in the same way and for the same reason a law-abiding citizen knows where in the neighborhood to buy groceries, repair a car, wash clothes, and find a doctor.

■ **Most of the information gathered by the multitude of Federal agencies investigating cases eventually makes its way to the U.S. Attorney's Office.** The Federal prosecutor's office becomes the intersection for exchanging a wealth of data, facts, and intelligence and for sorting out the interrelationships between all the pieces of information. Whether the agency is the Department of Agriculture working on a food stamp fraud case in a neighborhood grocery or the ATF investigating gun running out of that same grocery, the U.S. Attorney will be the common point of contact. The prosecutor will be the one who cuts the subpoena on the store's records for Agriculture and authorizes the taping of the gun deal for ATF. But in many offices, these connections are not easily discovered because different prosecutors are responsible for each of these cases, and neither they nor the investigating agencies have any simple method of discovering their joint interests.

Prosecutors in USAO SDNY felt the full effects of this situation when they began concentrating heavily on the prosecution, through racketeering laws, of violent neighborhood gangs. In a few short years, the Office had charged more than 300 defendants with more than 200 murders; and in each neighborhood where a gang was incapacitated, the murder rate plunged well below the citywide averages.

The investigation of each gang uncovered connections to bits and pieces of other agencies' investigations—both active and closed. And each target provided a rich set of connections and relationships with past and future targets from the neighborhood under scrutiny. It was the realization that these intense connections among neighborhood felons could be harnessed via today's technology that prompted USAO SDNY to develop a methodical means of discovering patterns of criminal activity.

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Developing the Solution

The idea was simple: collect key information about cases in a single place so that interconnections could be easily identified. What would the key information be? At a minimum it would include: (1) addresses for arrests and residences of defendants and victims, (2) crime locations, and (3) areas and topics of cooperation of Federal witnesses. If possible, key information also would include the addresses of suspects and locations under investigation, relevant telephone numbers, locations of search warrants, and wiretaps. Such key information exists in paper folders throughout a prosecutor's office, but

it is not easily searched and can be difficult to identify. Electronic organization of the information permits its more systematic use.

Although the idea was simple, the logistics of its execution were not. At the outset, the project faced the challenge of developing a system with little money, expertise, or personnel.

To address the lack of money and expertise, the Office worked with geographers and researchers at Hunter College at the City University of New York, who in turn received a small grant from NIJ.[1] The group, led by Professor Victor Goldsmith, was highly trained in Geographic Information Systems (GIS) and had helped the New York City Police Department in enhancing its crime mapping system.

To address the lack of personnel, the Office drafted student interns, paralegals, secretaries, and others to assemble and clean the data.

The system was dubbed "Rackets" because the impetus for collecting and tracking the information came from the Office's extensive work in racketeering cases brought against gangs.

Making Rackets a Reality

During the first 6 months of the project, a Hunter College graduate student, Colin Reilly, developed a working model of a database and corresponding geocoding system. (Geocoding is the process by which addresses in a data file are assigned coordinates that describe their location on the earth's surface, enabling them to be mapped.)

Reilly's goal was to turn data from the U.S. Marshals Service and USAO into a system that staff with limited computer knowledge could use to produce maps showing all Federal law enforcement activity in SDNY.

He developed the system using a custom database, a mapping program, and geographic base files (or city maps). (See "The Nuts and Bolts of Rackets.")

As the programming work progressed, the team faced the daunting task of determining a method of accurately capturing information about pending cases. Because the U.S. Marshals Service books and photographs every defendant

arrested in the Federal system, collecting its data seemed a logical first place to start.

Under the direction of George Zarur, the Marshals Services' Information Systems Section provided, in computer readable form, an electronic download of the pedigree information the Marshals Service took on each arrested defendant (for example, address of the arrest and arrestee). But the first download

The Nuts and Bolts of Rackets

by Colin Reilly, Geographic Information Systems Specialist, Parsons Brinckerhoff.

The components of a system like Rackets include hardware, software, and personnel:

Hardware. Minimum recommended requirements include one high-end computer with at least 128 MB of memory running Windows NT (approximate cost: $3,500) and one tape backup (approximate cost: $500).

Software. Rackets uses several software components. A customized relational database is connected to a mapping program to analyze, query, and visualize large amounts of data.

Three types of software are needed:

■ **A custom database.** Rackets uses Microsoft Access™[1] as its relational database and Visual Basic for Applications™[2] (approximate cost: $350).

■ **Mapping programs.** Rackets uses a desktop GIS software program (ArcView™[3]) customized with Avenue™[4] to simplify and automate numerous mapping tasks (approximate cost: $1,200).

■ **Geographic base files.** These files show a community's streets, rivers, parks, schools, and other geographic features. Together, they form the "skeleton" upon which data are displayed on a map.

Numerous vendors supply street-based geographic data for the SDNY area; most are based on the U.S. Census Bureau's TIGER files. USAO experimented with several systems before selecting the most beneficial. The Office decided to use Geographic Data Technologies' Dynamap 2000 street network because this package showed the greatest degree of accuracy (approximate cost: $600 per U.S. county).

Personnel. Ideally, the system needs a dedicated full-time computer analyst familiar with GIS analysis and relational database technology to conduct both maintenance and analysis. In addition, a project manager is needed to oversee operations and ensure processes for accurate and timely data entry.

1 Microsoft Access is a database management system sold by Microsoft, Inc.

2 Visual Basic™ is a programming language developed and sold by Microsoft, Inc.

3 ArcView™ is a desktop mapping program developed by Environmental Systems Research Institute, Inc.

4 Avenue™ is the scripting language included with the purchase of ArcView™.

contained approximately 17,000 records—one for every prisoner ever processed electronically by the Marshals Service in the Southern District of New York. The team had to accurately and painstakingly winnow down these records to find the approximately 6,000 defendants involved in open cases.

The team then began reviewing information from the Department of Justice database to identify which defendants had been charged together and with what offenses. This required accurate substantive information about USAO's current cases and investigations. A fleet of summer interns began conducting an officewide inventory of pending cases being handled by the 150 prosecutors in the Office.

Next the team merged the data from the Marshals Service on active defendants with the information about cases from the Justice Department computers. Unfortunately, the two sources used different protocols (that is, the format of names in the two databases was not congruent enough to be matched by a computer). The team thus had to match the names by hand. A group of secretaries, students, paralegals, and investigators accomplished the task in 3 weeks.

As a complete and accurate database was being built, the team also was developing a system to keep the data accurate and up-to-date. Currently, support staff in each unit of USAO SDNY collect updates from each Assistant United States Attorney (AUSA) every few days. A staff of two people operate the system: a part-time graduate student does the bulk of the maintenance, and an analyst keeps track of updates and responds to requests for information from the office. Every day, arrest data from the Marshals Service are downloaded and matched with information already in the database. Every week, AUSA's provide infor-

mation, such as which defendants are cooperating or what guns have been seized by Federal agents.

To maintain privacy and confidentiality, Rackets operates on one stand-alone computer workstation within the Office and is not shared outside USAO SDNY. Within the Office, all requests for information are funneled through one individual. Requests for data and maps are submitted to the Rackets analyst who produces reports and provides information to AUSA's.

These security measures are important in protecting sensitive information as well as in complying with Federal statutes restricting development of criminal intelligence databases (Section 28 CFR Part 23).

Benefits of Rackets

Rackets was designed to give prosecutors basic information about various cases across geographic areas. But it does more than that.

It saves time. Rackets provides a service that lightens the daily workload: Federal rules of discovery require prosecutors to give defense counsel a copy of the booking form and often a photograph of each defendant. This task is now accomplished automatically by Rackets, saving numerous hours of work for both the Marshals Service and USAO. In addition, the information is more legible and the photographs are clearer than the faxed forms and photographs previously obtained.

It answers questions about cases and caseloads. Rackets responds to approximately 50 requests a month for information. The requests range from simple questions (such as determining which prosecutor is responsible for a particular case) to more complex questions (such as identifying Federal cooperators familiar with a certain area or identifying agencies working in a particular region).

It gives background information. Rackets allows a prosecutor to enter a street address or intersection into the computer and create both a map and a report about crime patterns in that neighborhood. The location can be as small as the street corner of an intersection or as big as the entire city.

It analyzes special problems. When one neighborhood recently experienced a sudden rise in shootings and murders, Rackets allowed USAO to carefully examine every arrest made in that neighborhood (regardless of the arresting agency) and quickly develop a list of witnesses to a number of the unsolved crimes. Similarly, Rackets enhances collaborative problem solving. USAO SDNY, like many other USAO's, chairs crime prevention efforts in several neighborhoods through the Department of Justice's Weed and Seed effort. The Office uses Rackets to examine systematically every case and investigation initiated in Weed and Seed neighborhoods to ensure that no link is missed.

Rackets also provides an important base for combining data from many sources. For example, when ATF traces guns used to commit crimes to the store that first sold the gun, Rackets can map the location of purchases, color-code the data by State, and use the data as a starting point to determine if guns from particular States are fueling the spiking rate of shootings in certain neighborhoods.

Where Does Mapping Analysis Go From Here?

The potential for USAO to apply data analysis and computer mapping in other ways depends on the Office's ability to continue to mobilize staff and maintain the accuracy and timeliness of the system.

USAO SDNY has been particularly successful in solving homicides by using information provided by defendants who cooperate with the Government—and who often are members of the murderous groups USAO targets. As a first step in determining whether a particular individual will be a candidate for cooperation, defendants must tell prosecutors truthfully about every crime they have committed, whether related to a specific arrest charge or not. The Office thus becomes the repository of enormous amounts of information about violent crimes committed throughout the city. By overlaying (or merging) a computerized map of the city's unsolved homicides with a map of homicides revealed by cooperators, numerous leads can be developed to solve those crimes.

In forfeiture cases, Rackets can be used to identify the array of drug activity that takes place at a particular location, regardless of the investigating agency. In police corruption cases, the system can identify potential witnesses and map alleged violations by precinct. In money laundering cases, related "smurfing" activity can be identified by mapping the banks and remitters engaged in suspect activity.

Other features can be added easily so that the Office can create visual aids for trial or for debriefing witnesses. For example, Rackets has incorporated aerial photographs of New York City so that a photograph as well as a map pops up when a particular address is entered. These photos help jurors and witnesses visualize the relationships between places.

The current system, which downloads the Marshals Service's digitalized photographs of defendants, also could be enhanced to become a centralized Federal catchment for electronic photo-arrays.

As prosecutors become more involved in strategically planning the use of their resources—in combination with other, sometimes unusual partners—to accomplish drops in crime, maps showing crime patterns could be combined with maps showing income or housing patterns. For example, USAO SDNY has used Rackets in a Weed and Seed site to better determine where to locate resources for youth. By comparing existing resources with neighborhood crime hot spots, the Office pinpointed the best place to locate a neighborhood Safe Haven.

Replicating the System

Replicating the system should be much simpler than creating it from scratch. The relational database structure that supports the system has been created, and, at the Federal level, the Department of Justice's case-tracking system has been improved. USAO SDNY hopes to standardize Rackets so that it can be used in any prosecutor's office.

Local prosecutors who work with various investigative agencies may also find that a mapping system produces information that simultaneously cuts across agency lines and synthesizes cases coming from a variety of sources. A district attorney whose jurisdiction extends across a county with a number of municipalities will prosecute cases developed by many agencies that enforce the law in those cities, towns, and unincorporated areas. A burglary ring could be operating countywide and several investigating agencies may have made contact with victims or suspects, but until all the contacts pop up on a prosecutor's map, no one can see the connections.

A prosecutor's mapping system can be a powerful tool for the rational and effective deployment of law enforcement resources to reduce crime. It can contribute to better use of attorney time, more efficient use of resources, more effective problem solving, and stronger coordination of efforts. By building more comprehensive cases, Rackets can give prosecutors—at the press of a button—a glimpse of the relationships and intersections among many law enforcement agencies' information. It has become one tool Federal prosecutors can use to help reduce crime by helping prosecutors build solid, comprehensive cases.

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Notes

1. NIJ grant number 1998–LB–VX–0004.