

**POLICE PURSUITS:
LOOKING AHEAD**

by

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The Command College Futures Study Project is a FUTURES study of a particular emerging issue of relevance to law enforcement. Its purpose is NOT to predict the future; rather, to project a variety of possible scenarios useful for strategic planning in anticipation of the emerging landscape facing policing organizations.

This journal article was created using the futures forecasting process of Command College and its outcomes. Defining the future differs from analyzing the past, because it has not yet happened. In this article, methodologies have been used to discern useful alternatives to enhance the success of planners and leaders in their response to a range of possible future environments.

Managing the future means influencing it—creating, constraining and adapting to emerging trends and events in a way that optimizes the opportunities and minimizes the threats of relevance to the profession.

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Police Pursuits: Looking Ahead

The police may soon not be required to chase criminals nearly as far as they do today. Imagine all vehicles being equipped with a device that allows a dispatcher to shut it down remotely, virtually stopping the vehicle in its tracks. How might this impact the safety of pursuits, the damage to police and private vehicles and the public's perception of police chases? Current intervention options do not offer this opportunity, but emerging technology does.

Ever since criminals have tried to flee, the police have chased them. In simpler times, this might mean an escape on foot or by horse; in the Twentieth Century, it is most often the car. This trend continues into this Century, and shows no signs of abating. Helicopter videos of the police chasing a suspect are beamed into homes and onto websites almost daily. Though the instances of death resulting from these incidents are extremely infrequent, they capture the attention of the public through televised media coverage.

Law enforcement and society are in need of a means by which to quickly, safely, and effectively avoid or significantly limit the duration of vehicle pursuits. As long as law enforcement officers and law violators coexist, suspects will try to avoid apprehension by fleeing from the police. Applications capable of remotely stopping a vehicle are currently available and may significantly change the complexion of this form of apprehension. The law enforcement profession needs to lead the charge to implement advancements in vehicle shutdown technology in an effort to continuously improve the safety of police pursuits. As new technologies emerge, we may not be far from the next significant milestone in this area.

Current Intervention Tools

Certainly, for as long as the police have chased suspects in their cars, driving techniques and intervention tools have been used to minimize their duration. Most prominent amongst these tactics are using a “PIT”, a “box”, or the spike.

In the 1980s the Pursuit Intervention Technique (P.I.T.) was introduced as a method to end police chases.¹ The technique entails the use of a police vehicle to obliquely strike and “spin out” a suspect vehicle. Of course, it has some significant limitations and dangers associated with it. P.I.T. is most effective when used at relatively slow speeds, in areas with minimal traffic, and in areas with wide roads. These criteria are difficult to meet. In addition, this maneuver almost always results in vehicle damage and has a likelihood of causing injury to the suspect, officer, or others who are present.

Another popular vehicle-stopping maneuver is to “box in” the suspect with police vehicles. Various boxing methods have been used to stop fleeing vehicles. In 1995 the Hillsborough County, Florida, Sheriff’s Department developed the Vehicle Intercept Program (V.I.P.).² It is a variation of the traditional boxing maneuver and is implemented while the suspect vehicle is stopped or moving slowly and prior to activation of patrol vehicle emergency equipment. As is the case with the Pursuit Intervention Technique, boxing tactics require optimal conditions, which rarely exist, and the risk of vehicle damage and injury to both involved and uninvolved people remains high.

¹ Bondurant, Bob. Bob Bondurant on Police and Pursuit Driving (Bob Bondurant On). Osceola: Motorbooks, 2000.

² Clyde Eisenberg, “TOTAL PURSUIT MANAGEMENT,” Police Driving.com, <http://www.policedriving.com/pursuitmanagement.htm> (accessed April 16, 2009).

Tire deflation devices have also been deployed by law enforcement agencies across the country as a tool to end a police pursuit. The “spike strip” is a strip of sharp spikes, laid horizontally across a highway, that are designed to deflate all four tires of a speeding vehicle.³ The conditions under which this tool can be used are even more restrictive than those for the other methods previously mentioned. Officers must be able to predict the route of the chase, clear the roadway of uninvolved motorists, and safely deploy and quickly remove the device to avoid affecting pursuing vehicles. Though law enforcement can influence the direction of travel, the suspect ultimately controls the route. Additionally, officers have been injured or killed while deploying spike strips. For instance, on November 28, 2007, Palm Beach (Florida) County Deputies Donta Manuel and Jonathan Wallace were tragically killed when they were struck by a pursuing officer while removing a tire deflation device from the roadway.⁴ Even a “successful” deployment can result in the suspect vehicle remaining mobile, with less control due to the deflated tires.

All of these options require optimum conditions and still involve danger of collisions. Until now, these were the best alternatives available to shorten the duration of pursuits.

California Pursuit Data

In 2008, the California Highway Patrol reported 5903 police pursuits occurring throughout the State from its various police departments, sheriff’s agencies and CHP offices. That equates to one pursuit every 89 minutes, nearly 25% of which last in excess

³ Marr, Ron. "What are Spike Strips?" WiseGEEK: clear answers for common questions. 22 June 2009 <<http://www.wisegeek.com/what-are-spike-strips.htm>>.

⁴ Craig W. Floyd. “Spike Strips Pose Element of Danger, While Making Vehicle Pursuits Safer.” January 8, 2008. Database Online. http://www.policeone.com/pc_print.asp?vid=1647847

of 5 minutes. The *2008 California Highway Patrol Pursuit Reporting System Data Summary Report* states twenty of those incidents ended in a fatality. Seven people, other than suspects, were killed as a result of those vehicle pursuits. In addition, 213 people who were not involved were injured as a result of police pursuits. These consequences have occurred despite the existence of police policies regarding these types of events.

Police pursuit policies are generally either discretionary (describing conditions under which pursuits may be initiated or continued) or restrictive (actively limiting police involvement in this activity). The May, 1997 National Institute of Justice, *Research in Brief*, discussed pursuit policies and training. A survey of 737 agencies indicated that 42% of the responding agencies that had modified their policy since 1995 had made them more restrictive.⁵ Adding restrictions to policies is a simple alternative to control pursuit behavior. According to Officer Jack Richter, Press Information Officer for the Los Angeles Police Department, in June 2003, LAPD implemented a more restrictive pursuit policy. Data showed a significant decrease in pursuits, collisions, injuries, and deaths.⁶ What is missing in Officer Richter's release is data to show the impact on crime.

Police Pursuit Policies

Restrictive pursuit policies are generally designed to limit the types of crimes for which an officer is permitted to pursue. These policies typically permit officers to pursue only those who are alleged to have committed violent crimes. Opponents argue that pursuit bans and restrictions will encourage lawlessness. Field reports suggest that

⁵ United States. U.S. Department of Justice. Office of Justice Programs. By Geoffrey P. Alpert. *Research In Brief*. May 1997. National Institute of Justice. 17 June 2009 <<http://www.ncjrs.gov/pdffiles/164831.pdf>>.

⁶ Press release. *Drive and Stay Alive*. 20 Aug. 2003. 22 June 2009 <http://www.driveandstayalive.com/articles%20and%20topics/police%20issues/police-pursuit-policies-001_LAPD-2003-08.htm>.

adopting restrictive pursuit policies lead to an increase in some crimes, especially auto theft. According to Clyde Eisenberg's paper, *Total Pursuit Management*, prior to 1995 Tampa Bay, Florida Police Department had a policy only allowing the pursuit of violent felony offenders. In 1995, the policy was modified to include auto thieves and burglars. "Following the policy change there was an immediate decrease in the number of auto thefts."⁷

The Palo Alto, California, Police Department's policy does not permit pursuits for property crimes. An example of the limitations these policies place on officers occurred on August 6, 2008, when Palo Alto officers witnessed two suspects loading property into their vehicle from a residential burglary. As uniformed officers attempted to contact the suspects, they drove off. Based upon the nature of their policy, the officers were forbidden from pursuing the suspects. Palo Alto residents interviewed by the press following this incident were irate about the fact that officers who witnessed a crime were not permitted to pursue the perpetrators. One local resident said, "This kind of policy does not give the residents a lot of confidence that police will protect us. It kind of says we're wide open; the police can't chase you."⁸

In contrast, discretionary policies have the primary purpose of providing officers guidance in balancing the safety of the public and themselves against law enforcement's duty to apprehend violators of the law. This type of policy does not forbid officers to pursue solely based on the type of violation.

Lexipol, a California-based company, drafts police policy manuals based upon best practices and court case law. Their recommended vehicle pursuit policy is

⁷ Clyde Eisenberg, *Total Pursuit Management*. (<http://www.policedriving.com/pursuitmanagement.htm>), September 22, 2003.

⁸ Green, Jason. "Burglars Flee, Residents Fume." Bay Area News Group 8 Aug. 2008.

discretionary in nature and identifies a variety of considerations, such as traffic conditions and the seriousness of the offense that must be weighed against the danger to the public.⁹ For instance, an officer sees a person taking property out of a building, through a broken window. As the officer drives toward the suspect, he drives off at 60 miles per hour on a city street near a park that is hosting a large party. The officer recognizes the violation as a property crime, considers this along with the vehicle's speed and the proximity to the park, and is not likely to continue to pursue the violator. Policies regulate officer's actions. A tool is needed that effectively regulates the suspect vehicle.

Is Technology Ready?

According to the National Institute of Justice (NIJ) Pursuit Management Task Force report,¹⁰ a 1996 study indicated 50% of all pursuit collisions occurred in the first two minutes and more than 70% occurred before the sixth minute. This data indicates the preferred solution should be accessible and quickly deployed. Additionally, the most favorable device or technique will permit the driver of the target vehicle to maintain sufficient control to ensure the ability to safely maneuver the vehicle to a stop.

The tools currently in use to end pursuits do not optimize effectiveness or safety. Policies eliminating or reducing the ability for officers to engage in vehicle pursuits save lives, minimize vehicle damage, and improve the safety of some citizens. The law enforcement mission to protect lives and property, however, is hampered when criminals can avoid capture merely by fleeing from police. Remote vehicle shutdown systems satisfy these equally important interests.

⁹ Foster City Police Department. Policy Manual. Comp. Lexipol.

¹⁰ Jeremy Travis (Director), "Pursuit Management Task Force," National Institute of Justice, Research Preview, August 1998

In November 2004, *Space Daily* reported that Satellite Security Systems, from its San Diego office, successfully shutdown a tanker truck at the California Highway Patrol academy in Sacramento.¹¹ They used a satellite system and a central processing unit in the target vehicle to track, control, and ultimately shut it down.

A similar shutdown tool was recently marketed for passenger cars by General Motors when their On-Star in-vehicle safety and security system began offering a new feature called Stolen Vehicle Slowdown (SVS) in some of its 2009 model year vehicles. SVS uses global positioning systems and cellular communications to alert On-Star technicians of the location of a stolen vehicle (whose owner subscribes to the service). Technicians then send a remote cellular signal to the vehicle that reduces engine power until it gradually stops. There are also emerging alternatives for those who do not have OnStar installed in their vehicles.

On May 3, 2009, Cadec Corporation unveiled its software-based remote engine shutdown technology at the National Private Truck Council Conference in Nashville, Tennessee.¹² The company highlighted the fact that “Hardware approaches tend to force an abrupt stop. By contrast, Cadec’s software slows and then stops a vehicle remotely in a safe, controlled manner.” The technology meets the criteria for the U.S. Department of Homeland Security and the Transportation Security Administration federal grant programs, lending to the credibility of this advancement. These examples demonstrate the current capability to use this technology as a pursuit intervention strategy. Currently,

¹¹ "Tanker Truck Shutdown Via Satellite." [GPS News](http://www.spacedaily.com/news/gps-03zn.html) Nov. 2004. 16 Apr. 2009
<<http://www.spacedaily.com/news/gps-03zn.html>>.

¹² Faulkner, Michelle G. "Cadec introduces First Software-Based Remote-Engine Shutdown Technology for Truck and Motor Coach Fleets." 3 May 2009. [Marketwire.com](http://www.marketwire.com/press-release/Cadec-Global-983482.html). 15 May 2009
<<http://www.marketwire.com/press-release/Cadec-Global-983482.html>>.

these technologies are only being deployed in large commercial vehicles. There has not yet been a movement to bring this advancement forward as a pursuit intervention option.

Pursuit Safety for the Future

The implementation of vehicle shutdown technology is critical to improve the safety of vehicle pursuits. Let's look at a Palo Alto pursuit of the future. As the officers attempt contact with the suspects in their vehicle, the driver accelerates from the scene. The responding officer advises dispatch to "shut it down," as he and his partner follow the suspect vehicle. A few blocks away, the suspect vehicle is disabled. No collision, no danger to others, property recovered, and the suspects in custody. The concept of using vehicle shutdown systems is a safe and controlled intervention technique, even for those who may object to any level of pursuit. The federal government seems to concur, and has investigated and tested for national security purposes.

Federal Support and Testing of Technology

As a result of the September 11, 2001, terrorist attacks and several domestic incidents involving the use of commercial vehicles, the U.S. Department of Transportation's Federal Motor Carrier Safety Administration (FMCSA) investigated methods to improve motor carrier safety. In November 2007, the FMCSA released a report entitled *Vehicle Immobilization Technologies: Best Practices for Industry and Law Enforcement Final Report*.¹³ The report included vehicle immobilization technology (VIT) demonstration results; three case studies that included costs, installation times, and

¹³ United States of America. U.S. Department of Transportation. Federal Motor Carrier Safety Administration. Vehicle Immobilization Technologies: Best Practices for Industry and Law Enforcement. By Oscar Franzese, Helmut Knee, Thomas Urbanik, Joseph Massimini, and Randall Plate. Comp. Oak Ridge National Laboratory.

monthly fees; and a section of the report was dedicated to “best practices” as defined by a stakeholder group.

The “Best Practices” section discussed maintenance, reliability, and integration. The system needed to be checked on a routine basis to ensure proper operation and as a pursuit intervention tool, it would be inspected to ensure it had not been removed or disengaged. The use of dual communication types, cellular and satellite, improve reliability. Finally, integration with existing vehicle components, easing implementation was of importance, as it would be in a passenger vehicle application.

The demonstration of the vehicle immobilization technology included two styles, shutdown and acceleration control, and provided data regarding stopping and re-enabling time. The shutdown options offered by four different vendors required a mere 39 to 101 seconds to stop the target vehicle from the time the order was given to the technician at the control center. The unit and installation cost was between \$445 and \$1815 per unit. The implementation of remote vehicle shutdown systems will give law enforcement an effective tool, capable of shortening the duration of pursuits.

Law enforcement must continue to move forward, finding ways to improve the safety of vehicle pursuits. Over the years, various tools were developed, but according to the National Institute of Justice 1998 Pursuit Management Task Force Report, “there is currently no single technology on the horizon that affords a ‘universal’ solution to pursuits.” The report recommends finding a solution that does not require placing a

device in front of the pursuit, nor a solution that may have an impact on other vehicles.¹⁴

Vehicle shutdown systems meet these goals.

Next Steps

The use of a vehicle shutdown application that has been tested and used successfully in real situations may be the best solution for law enforcement to quickly, safely, and effectively avoid or significantly limit the duration of vehicle pursuits. The vehicle immobilization studies by FMCSA and the products currently in use provide optimism that a workable solution is possible. The shutdown models used in the study were capable of bringing a vehicle to a controlled stop in time to avoid most pursuit-related collisions based on the information in the NIJ study. The FMCSA study, though used for homeland security purposes, has provided useful data that can be applied to minimizing the duration of police pursuits, resulting in fewer collisions, injuries, and deaths.

To be most effective, vehicle shutdown systems need to be on all vehicles. Law enforcement must inform the public and legislators about this emerging solution to the dangers of police pursuits and advocate for its required use. Encouraging legislators to consider laws mandating their installation will be necessary to make this a reality. Public awareness of the benefits of vehicle shutdown technology should improve support for future legislation. A solution is within reach.

¹⁴ United States of America. Department of Justice. Office of Justice Programs. Pursuit Management Task Force Report. By Robert Osborne. Justnet. Sept. 1998. 22 June 2009
<<http://www.justnet.org/Lists/JUSTNET%20Resources/Attachments/1302/pmtf.pdf>>.