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Today, many investigators hear the words, “You have a DNA match.” Old, cold, and forgotten cases and their victims have received new life through DNA technology. Now, microscopic pieces of evidence can unravel unsolved mysteries in crime. How investigators respond to and use this technology to identify, apprehend, and prosecute suspects will measure the success of DNA analysis.

For over 6 years, the Phoenix, Arizona, Police Department has designated specific investigators to identify unsolved cases, as well as those with no known suspects. They locate the potential evidence associated with the cases and, in partnership with crime lab personnel, test it. Since 2000, the department’s cold case sex and homicide teams have reviewed over 2,000 cold cases, testing hundreds of pieces of forensic evidence for DNA potential. This process has yielded greater results than anticipated.

From August 2004 through August 2005, the Phoenix Police Department recorded over 100 DNA matches on previously unsolved sexual assault
and homicide cases. Several
dozens of additional matches to
unsolved crimes, ranging from
burglaries, auto thefts, and rob-
beries, also have occurred.

So, what happens to these
DNA hits? An informal poll
revealed a range of answers
concerning how a DNA match
is resolved. Some departments
simply hand the match to the
next available detective, and the
case gets treated the same as the
rest. Others designate cold case
teams that develop a protocol,
as well as an expertise, and pur-
sue these matches as a priority,
not just when time allows. With
more labs processing thousands
of pieces of evidence, agencies
should identify experienced,
knowledgeable investigators
and use them specifically for
cold cases. Obviously, the
amount of resources, person-
nel, and caseloads significantly
influences who resolves these
cases and how they do so.

The President’s DNA
initiative was one of the first
nationwide steps to give law
enforcement agencies the
resources to combat violent and
other crimes by using forensic
evidence. Part of the initiative
earmarked millions of dollars
that allowed federal, state, and
local agencies to research,
identify, and examine thousands
of pieces of evidence from
unsolved cases. The National
Institute of Justice sponsored
and offered grants for law
enforcement departments and
laboratories to use DNA tech-
nology in high-volume crimes
(burglary and auto theft).

DNA is a growing and
expanding crime-fighting tool.
What should investigators know
and do when they receive these
DNA matches?

**The Basics**

Cold case investigators in
the Phoenix Police Department
quickly realized that a DNA
match essentially starts a new
case. If a match is made to a
convicted offender, detectives
begin a comprehensive back-
ground on the suspect. Where
is he currently located? Is he
in custody? Can he be placed
in the time and at the location
of the crime? Is a time line
needed? These questions require
quick answers to apprehend the
suspect as law enforcement’s
duty is to protect the public and
prevent crime. Such research on
offenders is labor-intensive and
often consumes valuable inves-
tigative time. Detectives with
other case responsibilities may
lower this task on their priority
list or not be able to address it
at all. Removing an offender
from the streets is the best
proactive crime prevention tool.
Therefore, departments should
consider developing a specific
team to address cold case DNA
matches.

**Case-to-Offender Matches**

Although it may seem that
an investigator can make an
arrest based only on a DNA
match, this may not be the most
prudent decision. In sexual
assault cases, for instance, the
question may not be who the
offender was but, rather, if
investigators can show that the
sex was nonconsensual. Most

![Sergeant Markey serves on the Sex Crimes Unit/Cold Case Team of the Phoenix, Arizona, Police Department.](image)
sex offenders, including serial rapists, use consent as their first defense. When detectives receive a DNA match, does enough documentation (e.g., injury, witnesses) exist in the original report to help counter the consent defense? In most cases, investigators will have to contact the victims. In doing so, they should carefully consider their approach because resurrecting these cases may have emotional consequences for victims and their families, ultimately affecting the potential for a successful prosecution.

After identifying the offender, investigators should prepare for all possible defenses, although a thorough background check may alleviate many common ones the suspect may employ. Investigators should review an offender’s criminal history for any previous police contacts to help develop an interview strategy for the case.4

The Confirmation Sample

When investigators discover the suspect’s current location, they should interview him and obtain a confirmation DNA sample. CODIS (Combined DNA Index System) regulations recommend that case investigators obtain a second DNA sample from the identified offender. This ensures the integrity and confirms the validity of the original DNA match.5 When the first sample is taken from a convicted offender, others may have theirs taken at the same time as well. The samples could inadvertently be switched or labeled wrong. When investigators request the second sample, they should not obtain a blood standard. Transporting human blood is a biohazard that causes undue stress on investigators and, if they use public transportation, other passengers as well. Instead, they should opt for a buccal swab.

Confirmed, investigators should obtain a warrant after presenting the case to a prosecutor. This ensures that if the suspect has law enforcement contact, he more than likely will be arrested, and the investigator will be notified. Further, investigators should be aware of statute-of-limitation issues in their jurisdictions.

After obtaining a second sample (and a confession), investigators should talk to the victim and the victim’s family, providing assistance from a victim advocate during this part of the investigation. In many cases, particularly sexual assaults, having the victim emotionally available for court can prove the difference between conviction and freedom. During this time, investigators should clarify any issues in anticipation of a defense the suspect may produce.

Case-to-Case Matches

Case-to-case matches create different issues for the cold case detective. Generally, these matches involve multiple law enforcement agencies. Investigators should share all information with everyone involved because it may prove critical in solving a cold case. Agencies that have worked serial cases across jurisdictional boundaries immediately realize that looking at factors other than the DNA in each case proves fruitful in...
yielding a commonality that potentially may identify a suspect. Investigators should analyze a broader field of information that possibly will link suspects and cases with or without DNA. They should analyze all crimes in the geographical area, realizing that some suspects commit other types of offenses, and evaluate the type of attacks (e.g., indoors, outdoors, in a car) and victims (e.g., old, young, high- or low-risk). Further, investigators should determine whether parolees, probationers, or registered sex offenders live or work near the area of attacks.

Many departments have partnered with prosecution teams and, using the unknown DNA profile match, obtain a “John Doe” warrant. Investigators should discuss the feasibility of this tactic with their local prosecutors.

**Trial Preparation**

All of the evidence, including confessions, statements, and DNA is useless if investigators cannot use it in court. In many jurisdictions, cold case prosecutors are specifically designated and trained in these types of trials. From the beginning, investigators should thoroughly document every detail and organize it appropriately. Additionally, investigators’ legal teams can help prevent damage at all stages of the cold case investigation.

**Conclusion**

DNA technology has given new hope to those responsible for fighting crime and solving cases. The law enforcement community needs and requires the full support of citizens and local, state, and federal agencies to help overcome the various resource issues that stand between potential and actual success of any DNA initiative. Although each agency faces the reality of limited resources, the President’s DNA initiative has given the jump start needed to address both violent crime and criminals in society.

Now, agencies face the question of how to respond. Should they continue to work DNA cases when they can? Or, should they commit to using this crime-solving tool to its fullest potential? Future funding for DNA will focus on helping law enforcement after the match. Police departments must send a message to criminals, victims, and citizens that they will use all of their available resources and technology to continue pursuing these violent offenders.

**Endnotes**

1 The author conducted an informal poll of investigative units in large, urban police departments in the United States.

2 For more information about this initiative, visit [http://www.dna.gov](http://www.dna.gov).

3 The authors employ masculine pronouns throughout the article for illustrative purposes.


5 [http://www.fbi.gov/hq/lab/codis/index1.htm](http://www.fbi.gov/hq/lab/codis/index1.htm)
The Benefits of Effective Partnerships

As both the international and domestic threats of terrorism incidents rise at an unprecedented rate, so does the need for contemporary law enforcement leaders to do everything possible to ensure the safety of their communities. Forging new partnerships while strengthening existing ones may be the single most important element leaders can offer their agencies. Effective partnerships offer a host of benefits that include information sharing, joint investigations, specialized training, and additional resources. Also, interagency trust is built with each organization having a stake in the other’s success. As an unknown author stated some time ago, “When the drum beats for battle, it’s too late to sharpen the sword.” This vision has particular relevance in today’s world. The time to establish effective partnerships is before the crisis occurs.

Terrorism investigations are complex and often supported through worldwide clandestine networks. However, every act of terrorism also is local. Law enforcement leaders must keep in mind that every attack is planned in someone’s town, city, or county. Every operative resides in someone’s jurisdiction, and each improvised explosive device is assembled in someone’s community. A vigilant citizenry and local law enforcement agency more than likely will be the catalysts for unveiling these preparatory acts. Thus, in this new world, the head of the organization must remain keenly aware of the tremendous value in developing both internal and external partnerships.

I firmly believe the only way we can avert the next terrorist attack is by agencies working together with the single goal of defeating this faceless enemy. Although federal agencies often possess the largest quantity of resources in law enforcement, no one has the intimate knowledge of our jurisdictions more than the officers who patrol their streets on a daily basis. Clearly, a formidable team to combat terrorism results when agencies and citizens work together. Cultivating these critical partnerships is a necessity in the world of contemporary law enforcement. It is a responsibility we owe the residents of our communities and the men and women who work for our organizations. And, it is essential to ensuring the safety of all U.S. citizens.

Chief Kenneth N. Berkowitz of the Canton, Massachusetts, Police Department, an FBI National Academy and FBI Law Enforcement Executive Development graduate, prepared Leadership Spotlight on behalf of the FBI’s Leadership Development Institute.
Regardless of quality, vision, or intended impact, no level or aspect of strategic planning can be successfully implemented unless the personnel charged with meeting the goals are capable of doing so. “Knowledge and skill can’t be pumped into people the way traditional schools have done it. They can be mastered only by applying theory directly on the job, to real problems, here and now.”

Certainly, the past does not equal the future. Issues in today’s world compel current leaders to “grow” future ones who will develop, articulate, and implement sound strategic vision. Such an effort will need employees who can become efficient and effective (E&E) at all levels. “Managers are people who do things right, and leaders are people who do the right thing. The difference may be summarized as activities of vision and judgment, effectiveness, versus activities of mastering routine, efficiency.”

“Management is about coping with complexity. Leadership, by contrast, is about coping with change.” Such statements may tend toward conceptualizing the law enforcement executive as “an individual who does right things right and who possesses the mind of a manager, the soul of a leader.” Granted, leaders must meet these standards, but...
what about the day-to-day focus on their employees? Is it reasonable to pursue the goal of E&E for all personnel?

THE NCIS EXPERIENCE

The Naval Criminal Investigative Service (NCIS), the U.S. Department of the Navy’s primary law enforcement arm, is in the midst of a transformation. No longer is the traditional reactive law enforcement model adequate given the complex and increasingly blurred terrorist, counterintelligence, and criminal threats to this nation. NCIS has more than 2,200 employees, 55 percent of who serve as civilian special agents (SAs), located in over 140 locations around the world, including those assigned as “afloat agents” aboard ships and aircraft carriers.

The current environment throughout NCIS involves an aging group of supervisors and managers working to train, lead, guide, mold, and mentor a young and inexperienced agent corps. Federal regulations for law enforcement retirement compel an end of service for nearly 40 percent of all NCIS SAs—managers, supervisors, and nonsupervisors alike—within the next 5 years. Depending on individual circumstances, retirement can occur as early as age 50 but becomes mandatory at age 57. The worst-case scenario reveals that the maximum level of experience within NCIS could be only 10 years by 2009.

Current planning objectives within the Far East office of NCIS hinge on identifying interested SAs to “build” them toward model employees and leaders. This overall effort proves similar in nature to a combination of multidimensional scaling that basically develops a geometric picture, or map, of the location of some objects relative to others and specifies how they differ. In this context, the process includes development of a map to identify the location of SAs and the best method of moving them toward the ideal E&E employee or supervisor in terms of skills, traits, and attributes. The movement of personnel, of course, refers to the process of providing information, opportunity, and guidance to those interested to move them to where they need to be.

In terms of problem-versus-system focus, “system models are best thought of as tools for coalescing people to do something together, helping them to undertake a systems improvement task.”6 With this concept, the approach should be from a systems perspective because, by definition, addressing only the supervisory aspect would be nothing more than problem focused and a temporary solution at best. After all, the environment in which NCIS operates requires all employees to function at the highest level possible to fulfill its mission.

The Concept

Building agents? Yes. In simple terms of cultivating and nurturing via mentorship, a process must be established and fielded within the agency from the ground up. The color code depicted in figure 1 can summarize the concept in simple terms. Green is optimal, yellow indicates a need for attention, and red requires intervention. Efficient and effective, of course, falls in the green area and aptly describes the SA successfully investigating cases and making arrests, the supervisor providing correct guidance and leadership, and the executive conveying superior vision and strategy, all vital functions for fulfilling the organization’s mission.

In general terms, these color combinations represent levels
of performance that could have a significant negative impact on the overall productivity of the office or, of even more importance in the representation of NCIS to its counterparts and customers, on credibility and valued service. The issue comes into question when the employee becomes efficient and ineffective (yellow), inefficient and effective (yellow), or, in the worst case, inefficient and ineffective (red). Inefficient agents could be deficient in report writing, not timely in responding to crime scenes, or lacking in interview skills that would require additional resource allocation. Ineffective supervisors might provide incomplete guidance or conduct unproductive case reviews. Ineffective executives may not engage in vigorous coordinated discussions with upper-level officials for tactical or strategic application of resources. Such examples demonstrate less than expected performance.

In design and implementation of this type of model, it is critical to ensure that the same terminology is used in communication. First is the standardization of terminology dealing with the core composition of personnel: core values (honor, courage, commitment), core competencies (skills), and a core understanding of the mission and vision for the future. What is the expectation for successful performance in each? Of course, as this develops, the growth-to-goal metric would be a fundamental change of the current employee appraisal system, perhaps better defined as a multilevel process that evaluates employees as individuals in performance and then how this performance meets the growth-to-goal mission.

The Process

“Managers need a simple way to assess the potential for action, focus attention, and help people learn together.” The process of evaluation can begin once the terminology is standardized and a common understanding of E&E is reached. Without a specific definition, no reflective scale for the measurement of performance can exist. What exactly is sought as efficient and effective?

Within the Far East office model, the goal is to achieve the core competencies of the profession. These include oral and written communications, problem solving, Navy and NCIS mission/organization awareness, interpersonal/team skills, self-direction, quality principles, customer orientation, flexibility, decisiveness, technical competence, diversity awareness, situational leadership, model/reinforce core values, coaching/counseling, conflict management, change management, team building, and influencing/negotiating. By default, the variance toward inefficient and ineffective occurs when employees do not demonstrate or maintain

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Figure 1: Efficient and Effective (E&E) Guide

[Image of a 2x2 matrix with Efficient and Inefficient on the Y-axis and Effective and Ineffective on the X-axis, showing the four quadrants of performance.

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consistent performance in these competencies.

To assess the process, each manager in the Far East office received a spreadsheet with instructions to include all employees and, independent of their annual performance evaluation, subjectively rate them. Objective areas evaluated included number of years assigned to the office and pay level. Subjective categories dealt with such issues as determining overall performance (denoted via a rating scale of 1 as poor to 10 as excellent), noting changes in performance (improved, stayed the same, decreased, unknown), ranking employees against one another, summarizing briefly what would help them improve (training, experience, commitment), stating their biggest challenges, providing an overall rating (efficient and effective, E&E; inefficient and effective, I&E; efficient and ineffective, E&I; or inefficient and ineffective, I&I), and explaining the steps needed to upgrade them to efficient and effective.

Following the analysis of the data and the assessment of the local offices, the supervisors were evaluated by their assistant special agent in charge (ASAC) with the goal of assessing the difference in the two. For example, how the supervisory special agents (SSAs) saw their personnel and office overall, as well as how the ASAC viewed each SSA in comparison with the others.

Agencies can sort and analyze such data to meet their needs and determine options for solutions. This adds additional weight when compared with traditional metrics associated with performance. It also provides further opportunities to identify strategic needs in upgrading both employees and offices. For example, if time management is an issue, a course or block of instruction could address it with all who need assistance. This permits a better directed expenditure of funds, as well as a more tactically oriented return on investment.

“\nIn simple terms of cultivating and nurturing via mentorship, a process must be established and fielded within the agency from the ground up.\n”

Similar sorting options apply for supervisors, administrative personnel, and other employees and can offer a further glimpse into the mechanism of each individual and office and provide cues to modify or improve performance. If persistent issues become apparent, remedies via training or other assistance can be applied.

The Related Factors

Certainly, a spreadsheet does not tell the whole story in a people-oriented business. Other factors affect the performance of each employee every day. How does each person influence the rest of the people in the office? These factors, both external and internal to each office and often to each employee, have a resulting impact on performance metrics, regardless of how they are assessed.

The wide range of external factors can include balancing large or complex case loads; legal, interagency, and interpersonal nuances inherent in operating within a foreign culture; heavy travel schedules; recalcitrant customers; or issues with coworkers. Employees are subject to a barrage of these external factors on a daily basis.

All personnel also carry a burden of personal or internal factors that affect their performance. These can be associated with family commitments (aging relatives at home) and family issues (health and education concerns) that come with living in a foreign country, as well as personal skills.

Regardless of definition, these factors design the discourse from which each agent operates, something inclusive of
both quality of life and quality of work life. Considering both the external and internal dynamic of every operational employee, it goes without saying that these individuals can impact the efficiency and effectiveness of the office.

The effect of internal and external factors can overlap an individual’s E&E status on a short- or long-term basis. The daily operational environment includes the amount of overtime (whatever, wherever, or however long in duration) worked to accomplish the mission and the extent of travel, or “road time,” accumulated during the tour. In short, it encompasses the amount of time agents spend on the job, which translates into time not spent at home. Hypothetically, the daily operational environment can traverse only one vertical or horizontal axis at a time and, in effect, results in an employee being E&E in some respects and E&I in others. The dual status can be temporary or last for a period of time and can fluctuate in size and location based on the impact of the external or internal issues. A balance between flexible and fluid becomes essential in adapting to a fluctuating daily operational environment.

An analysis of the amount of time agents spend out of the local office can provide a glimpse into their operational tempo. Critical thinking applied to the data can offer the opportunity to understand the concept in terms of factors affecting performance, notwithstanding any metrics (i.e., quality of performance) associated with the information. The challenge then would rest in associating a measurable metric to move and size the daily operational environment to reflect the level of E&E that agents have in accomplishing their mission. An otherwise E&E employee who, due to various internal or external issues or excessive overtime or road time, becomes distracted at work and, while still effective, is viewed as inefficient. When personnel demonstrate a negative shift, supervisors must explore reasons causing it and attempt to guide their employees back to a level of optimal performance. Issues that managers can correct should be addressed, and other solutions or employee assistance program interventions should be equally poised to assist in returning personnel to the E&E track. Major benefits of this process include accurate assignment of personnel in particular offices; identification of issues or indicators before they become problems; and better interaction with and among all employees, from entry-level workers to executives.

CONCLUSION

Emergent and exigent requirements have resulted in fundamental change in much of the traditional business processes. Planning and evaluating the direction of the Naval Criminal Investigative Service in close correlation with the Navy and Marine Corps leadership is continuous, looking forward, and anticipating the future, a critical capability with an equally critical outcome. While concentrating on the metrics of performance to evaluate accomplishments, the agency determined that it was reasonable to seek to achieve a specific goal of efficient and effective for all personnel.

The goal is to refine the process to reflect the impact of performance for each individual in combination with the entire office and then how the office performance meets the expectations of local commanders in balance with the mission of a field office within the goals.
of the agency. In short, this encompasses a three-dimensional analysis, rather than the traditional metric of cases closed. Certainly, the process is a question of balance: personnel versus mission, actual versus perceived threat, effective communication versus interpretation of definition, and customer needs versus agency strategy, among others. What this effort will result in, however, is the opportunity to identify the issues and needs resident at the lowest common denominator within an office and enable change in reaching the goal of efficient and effective, as well as consistent, operational excellence at all levels.

Endnotes


6 Supra note 1, 259.
7 Supra note 1, 263.

Special Agent Parsons, formerly in charge of the Naval Criminal Investigative Service’s Far East office, currently is the assistant director for planning and evaluation.
At midnight, you and your family are asleep. Suddenly, you awaken to a crash downstairs. You immediately get out of the bed to investigate the cause of the noise and find a broken window. After you call 911, a crime scene unit arrives and discovers impression evidence in dog feces near the broken window. The unit protects the scene, takes pictures, and collects samples. The next day, police apprehend a suspect and find evidence of dog feces on the sole of one of his shoes. Not only is the sole impression the same but DNA testing of the feces confirms that it matches what authorities collected at the crime scene as well.

This hypothetical situation presents just one way that veterinary forensics (i.e., the use of animals, particularly their DNA) can provide vital assistance to law enforcement professionals conducting a criminal investigation. Many owners have a close association with their animals and often have traces of the pets, such as hair and saliva, on them. In some cases, the animal’s blood, urine, and feces may be in the owner’s surroundings. Subsequently, the analysis of animal DNA may prove invaluable to investigators.

**TRADITIONAL ROLES**

Using animals to assist law enforcement is not new. In 1903, the Bavarian military developed an innovative technique of spying through the use of pigeons. A tiny camera that took a picture every 30 seconds was attached to the breast area of the pigeon, which then flew behind enemy lines and eventually back to its starting point while capturing photographs of an adversary’s operations. Notes often were attached to the pigeons’ legs to transport messages. Such use of pigeons ended when cameras were discovered underneath them; the enemy simply shot the airborne pigeons.

Advancements in forensic photography would allow law enforcement the ability to reinstitute surveillance via animals, although using pigeons may be dated.

Animals can help investigators in three ways: as witnesses, perpetrators, and victims. Each method has a different purpose.

**Witnesses**

“Witnesses who can’t speak often provide the most eloquent evidence.” Animals serve as witnesses when they successfully place the suspect at a crime scene. For example, the victim’s animal can transfer evidence, such as hair, saliva, blood, urine, or feces, from the animal to the suspect or crime scene. Or, the suspect’s animal can transfer it to the victim or crime scene. In one case, a female was working in her lawn. A man pulled up in his
truck and forced her inside the vehicle to sexually assault her. During this offense, the victim noticed her dog urinating on the suspect’s vehicle tire. Fortunately, she was able to fight off the man and phone the police. During interviews, the victim described the truck and informed officers of her observations, but she was unable to distinguish the suspect in a lineup. Investigators performed DNA testing of the dog’s urine on the tire and identified a suspect who was later apprehended.7

In another example of the animal as a witness, a macaw helped catch a suspect in a burglary case. Blood samples from the suspect on the bird’s beak and marks found on the suspect, both from the parrots’ assault, were tested. Using the blood and impression evidence, police apprehended the suspect.8 The bird not only provided physical evidence of the crime but chronological proof as well. Investigators pinpointed the exact time of the encounter after neighbors reported hearing the bird “hooting hysterically.”9

Perpetrators

DNA evidence obtained from a crime scene often can identify an animal involved in an attack on a human or another animal. For example, a doctor was convicted of two counts of involuntary manslaughter, one count of reckless homicide, and one of assault after his two dogs attacked and killed a woman. The doctor’s dogs were linked to the crime through animal DNA evidence.10 In another example, a woman’s cat was killed by another animal. She suspected her neighbor’s dog, which she had noticed in her yard numerous times. When investigators conducted DNA tests, the culprit actually was a bobcat, and, thus, an innocent animal’s life was spared.11

Victims

Victims may include abused or stolen animals.12 Investigators can match DNA evidence from a weapon to the victim in cases of abuse. Further, they can use DNA to establish rightful owners of animals. In one instance, a man was sentenced to 60 months of formal probation and restitution in the amount of $22,000 for grand theft cattle. After stealing the cattle from a ranch, the rustler rudimentarily changed the brand. During a cattle sale, the brand inspector noticed that the mark looked strange. When the rustler failed to prove ownership through invoice purchases, an investigation began. Through the use of DNA testing, investigators discovered that the cow had been born from one on the neighboring farm.13

NONTRADITIONAL FUNCTIONS

With some innovation, nontraditional means of veterinary forensics also may aid investigators. Canines are not the only animals that law enforcement agencies can use to find narcotics; one department utilized potbellied pigs. According to experts, the potbellied pig’s sense of hearing and smell is exemplary and significantly greater than humans.14 In one demonstration, within 30 seconds, a potbellied pig discovered a small box containing marijuana wrapped in canvas cloth.15

After an 18-month project, researchers at the Los Alamos National Laboratory in New Mexico trained bees to detect explosives.16 Bees were exposed to the distinctive smell of explosives followed by sugar water. Through operant conditioning, the bees were trained to stick out their proboscis when they detected the smell of explosives.17

In addition, fish have been used to detect potential terror attacks. Bluegills have a highly tuned
monitoring system concerning chemical imbalances in their surrounding environment. As a result, they currently help safeguard major drinking water supplies. Using a computerized monitoring system, detection of even the slightest change in the bluegills’ vital signs will send an e-mail alert to authorities to warn of potential danger.\(^{18}\)

In another parrot-related case, thieves stole a parrot during a burglary. As the parrot was hauled off, the owner came out screaming, “Robbery! Robbery!” A short time later, police stopped a vehicle for a traffic violation. As the officers approached the vehicle, the parrot called out, “Robbery! Robbery!” which aroused their suspicions. A subsequent search of the vehicle revealed the stolen goods.\(^{19}\)

**CONCLUSION**

All evidence, whether human or animal, should be collected by trained law enforcement personnel or other officials who can testify to its collection. Not only does this ensure the reliability of its collection but the continuity of the chain of custody. Investigators should take every possible precaution to ensure the integrity of a crime scene, including minimizing contamination by animals, which can transfer evidence and other trace materials to and from the area.

Whether functioning as victims, suspects, witnesses, or even agents of law enforcement, animals can aid investigations in a variety of ways. Although the use of veterinary forensics is still in its infancy, agencies are rapidly seeing the capabilities of the creatures around them and are using their assistance more often in an effort to curtail crime.\(\uparrow\)

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**Endnotes**

\(^{1}\) [http://www.veterinaryforensics.com](http://www.veterinaryforensics.com)

\(^{2}\) [http://www.questgen.biz](http://www.questgen.biz)

\(^{3}\) The use of canines in law enforcement is well documented; therefore, their discussion in this article is limited.

\(^{4}\) “Bavarian Pigeon Corps,” *The Cause* (March 2002); retrieved from [http://www.pitsco.com/the_cause/prev_year/02cause2eng.htm](http://www.pitsco.com/the_cause/prev_year/02cause2eng.htm).

\(^{5}\) Ibid.


\(^{7}\) *Fresh Air*, NPR, February 14, 2006.


\(^{9}\) Ibid.


\(^{11}\) Supra note 6.

\(^{12}\) Supra note 6.


\(^{15}\) Ibid.


\(^{17}\) Ibid.


For further information concerning the use of veterinary forensics in law enforcement, visit [http://www.vgl.ucdavis.edu/forensics](http://www.vgl.ucdavis.edu/forensics).

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One evening, the Gardena, California, Police Department received a burglary-in-progress call. Officers arrived at the residence in less than 1 minute, discovered the perpetrator inside the house, and arrested him. Investigators subsequently linked the man to other burglaries in the area.

The officers, however, were not in that part of the city by chance; they were on directed patrol duties. The sergeant supervising that shift had studied crime pattern information from crime analysis reports and maps routed to him a short time before the shift’s briefing. Upon recognizing a cluster of burglaries in the late afternoon in that specific geographic area, he deployed officers who, in turn, responded immediately to the burglary call.

USEFUL TOOLS
Crime mapping has become an important and useful tool for law enforcement. Before the availability and use of computers with geographic information systems (GIS) software, agencies created handmade pin maps to help officers visualize where crimes occurred. Crime mapping allows law enforcement organizations to study crime trends and various factors relating to police resource deployment through the use of simplified crime data summary reports and maps. These provide powerful communication aids for law enforcement agencies and
can significantly influence decision making. The use of maps allows decision makers to focus on crime reduction and prevention tactics in the right manner at the right place. Advances in GIS technology have allowed agencies to streamline the process and do more for less money. The use of maps as a tool for crime prevention has become more important with the development of computer-based statistical analysis methods, such as Compstat (an acronym for computer statistics). Many law enforcement agencies in the United States and other countries are using the Compstat model, which has become popular during the past 10 years.

Simply put, Compstat looks at a wide array of statistics, ranging from street crimes to officer productivity, and holds police managers responsible for following up on identified crime problems. The basic premise behind Compstat rests with management accountability, which police executives and managers thoroughly discuss at meetings. Managers set forth their strategies and actions based on the information made available to them. Executives and managers receive a variety of computer-generated information, such as officer productivity data and statistics related to crime and quality-of-life conditions, compiled by crime analysts.

Many articles, books, and training guides exist related to Compstat outline programs based primarily in large cities and metropolitan areas. Large agencies, especially with crime-ridden neighborhoods, generally have more statistics to study and often can identify crime trends more easily. These departments usually have crime analysis units and budgets that allow for specialized computer equipment. But, what about smaller agencies? Can they also benefit from a Compstat program? Although smaller departments make up the majority of law enforcement agencies in the United States, many do not use statistically based programs to track crime or evaluate field activities. A number of reasons may explain why, including small budgets, lack of technical personnel, or low crime rates. Some organizations may not require or desire a full Compstat process, but many can benefit from using comprehensive crime data reports and maps. No matter the size of the department, crime data reports and maps tell the story of what is occurring in the community.

The first step of the Compstat process involves obtaining accurate and timely intelligence and using a system developed primarily to analyze and map crime information. Smaller agencies may need an effective and low-cost method to produce meaningful statistical reports, whether for a Compstat program or a simple informational distribution system. Of importance, departments must distribute these reports in a method that benefits every employee, from the executive to the officer in the field.

"No matter the size of the department, crime data reports and maps tell the story of what is occurring in the community."

Lieutenant Burnett serves with the Gardena, California, Police Department.
Distributing regularly scheduled reports and maps is especially important to agencies that have difficulty passing information between field personnel and divisions. Many organizations have officers working 12-hour shifts over 3 or 4 workdays per week. This creates a natural problem of information sharing because field personnel rarely come in contact with other members of their agency or learn about crimes that occurred while they were not working. Squad or team deployment often results in situations where valuable crime information is unintentionally not shared with other squads.

So, how do smaller agencies create and disseminate this information? How do they set up a program without a crime analysis staff and funds to pay for it? One department found an answer by creating a simple but effective reporting and mapping system that cost under $1,000 and did not require a full-time crime analysis detail.

THE GARDENA APPROACH

The Gardena, California, Police Department identified the need for a statistically based reporting and mapping system through a strategic planning process. The organization then developed a simple but effective method of distributing crime information in the form of maps and reports to affected personnel, including managers and supervisors who review the information to effectively deploy personnel. The department named the program the Gardena Crime Accountability and Reduction Strategy (GCARS).

GIS software has become more customized and user friendly but carries varying and often high prices for specific and enhanced applications.

GIS software has become more customized and user friendly but carries varying and often high prices for specific and enhanced applications. Technological advancements in the last few years have resulted in the development of less expensive alternatives and standardized software products that agencies can purchase directly from a software retailer. The products needed include report compilation software and a mapping program. The report compilation software used to prepare the data and create analysis reports produces simple, to-the-point maps but does not have the complexity of the larger, more expensive GIS applications. Using this less expensive method requires greater human interpretation than more customized and automated applications. But, depending on the technical abilities of their personnel, agencies can automate much of the process.

The Gardena Police Department shares a regional database computer system with three neighboring agencies. The network contains computer-aided dispatch (CAD), a records management system (RMS), a custody management system (CMS), and an automated report-writing system (ARS). Purchased from the same vendor, all of these systems interact with one another. Integrated systems offer a distinct advantage for setting up the reports and maps because the end result should contain one primary data record for each incident, normally assigned a case or incident number. All information related to the incident is contained in one master record. The RMS acts as the parent system and organizes the data records.

Planning

The agency’s command staff should study all available crime data and calls-for-service information to formulate the direction of the program. Determining which data to include in the reports and maps is critical.
It is imperative that the planners talk to officers, supervisors, and investigators to find out what information would benefit them the most. Planners also must look at existing crime data and determine which crimes are the most prevalent in the community. The Gardena Police Department uses the Part I Uniform Crime Reporting crimes, which have a great impact on quality-of-life issues and, for years, have been used as benchmark statistics for communities across the United States. The department further subdivided some crimes by classification to provide greater detail. To recognize trends, it is necessary to identify variables or crime factors associated with each crime and make sure personnel record these items when investigating crimes. For example, the type of weapon used in an assault or the method a burglar employed to enter a house represent important crime factors that could detect trends.

The planning stage should identify the employees needed for the information-gathering process, method of report dissemination, and follow-up strategies. Marketing the program among members of the agency is important during the early stages. Field personnel should find the information worthwhile and of assistance in policing their assigned geographic areas.

Software and Training

Two specific types of computer software, report generating and mapping, are required. Assuming that the agency uses an automated RMS, the first step in the output process involves collecting the crime information from the database. Off-the-shelf, commercial software, often referred to as business intelligence software, will retrieve data from the RMS database and prepare the information in a report. The
software collects data from a source (usually a database or spreadsheet) and displays it in formats created and customized by the user. This part of the process may require the agency to train existing personnel in data retrieval and report creation or, perhaps, as a better option, hire a specialist to create templates. Depending on the complexity of the desired reports, this could add extra costs to the program. However, once the agency has the templates, anyone with basic computer skills can use them. In the Gardena Police Department, an existing employee prepared the templates after receiving training with the report-generating software. Because the data must be organized in a format that the mapping software can import, smaller agencies that do not use a database to collect crime statistics can enter the information into a spreadsheet as the first step in preparing it for mapping.11

A commercially available mapping program that will plot points on a map represents the other type of software needed. Agencies do not need to purchase complicated GIS software unless they desire greater amounts of mapping tools. Advanced GIS programs also may require the yearly purchase of geocoded map data licenses, whereas the less expensive off-the-shelf mapping software does not.12 Most mapping products will contain all of the street addresses in the United States and in many other countries. Obviously, even the most up-to-date software may not include newly constructed roads. Mapping programs base their address geocoding by block numbers, rather than individual street addresses. The software also may have a function to allow the use of latitude and longitude coordinates for plotting locations. Many CAD and RMS programs contain geocoded latitude and longitude coordinates linked to incident addresses. Using these often allows for more precise point plotting on maps.

It is critical that the mapping program contains data import functions to enable point plotting. Some mapping programs offer single point plotting, while others offer an array of features, including various forms of shading. Agencies should evaluate these products to find which one best meets their needs.

Data Input

The information entered into the crime database needs to be standardized. The old and overused “data in, data out” phrase best summarizes this. The more specific the information, the better the reports and maps will reflect patterns because crime report data, the primary mechanism of the mapping program, produces what is plotted on the maps. In Gardena, officers enter crime report information directly into the database through the ARS when they write incident reports. The system allows officers to enter crime data factors immediately into RMS and gives them access to real- or near-time data. Of course, agencies that enter data manually will not have information available for reports and maps as quickly as those with automated report-writing systems.

Agencies can use CAD data for field productivity and shift management. Such information, however, is completely different from crime data. Organizations can employ CAD data to track and evaluate field service calls, response times, officer activity statistics, and many other areas of need.13 A serious problem associated with using CAD data in crime analysis trend reporting is that the initial information taken from a complainant often is classified wrong or is incorrect. This occurs because the 911 operator does not receive

Marketing the program among members of the agency is important during the early stages.
all of the facts about the crime, which a field officer will collect later. CAD data can produce maps indicating the locations where calls are generated but not necessarily where crimes occur.

Quality control during data input is important. Supervisors should ensure that personnel enter specific and applicable data for different crime types. For example, because weapon information is critical in robbery and assault cases, omitting specific data may result in a crime pattern going undetected. Therefore, agencies should standardize the input of data and provide their personnel with detailed training and follow-up.

**Production of Reports and Maps**

During the planning process, organizations should identify which types of reports and maps will prove the most beneficial for all personnel. The Gardena Police Department created various data output reports, which include information from RMS and CAD, so its members can receive accurate and recent information about criminal activity and field service calls. Because trend identification constitutes the most important aspect of the system, producing data for this purpose is essential. For example, the information contained in an auto theft report needs the location of the incident, the date and time of occurrence, and the description of the stolen vehicle. Then, all of this information can be displayed in crime analysis reports and plotted on maps, which will have a data point for each street address. Maps showing both stolen and recovered vehicle locations have become worthwhile tools for officers in the field.

> Agencies do not need to purchase complicated GIS software unless they desire greater amounts of mapping tools.

The department primarily uses Uniform Crime Reporting Part I offenses, with some subcategories (specifically burglaries and auto thefts), for the crime analysis reports. The data include the location and date and time of occurrence, suspect information, victim identifiers (race, age, and sex), and involved-vehicle information. The categories for the maps and accompanying reports are homicide, rape, assault, robbery, burglary, theft (larceny), and vehicle crime. Personnel prepare a detailed report listing crimes in geographic patrol areas (beats) at various time intervals.

For analyzing field service calls, the department uses dispatch or CAD data, which can provide an abundant amount of time- and location-sensitive information, that it can use to analyze and deploy resources. The reports containing field service calls identify locations where an abundance of calls may occur and where the department may need to redirect resources. The reports produced from CAD data include field service calls by day of week and time of day, locations receiving the most calls, and the most frequent call type. The report-generating software can create custom bar charts and other types of graphs that provide excellent visualization of the days and times when field resources are being used.

**Distribution**

The Gardena Police Department distributes the database reports via three basic methods: e-mail, printing, or posting on bulletin boards in the police facility. Personnel route reports automatically to a printer in the shift supervisor’s office prior to the start of a shift and also to investigators. Analysis reports list crime and dispatch information for 24-hour and 3-day intervals. Supervisors can quickly view these reports and...
pass the information on to line officers at the beginning of a shift, pointing out any current crime trends.

Maps, which compliment the reports, offer a visual representation for field personnel and supervisors. The department distributes different types of maps that depict various crime factors. For example, points on the map for robberies have different colors for each classification (e.g., handgun, knife, strong-arm, or other weapon). Agencies that print the maps in black and white, however, could use different symbols for each category. Maps also can display different crime factors. For example, the department can create a residential burglary map listing occurrences between certain hours where a rear door was forced open. These types of maps can become more detail specific and be produced based on particular requests.

In addition to the reports and maps, the department recently added an online log, which allows employees to enter a wide array of information complementing the crime statistics and maps. The log items are linked to the report distribution system and provide additional criminal information to officers and investigators on the upcoming shifts. This system allows for quick distribution of crime information and adds a human touch to the automated data.

For example, an officer receives information from a citizen about suspicious activity in an area where burglaries are occurring and enters it into the log where it can be shared with other personnel.

Assessment

Agencies can evaluate the reports and maps through a Compstat process or simply have their managers, supervisors, and field personnel meet and informally discuss them. The key to a successful mapping program is to continually study the reports and maps and then relay the information to the personnel in the field. This allows supervisors to assign tasks or develop plans based on the intelligence. The management team and supervisors should use the information to allocate resources and evaluate staffing levels. During the first 6 months of 2006, the city of Gardena experienced a decrease in overall crime, enabling the police department to allocate resources to specific problem areas. Closely monitoring criminal activity has allowed for the deployment of directed patrols for preventative purposes as detailed in the opening scenario of this article.

Law enforcement organizations also should continually...

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**Crime map showing weapons used in robberies.**
review distribution methods of the crime data reports and maps. In addition to sending information by e-mail and posting it on bulletin boards, agencies can make the information available to employees via an in-house intranet system.

It is important to continually review trends and crime rates. Smaller agencies can use this method even in communities with less criminal activity. An assessment of field service calls may be all that is needed in such locations. Organizations also can use the system for many other areas of concern, such as sex offender addresses, residences of parolees and of persons having outstanding warrants, and traffic collision locations.

CONCLUSION

Using inexpensive and simple methods to track information can benefit many law enforcement agencies, regardless of size or level of criminal activity. The process also can have a positive affect on quality-of-life issues.

A statistically based reporting and mapping system can offer agencies the ability to identify crime trends and deploy resources based on the compiled information. Personnel can quickly and easily create reports and maps that can provide an excellent crime prevention tool for officers responsible for a geographic area. This, in turn, allows them to respond to calls faster and better protect their communities. ♦

Endnotes


...agencies should standardize the input of data and provide their personnel with detailed training and follow-up.

6 Over 18,000 state, county, and municipal law enforcement agencies of varying sizes are in the United States. A great number of these employ fewer than 10 officers, while the average-sized agency has under 25 officers.
7 Supra note 3, 224.
8 Located in Los Angeles County, the Gardena Police Department has 87 police officers who serve a community of 60,000.

9 Part I offenses include the violent crimes of murder and nonnegligent manslaughter, forcible rape, robbery, and aggravated assault, as well as the property crimes of burglary, larceny-theft, and motor vehicle theft.

10 A crime factor is the individual piece of information collected about a particular criminal incident. It could be the type of weapon, the time of day, suspect descriptions, vehicles used, methods of entering a building, and many other activities or descriptions to enter into the database.

11 Of significant importance, agencies must ensure that they set up the address-location data exported by the database reporting software to match the geographic-location naming system in the mapping software. In simpler terms, the addresses downloaded from RMS must match the street addresses contained in the mapping software. Intersections should receive special attention because the mapping software may not recognize the format. As a quality control point, agencies can instruct dispatch complaint operators and field personnel to use actual addresses, rather than intersections, whenever possible.

12 Geocoding is the process of putting information onto a map. Agencies can purchase address and location data geocoded for GIS products. Off-the-shelf mapping programs contain geocoded street addresses.

13 Field service calls are incidents handled by law enforcement personnel in the field and are the primary calls placed by members of the community to the dispatch center.

14 The Gardena Police Department encourages its employees, whether on or off duty, to use the log, which operates in the same fashion as a blog on the Internet.

For additional information about the Gardena Crime Accountability and Reduction Strategy, contact the author at eburnett@gardenapd.org.
A regular part of police patrol involves the stopping of motor vehicles. These stops occur for a variety of reasons, such as to enforce motor vehicle laws or investigate suspicious activity. The vast majority of these motor vehicle stops are uneventful: the vehicle is stopped, the driver is issued a traffic citation, and the police officer and the driver depart the scene. Unfortunately, some vehicle stops do not follow this pattern. Individuals may ignore the command to stop, forcing the pursuit of the vehicle. When police officers engage in the pursuit of a vehicle, either by initiating the pursuit or assisting other officers pursuing a vehicle, many legal and policy issues are implicated.1

Over the last 20 years, the U.S. Supreme Court has decided several cases relevant to Fourth and Fourteenth Amendment issues surrounding motor vehicle pursuits. These cases have clarified many of the legal issues arising from police pursuits by identifying the constitutional provisions that govern this activity and setting forth the legal standards by which the police activity will be measured. This article discusses the application of the Fourth Amendment to motor vehicle pursuits and addresses issues relating to the admissibility of evidence and potential civil liability for injuries or deaths sustained by the subject of the pursuit.

THE FOURTH AMENDMENT

The actions of a police officer may be challenged under the Fourth Amendment by a person who has been seized by the officer.2 Such an individual can challenge both the right of the police officer to make the seizure and the manner in which...
the seizure was made under the reasonableness component of the Fourth Amendment. According to the Supreme Court, a seizure may be made by a police officer through either a show of authority or the imposition of force. To determine when a person has been seized by a show of authority, the test devised by the Supreme Court requires a determination of whether “a reasonable person would feel free to decline the officers’ requests or otherwise terminate the encounter.” When a police officer signals a driver of a vehicle to pull over and the person complies, a seizure has occurred because a reasonable person would not feel free to ignore the officer’s show of authority.

At this point, the officer’s conduct falls under the scope of the Fourth Amendment requirement that a seizure be reasonable to be lawful. To be reasonable, at the time of the seizure, the police officer must generally possess either probable cause or reasonable suspicion that the driver of the vehicle or a passenger is involved in activity that violates criminal or motor vehicle laws. According to the Supreme Court, stopping a motor vehicle is unreasonable “except in those situations in which there is at least articulable and reasonable suspicion that a motorist is unlicensed or that an automobile is not registered, or that either the vehicle or an occupant is otherwise subject to seizure for a violation of law.”

For police officers engaged in the pursuit of a motor vehicle, the more relevant determinations involve whether a Fourth Amendment seizure actually occurred during the course of the pursuit and, if so, when the seizure occurred. Identifying the level and nature of police conduct required to establish whether a seizure has occurred is significant because only conduct determined to be a seizure is subject to the reasonableness requirement of the Fourth Amendment and may form the basis for a civil lawsuit against the officers or result in the suppression of evidence.

THE ELEMENTS OF A SEIZURE

The Requirement of Intent

In Brower v. County of Inyo, the U.S. Supreme Court was presented with the opportunity to clarify the Fourth Amendment seizure issues that arise in the context of the police pursuit of a motor vehicle. In Brower, an Inyo County deputy sheriff began chasing a stolen car driven by Brower, a felony under state law. Brower led police on a chase for nearly 20 miles at high speeds to avoid arrest. At a point during the chase, the deputy radioed a request that a roadblock be established. Acting on this request, deputies placed a tractor-trailer across the highway to block both lanes of the road and put another police car between the tractor-trailer and Brower’s path with its headlights positioned to face Brower. Shortly after the roadblock was set up, the pursuit came to a sudden end when Brower drove past the stationary second police vehicle “at a high rate of speed and slammed into the tractor-trailer rig.” Brower was killed shortly after impact. In the aftermath of this incident, Brower’s family commenced a civil action.
against the police officers and the county of Inyo in federal district court pursuant to Title 42, U.S. Code, Section 1983 (hereinafter section 1983) alleging that the officers violated Brower’s constitutional rights by subjecting him to an unreasonable seizure. According to the family’s lawsuit, the roadblock used by the police, in addition to the details previously described, was concealed behind a curve in the road and consisted of an unlighted tractor-trailer and a police car in front of the tractor-trailer with its lights positioned to blind Brower. The federal district court dismissed the lawsuit by ruling that it was not unreasonable to establish a roadblock under the circumstances. The family appealed the decision.

On appeal, the Court of Appeals for the Ninth Circuit upheld the lower court decision but found that no Fourth Amendment seizure had occurred. The court of appeals reasoned that there was no seizure under the Fourth Amendment when Brower collided with the roadblock because “[p]rior to his failure to stop voluntarily, [Brower’s] freedom of movement was never arrested or restrained” by the police, and because Brower “had a number of opportunities to stop his automobile prior to impact.”

In reaching its decision, the court of appeals determined that the facts of the Brower case were similar to cases where the subject of a police pursuit loses control of the vehicle and crashes. In those cases, the court of appeals, together with other circuit courts, believed that no seizure occurred. Because there was no seizure, there was no need for the court of appeals to determine whether the police conduct was nevertheless reasonable. The Fourth Amendment claim brought by the family was dismissed. The family appealed the decision to the Supreme Court.

The issue before the Supreme Court involved the question of whether the allegations made by Brower’s family in their civil lawsuit were sufficient to establish the elements of a valid claim of a violation of Brower’s Fourth Amendment rights. In this regard, the Supreme Court focused on the essence of the allegations made by the family in the civil lawsuit—that the police “sought to stop Brower by means of a roadblock and succeeded to do so.” The Court decided that those actions on the part of the police, if true, were sufficient to “constitute a ‘seizure’ within the meaning of the Fourth Amendment.” In reaching this decision, the Supreme Court provided a detailed discussion of the legal threshold used to determine whether and when a Fourth Amendment seizure has occurred. Initially, the Court noted that a seizure under the Fourth Amendment occurs “only when there is a governmental termination of freedom of movement through means intentionally applied.” According to the Court, a Fourth Amendment seizure requires the “intentional acquisition of physical control” over a subject, and this control must be willful and not accidental. Because intent is an essential element of a seizure, the Fourth Amendment does not govern “unintended consequences of government action.” However, the intent on the part of the police to seize the subject is not sufficient in itself. In addition to the intention to seize, the seizure must be made by “means intentionally applied” by the police. In regard to this second requirement, the Court noted that when “determining whether the means that terminates the freedom of
movement is the very means that the government intended we cannot draw too fine a line…” but believed that it would be “enough for a seizure that the person be stopped by the very instrumentality set in motion or put in place in order to achieve the result.”

Applying these two legal requirements of a seizure to the facts of *Brower*, the lawsuit brought by the family properly stated a Fourth Amendment claim because it alleged both essential elements. The family alleged that the police intended to stop Brower and that he was, in fact, stopped by the roadblock, which was the instrumentality put into place to stop Brower. The Supreme Court reversed the decision of the circuit court and remanded the case to the lower courts to determine if the seizure of Brower was reasonable.

**The Requirement of Control**

While not a vehicle pursuit case, *California v. Hodari D.* presented the Supreme Court with an opportunity to clarify the concept of seizure when police are in a pursuit on foot. While patrolling a high-crime area, police officers observed Hodari with a group of three or four other juveniles “huddled around a small red car parked at the curb.” When Hodari saw the officers approaching, he ran away. One of the officers began to pursue Hodari on foot, but, before catching up with him, Hodari threw a rock of crack cocaine on the ground. Shortly after disposing of the cocaine, Hodari was tackled and handcuffed by the police officer. Hodari sought to suppress the cocaine found by the officers by arguing that it had been found as a result of an unreasonable seizure. A lower state court ruled against Hodari and refused to suppress the cocaine, but the California Court of Appeals reversed the lower court. The California Court of Appeals ruled that Hodari was seized when he saw the police officer chasing after him because this show of the authority by the police officer would lead a reasonable person to believe that he was not free to end the encounter with the officer. The court further concluded that the seizure was unreasonable because the police officer did not possess information to the level of probable cause or a reasonable suspicion that Hodari was engaged in any criminal activity to support initiating the foot pursuit. The state of California appealed this decision to the U.S. Supreme Court.

When the case reached the Supreme Court, the legal issue to be decided was whether Hodari was seized by the police officer at the time he dropped the drugs—while Hodari was running away from the police—or, more precisely, whether “a seizure occurs even though the subject does not yield” to a show of authority by police. In answering this question, the Supreme Court determined that there is no Fourth Amendment seizure unless and until the subject actually has been brought under the physical control of the police. Therefore, a seizure occurs when a subject submits to the control of a police officer or when the subject has control physically imposed upon him. In reaching this determination, the Court referred to its decision in *Brower v. Inyo County* and noted that it “did not even consider the possibility that a seizure [of Brower] could have occurred during the course of the chase because, as we explained, that ‘show of authority’ did not produce the stop.”

Turning to the facts presented in the case, the Court found that because Hodari did not comply with the police officer’s show of authority, Hodari “was not seized until he was tackled.”
Therefore, the cocaine that Hodari threw to the ground was not the product of an unlawful seizure.

As these cases illustrate, the principles set forth have relevance to the admissibility of evidence in criminal cases that may turn on a determination of the point in time where a seizure has occurred. For example, in *United States v. Swindle*, police officers on a federal task force attempted to stop a vehicle they observed at a house associated with a fugitive. However, when the officers attempted to stop the car, the driver “disobeyed the officers’ order to stop and kept driving.” As the driver fled from the police officers, he committed traffic violations and was observed throwing a bag from the car that later was found to contain a large quantity of crack cocaine. The driver ultimately stopped his vehicle and fled on foot. The police officers caught up with and arrested the driver. He was charged with various federal drug crimes. The defendant, Swindle, moved to suppress the bag of cocaine found by the officers on the grounds that it was the product of an unlawful seizure as the officers did not have a legal basis to stop the car he was driving. The trial judge agreed, suppressing the evidence as the police officers did not have either reasonable suspicion or probable cause to believe that the fugitive was inside the car, and they had not observed Swindle commit any acts prior to the chase that would support the stop.

On appeal, the Circuit Court of Appeals agreed that the order made by the police officers to Swindle to pull over was unreasonable because the officers did not possess “enough information on which to reasonably order [Swindle] to stop.” However, as the circuit court noted, the determination of the issue of the admissibility of the cocaine turned on the timing of the seizure. The defendant argued that he was seized when the officers ordered him to pull over and that the officers had no legal basis to stop him. The government argued that Swindle was not seized until he was actually apprehended by the police officers, at which time the officers had sufficient grounds for his arrest based upon what they observed during the pursuit.

The Circuit Court of Appeals, in reaching its decision, referred to the decisions in *California v. Hodari D.* and *Brower v. Inyo County* and, based on these decisions, ruled in favor of the government. Based on the holding in these cases, Swindle was not seized by the police officers because no force had been used to restrain him and he had not submitted to the show of the officer’s authority. Therefore, no seizure occurred until he was physically apprehended by the police, at which time the officers had probable cause to arrest.

These principles also have relevance to the issue of liability in civil cases that may turn on a determination of the point in time, if any, when a seizure has occurred. For example, *Connor v. Dukes* illustrates this point. Officer Dukes first noticed Jeffrey Connor after Connor pulled in front of Dukes on his motorcycle. Dukes observed that the motorcycle was missing a taillight and believed that Connor was driving under the influence of alcohol. Dukes turned on his blue lights and Connor responded by accelerating. With Dukes in pursuit, Connor lost control of his motorcycle and was severely injured. Connor commenced a lawsuit pursuant to section 1983 alleging, among other things, that he was deprived of his rights under the Fourth Amendment. Connor
alleged that Dukes’ pursuit was so close behind him that he was deprived of the option to stop the chase and, thus, was seized during the pursuit. The U.S. Circuit Court of Appeals dismissed the claim, reiterating that absent the exertion of physical control over the subject, no seizure occurs. Because no seizure occurred, the court declined to consider whether the actions were reasonable.28

**Force Used to Stop a Vehicle**

If a seizure has occurred, the reasonableness component of the Fourth Amendment requires the justification for the seizure be supported by either probable cause or reasonable suspicion. In addition, according to *Graham v. Connor*,29 the Fourth Amendment also speaks to the manner in which the seizure was made or, more specifically, the use of force in making the seizure. In *Graham*, the Supreme Court decided that claims of excessive force “aris[ing] in the context of an arrest or investigatory stop of a free citizen” are governed by the Fourth Amendment, which guarantees citizens the right “to be secure in their persons…against unreasonable…seizures.”30 A balancing-of-interests test is used to determine whether the use of force is appropriate by looking at “the nature and the quality of the intrusion” on the individual’s Fourth Amendment rights against “the countervailing governmental interests at stake.”31 While the Supreme Court noted that this test “is not capable of precise definition or mechanical application,”32 it requires “careful attention to the facts and circumstances of each particular case, including the severity of the crime at issue, whether the subject poses an immediate threat to the safety of the officers or others, and whether he is actively resisting arrest or attempting to evade arrest by flight.”33 The determination of the reasonableness of the use of force is “judged from the perspective of a reasonable officer on the scene, rather than with 20/20 vision of hindsight.”34 Significantly, it is an objective inquiry without regard to the underlying intent or motivation of the officer.35

These standards govern the use of force by police officers seeking to seize a fleeing vehicle. While the standards are stated simply, the application of the standards can be made difficult because of the varying situations under which seizures are made and the dynamic environment in which pursuits occur.36

Recently, the Supreme Court addressed the reasonableness of force used to effect a seizure during a police pursuit. In *Scott v. Harris*,37 a Georgia county deputy attempted to stop a car driven by Victor Harris traveling at 73 miles-per-hour in a 55 mile per hour zone. Harris failed to pull over and, instead, led police on a chase at speeds in excess of 85 miles per hour. Deputy Timothy Scott heard the chase called out on the police radio and joined the pursuit. During the pursuit, Harris was nearly boxed in by police cars but was able to evade the officers, striking Scott’s police car in the effort. “Six minutes and nearly 10 miles after the chase had begun,” Scott sought permission to stop Harris using a precision intervention technique (PIT) maneuver.38 Scott obtained permission to use the PIT maneuver; however, instead of using it, Scott “applied his push bumper to the rear” of Harris’ vehicle.39 Harris lost control of his car, left the roadway, rolled over, and crashed. Harris was rendered a quadriplegic from his injuries.40

As a result of the incident, Harris filed suit against Deputy Scott and others under section 1983 alleging that excessive
force was used to effect his seizure in violation of the Fourth Amendment. The district court rejected Deputy Scott’s attempt to have the lawsuit dismissed. On appeal, the U.S. Court of Appeals for the Eleventh Circuit affirmed the district court’s decision, allowing Harris to bring his Fourth Amendment claim to trial. The court of appeals believed that a reasonable jury could find that Scott violated Harris’ Fourth Amendment rights to be free from an unreasonable seizure. Harris appealed to the U.S. Supreme Court.

The Supreme Court first noted that the “decision to terminate the car chase by ramming his bumper into [Harris’] vehicle” constituted a Fourth Amendment seizure as defined by Brower v. County of Inyo. Because a seizure clearly had occurred, the Supreme Court noted that the appropriate standard for determining excessive force claims is the objective reasonableness standard set forth in Graham v. Connor. In Garner, the Court ruled the shooting was an unreasonable seizure and set forth the standard required to meet the requirements of the Fourth Amendment to use deadly force. The Court noted that Garner was merely an application of Graham’s reasonableness test. Rejecting Harris’ argument, the Court explained that the facts of Garner were vastly different to those in the present case and commented that “the threat posed by the flight on foot of an unarmed suspect” is not “remotely comparable to the extreme danger to human life posed by [Harris] in this case.”

In determining the reasonableness of the seizure, the Court employed the balancing-of-interests tests. “[W]e must balance the nature and quality of the intrusion on the individual’s Fourth Amendment interests against the importance of the governmental interests alleged to justify the intrusion.” Deputy Scott justified his actions by pointing out the “government interest in ensuring public safety,” which must be balanced against the “risk of bodily harm that Scott’s actions posed to [Harris] in light of the threat to the public Scott was trying to eliminate.” In seeking to determine the risk on both sides, the Supreme Court noted that it was clear that Harris posed “an actual and imminent threat” to pedestrians, motorists, and the police and that Scott’s actions “posed a high likelihood of serious injury or death” to Harris. The Court posed the question and the answer as follows:

So how does a court go about weighing the perhaps lesser probability of injuring or killing numerous bystanders against the perhaps larger probability of injuring or killing a single person? We think it appropriate in this process to take into account not only the number of lives at risk, but also their relative culpability. It was [Harris], after all, who intentionally placed himself and the public in danger by unlawfully engaging in the reckless, high-speed flight that ultimately produced the
choice between two evils that Scott confronted. Multiple police cars, with blue lights flashing and sirens blaring, had been chasing [Harris] for nearly 10 miles, but he ignored their warning to stop. By contrast, those who might have been harmed had Scott not taken the action he did were entirely innocent. We have little difficulty in concluding it was reasonable for Scott to take the action he did.54

The Supreme Court also refused to accept the argument made by Harris that the public could be protected by having the police terminate the pursuit.55 The Court noted that ceasing the pursuit was no guarantee that Harris would not continue to pose a danger to the public, and the Court was reluctant “to lay down a rule requiring the police to allow fleeing suspects to get away whenever they drive so recklessly that they put other people’s lives in danger”56 as the Constitution does not require “impunity earned by recklessness.”57 The Court decided to establish a more sensible rule.

A police officer’s attempt to terminate a dangerous high-speed car chase that threatens the lives of innocent bystanders does not violate the Fourth Amendment, even when it places the fleeing motorist at risk of serious injury or death.58 Scott v. Harris has provided important guidance for analyzing the use of force to terminate vehicle pursuits when that force is alleged to consist of deadly force. In Abney v. Coe,59 a motorcyclist died after colliding with a deputy’s car following an 8-mile pursuit. A section 1983 action was commenced by the plaintiffs against the deputy alleging excessive force. The chase was initiated after the deputy observed the motorcyclist commit a traffic violation and ended when the motorcycle collided with the police car.60 The motorcycle was knocked off the road and the patrol car ran over it and the driver. The district court refused to dismiss the case against the deputy, ruling that the deputy’s conduct in striking the vehicle could constitute deadly force that was unreasonable because there was no evidence that the motorcyclist posed a serious threat. This deputy appealed.

For purposes of its decision, the court of appeals assumed that the contact between the vehicles was intentionally made by the deputy and, therefore, a seizure occurred. The court turned to the question of reasonableness. Ignoring the plaintiffs’ claim to the contrary, the court of appeals reviewed the description of the pursuit and found that it was “replete with examples of reckless driving designed to elude the police and executed with little consideration for the lives and safety of other motorists.”61 The court refused to distinguish the Harris case on the basis that this chase occurred during the day, that the speeds were not excessive, or that this pursuit involved a motorcycle. The court of appeals concluded that “[t]his case is similar to [Scott v. Harris]” and made the following observation:

In both cases, a motorist refused to stop for police after committing a routine traffic violation; the police pursued the motorist; the motorist employed various tactics to escape capture thereby endangering other motorists and bystanders; a law enforcement officer terminated the chase; and the motorist was injured.

The Court found that the deputy’s actions were reasonable.62

CONCLUSION

Clearly stated Fourth Amendment rules applicable to police vehicle pursuits can be deduced from these cases.
A traffic stop made by a police officer that results in the driver actually submitting to the officer is a seizure under the Fourth Amendment and, thus, subject to its reasonableness requirement. However, when a driver refuses to comply with the order by the police to stop and continues to attempt to evade the authority of the police, there is no seizure while the driver continues to flee. Absent submission to a show of authority, a seizure occurs during a motor vehicle pursuit when the driver comes under the intentional physical control of the police officer by means designed to obtain that control. This occurs if a police officer deliberately rams a vehicle, sets up a roadblock to stop the vehicle, or disables the vehicle through the use of some other technique, resulting in the vehicle being brought under control. However, if in the course of the pursuit, when a driver is fleeing from police officers who have the intent to stop the vehicle, no seizure occurs if the driver loses control of the vehicle and crashes because control over the driver was obtained by means other than those intentionally sought by the police.

A separate question involves the level of force that officers are permitted to use to obtain control of the vehicle. It is clear that police officers are permitted to use force to stop a vehicle fleeing from them, but the use of this force must meet the objective reasonableness standard of the Fourth Amendment. In determining whether this use of force is objectively reasonable, police officers are permitted to assess the risk posed to the public by the flight itself (even if the offense for which the pursuit was initiated is relatively minor) and to terminate the pursuit in a manner that may place the driver at risk of serious injury or death.

The Fourth Amendment provides guidance for police chases that result in a seizure. When a police officer’s actions during a vehicle pursuit do not rise to the level of a seizure, the conduct is governed under the due process clause of the Fourteenth Amendment, which will be addressed in detail in a future article.

Endnotes

1 Vehicle pursuits and their aftermath raise significant policy issues that must be addressed at the local level by elected officials and those appointed to government positions. Officials at this level of government are in a better position to take “account of competing social, political, and economic forces” to determine policy rather than “federal judges interpreting the basic charter of government for the entire community.” See Collins v. City of Harker-Heights, Texas, 503 U.S. 115, 129 (1992).

2 U.S. CONST. amend. IV. “The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated....”


5 Id. at 663.


8 Id.

9 42 U.S.C. § 1983 is a federal statute that permits a civil action to be commenced in federal courts against a police officer who deprives any person of rights protected by the U.S. Constitution.

10 Brower v. County of Inyo, 817 F.2d 540, 545-546 (9th Cir. 1987).

11 Id. at 546, citing Galas v. McKee, 801 F.2d 200 (6th Cir. 1986) that held that there was no seizure when the fleeing driver lost control and crashed.


13 Id. at 597.
Law enforcement officers of other than federal jurisdiction who are interested in this article should consult their legal advisors. Some police procedures ruled permissible under federal constitutional law are of questionable legality under state law or are not permitted at all.
Law enforcement officers are challenged daily in the performance of their duties; they face each challenge freely and unselfishly while answering the call to duty. In certain instances, their actions warrant special attention from their respective departments. The Bulletin also wants to recognize those situations that transcend the normal rigors of the law enforcement profession.

Patrol Lieutenant Juan Vasquez, Jr., of the Pecos, Texas, Police Department responded to an apartment fire. Upon his arrival, Lieutenant Vasquez recognized that the residence belonged to a fellow officer from the department who likely was asleep after working a night shift. Immediately, he entered the apartment and found it engulfed in flames and filled with smoke. Quickly, Lieutenant Vasquez located the sleeping officer and escorted him to safety.

While on patrol, Chief Tom Courtney, Captain Warren Leeps, and Officer Sara Stinson of the Decorah, Iowa, Police Department responded to a vehicle collision involving a car fire. Upon their arrival, the officers noticed that the vehicle was in a ditch, and the engine compartment was engulfed in flames. The elderly driver was seriously injured and unable to exit the car. As the officers feverishly worked to free the victim, flames and heavy smoke spread into the passenger compartment. Chief Courtney, Captain Leeps, and Officer Stinson struggled for several moments to free the driver and then removed her from the vehicle just before the car was completely overcome by fire.

Nominations for the Bulletin Notes should be based on either the rescue of one or more citizens or arrest(s) made at unusual risk to an officer’s safety. Submissions should include a short write-up (maximum of 250 words), a separate photograph of each nominee, and a letter from the department’s ranking officer endorsing the nomination. Submissions should be sent to the Editor, FBI Law Enforcement Bulletin, FBI Academy, Madison Building, Room 201, Quantico, VA 22135.
Patch Call

The patch of the Milford, Massachusetts, Police Department displays the town’s seal, which depicts a man riding on horseback over a ford in a stream near a mill. This setting explains the origin of Milford’s name.

The town of Jean Lafitte, Louisiana, is named after a notorious pirate. The patch of its police department features his ship, a moss-draped cypress tree common to the area, and a trawl boat. The sunlit and moonlit portions represent the present and the past.