

**Can Technology and Innovative Approaches Help Deter Impaired  
Driving?**

**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.

The views and conclusions expressed in the Command College Futures Project and journal article are those of the author, and are not necessarily those of the CA Commission on Peace Officer Standards and Training (POST).

## **Can Technology and Innovative Approaches Help Deter Impaired Driving?**

Imagine a time when a drunk driver weaving across lanes of traffic was looked at as comical. Police officers offering rides to persons stopped for driving under the influence (DUI) wasn't out of the ordinary, not to mention trusting intoxicated drivers to park their cars and walk home. Although DUI was responsible for absolute carnage on our roadways, apathy was the mindset of too many citizens, at least until 1980 when a 13-year-old year girl by the name of Cari Lightner was killed by a hit-and-run drunk driver.

The lenient sentence of the drunk driver angered Cari's mother, Candy Lightner, who then organized Mothers Against Drunk Driving (MADD) in 1980.<sup>1</sup> Within a few years, MADD helped turn apathy to concern, then to outrage, because of the alarming number of people killed and injured as a result of DUI. Legislators around the country started increasing the legal drinking age to 21, not to mention lowering the legal blood alcohol contents (BAC) in an effort to curtail DUI.<sup>2</sup> Although there has been a lot of improvement since 1980, statistics still show that impaired driving is still a huge problem in California and the Nation.

For law enforcement agencies to make an impact on impaired driving, future leaders need to incorporate innovative approaches already seeing success in agencies across the Nation. This may include utilizing undercover officers inside restaurant and bars that have a high number of incidents involving impaired driving issues. Leaders also need to support automobile manufactures that invest in advancing alcohol sensor and

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<sup>1</sup> [www2.potsdam.edu/hansondj](http://www2.potsdam.edu/hansondj), Alcohol and Solutions accessed online May 20,2009

<sup>2</sup> California DUI Fact (2008), Department of Motor Vehicles accessed online April 10,2009

facial recognition technology. Finally, law enforcement leaders need to investigate the use of transdermal technologies and their use in this arena. On the pages that follow, we will investigate each of these approaches to better equip you to meet the challenges of the impaired driver of the future.

### **The Current State**

In 2007, California law enforcement arrested 203,866 people for driving under the influence the highest total number of arrests in the last 10 years. There were also 1,489 alcohol related fatalities and another 30,783 people were injured by an impaired driver. Although the number of fatalities and injuries were down from the past two years and the total number of arrests were up there are still too many individuals being impacted by the impaired driver. According to the Department of Motor Vehicles, impaired driving incidents are down, but more work needs to be done to reduce impaired driving incidents even further.<sup>3</sup>

California local, county and state Law Enforcement agencies have been working closely for the past two years to take a more aggressive stand against impaired driving. With additional funding allocations from the Office of Traffic Safety (OTS), many agencies have been given the additional resources needed to help address this issue. Two programs in particular, “AVOID” and “Every 15 Minutes” are worthy of note for others seeking solutions.

### **AVOID**

The “AVOID” Anti-DUI Program launched in 1973.<sup>4</sup> This program allows law

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<sup>3</sup> California DUI Fact Sheet (2008), Department of Motor Vehicles online accessed April 10, 2009, available at [www.dmv.ca.gov](http://www.dmv.ca.gov)

<sup>4</sup> [www2.potsdam.edu/hanson/dj](http://www2.potsdam.edu/hanson/dj), Alcohol and Solutions accessed online May 20, 2009

enforcement agencies to work together in a countywide cluster to crack down on the impaired driver and reduce the number of deaths and injuries caused by alcohol related crashes. The overall goal of AVOID is to let drivers know about the countywide enforcement campaign and to warn drivers the only way to avoid being arrested is not drive impaired.

The program, designed to work around the major holiday seasons, has seen 350 law enforcement agencies from 35 counties working together to fight impaired driving on California's streets and highways. In 2008, 41 counties in California participated in the AVOID Program and California DUI deaths are declining for the first time in nearly a decade by 6.7%.<sup>5</sup> This type of proactive enforcement in California has become very popular among law enforcement leaders.

Chief Jim Zulim of the Clovis Police Department stated "All the law enforcement agencies here in Fresno County 'AVOID 17' have made a significant impact on the impaired driver and we are proud to be the host agency."<sup>6</sup> Captain John Villani from the Siskiyou County Sheriff said "this is the third year we have seen a significant increase in arrests and zero fatalities over the holiday period, it just shows if law enforcement agencies work together we can accomplish great things for our communities".<sup>7</sup> The total combined efforts allow agencies to use officers from various agencies to concentrate on areas that have a high incident rate for impaired driving incidents. Additionally, smaller agencies do not deplete their resources while participating with the AVOID campaign

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<sup>5</sup> [www.ots.ca.gov/avoid](http://www.ots.ca.gov/avoid), accessed online July 8, 2009

<sup>6</sup> [www.ots.ca.org](http://www.ots.ca.org) 2008 AVOID 17 Campaign, Office of Traffic Safety online accessed May 10, 2009

<sup>7</sup> Ibid

and use other officers to concentrate on other crimes at the same time.<sup>8</sup>

### **Every 15 Minutes**

The program name of “Every 15 minutes” highlights the unfortunate fact that during the early 1980’s, every 15 minutes someone in the United States was killed in an alcohol-related traffic collision. Every 15 Minutes is a two-day program that focuses on high school juniors and seniors. It challenges participants to think about drinking and driving, personnel safety, the responsibility of making mature decisions, and the impact their decisions have on family, friends and many others in their communities.

The program begins with an outdoor assembly where students witness a dramatization of the aftermath of a fatal alcohol-related collision involving two automobiles. Emergency personnel, including police, fire, paramedics, helicopter rescue and the coroner’s office respond to the assembly with sirens blaring. The injured are transported to the hospital and the dead are removed by the coroner. On the second day of the program, students watch a video from the previous day’s events. The students who “died” the previous day express their views on how it was to die without saying goodbye. Emergency personnel who participate describe their view and feelings on impaired driving, and their experiences with real-life tragedies of this nature.

This program has had a dramatic effect on the students who watch and those who participate.<sup>9</sup> At the conclusion of the Program, many student and faculty members who participated verbally acknowledged to the agencies that were involved that the program

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<sup>8</sup> Annual Performance (2009), Office of Traffic Safety online accessed May 15, 2009 available at [www.ots.ca.gov](http://www.ots.ca.gov)

<sup>9</sup> Ibid

had a dramatic impact on them.<sup>10</sup> Several students reported to the coordinators of the program the events staged made an impression on them at the time, and they didn't want to drink or be around those who drink.<sup>11</sup> Gary Pantaleoni, Placer High School Assistant Principal stated "I think with the student body going out to watch it, it affects everybody. One of their friends could die, and even if it's not their friend, they still know them". Pantaleoni also said it was not just students that were affected by the program; although this was the fourth time he's experienced Every 15 Minutes at Placer High, it doesn't lessen the impact "one bit"<sup>12</sup>. Aubrie MacNair, 17, a student Vista Murrieta High School who played the part of one of the "walking dead" stated "I've never experienced anything like that before, we just take so much for granted, it just made me rethink. I got a new perspective and a new appreciation for what I have."<sup>13</sup>

Although the programs noted above have proven to be successful, police agencies are coming up with other innovative approaches to help address the impaired driving issue.

### **Innovative Approaches**

#### **Fresno PD**

The Fresno Police Department was experiencing a large number of incidents involving the impaired driver from 2000 to 2003.<sup>14</sup> To combat this problem, the

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<sup>10</sup> [www.auburnjournal.com](http://www.auburnjournal.com) Every 15 Minutes Program teaches teens about drunk driving consequences March 31, 2009 accessed online July 9, 2009

<sup>11</sup> Ibid

<sup>12</sup> Ibid

<sup>13</sup> [www.myvalleynews.com](http://www.myvalleynews.com), Every 15 Minutes Program aims to stop students from drunk driving, May 22, 2009, accessed online July 16, 2009

<sup>14</sup> [www.usatoday.com](http://www.usatoday.com), online accessed May 16, 2009, Some see Fresno DUI crackdown as a model

Department elected to employ more proactive efforts to help crackdown on suspected impaired drivers. One such program, “Operation Bar Sting”, identifies restaurants and bars in the community with a high incidence of impaired driving. The Department assigns uncover officers to identified locations. Officers monitor adjacent parking lots, stopping persons who appears to be impaired if they attempt to drive away. If the driver is impaired, he or she is taken into custody and booked for the offense.

Proponents of the approach note the proactive enforcement effort is supported by the community, citing a 42.2% reduction in impaired-driver related fatalities since 2002.<sup>15</sup> In 2008 the City had a 30.9% reduction in injury collisions as compared to 2007, and injury DUI collisions were down 8.6% in the same time span.<sup>16</sup> Chief Jerry Dyer credits his traffic commander for his foresight and use of innovative approaches to impact the number of DUI fatalities.<sup>17</sup>

Captain Greg Gardner, who manages the program, encourages other law enforcement agencies to follow suit if they are experiencing similar problems.<sup>18</sup> The community at large believes the effort by the Police Department is paying off and the more live saved is hard to argue with. The local media has also reported on the strategies employed by Chief Dyer and support the overall goal of removing impaired driver from the roadways.

### **Kane County, Illinois**

Police Agencies in Kane County, Illinois are using a device called a PAS IV

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<sup>15</sup> Ibid

<sup>16</sup> [www.fresnopd.ca.gov](http://www.fresnopd.ca.gov) Annual Report for 2008, Fresno Police Department, accessed online July 8, 2009

<sup>17</sup> Ibid

<sup>18</sup> Ibid

“Sniffer”.<sup>19</sup> This device senses the presence or absence of alcohol without requiring the driver to blow into a mouthpiece. In fact, it senses the presence of alcohol without any participation by the driver at all. The PAS IV sensor is incorporated into a standard police flashlight; therefore, a driver may not even know the police officer has used the device to sniff for the presence of alcohol. The ACLU feels some drivers feel this device violated the driver’s Fourth Amendment right against an unreasonable search and seizure, or at least the driver’s privacy rights under the Due Process Clause of the Constitution.<sup>20</sup> A recent decision from Associate Judge Allen Anderson from Kane County Illinois, though, ruled the results from the PAS IV may be used as reasonable suspicion to request a suspected impaired driver undergo field sobriety tests.<sup>21</sup>

Kane County officials believe the use of the PAS IV device should be implemented by other law enforcement agencies across the country.<sup>22</sup> This device appears to be working and is yet another tool for local, county and state law enforcement to use to detect or at least deter someone from driving impaired.<sup>23</sup>

### **CA OTS**

In 2009, the California Office of Traffic Safety is funding 6.5 million for additional officer overtime to fan out into communities from the Oregon state line to the Mexican border to arrest impaired drivers. California DUI deaths are declining for the

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<sup>19</sup> [www.chicagoduilaw.blogspot.com](http://www.chicagoduilaw.blogspot.com) access June 20, 2009, New DUI Technology by Kane County

<sup>20</sup> Ibid

<sup>21</sup> Ibid

<sup>22</sup> Ibid

<sup>23</sup> Ibid

first time in nearly a decade by 6.7%.<sup>24</sup>

OTS will continue to serve as a thought-leader for emerging traffic safety issues, funding results oriented and innovative programs to help California law enforcement save lives. OTS will be receptive to new ideas and encourage all law enforcement to bring their best ideas for solving traffic safety challenges in their communities. In 2009, The California Office of Traffic Safety awarded 250 mini grants to local agencies in cooperation with the California Highway Patrol to conduct the Every 15 Minutes program in California High Schools. This is in addition to a number of emerging technologies that will be a significant tool for law enforcement to use in their future arsenal to detect and remove the impaired driver from our roadways.

### **New Technologies**

Law enforcement agencies are exploring new technologies to assist their work to remove the impaired driver from our roadways. Three major emerging advancements- transdermal monitoring, in-vehicle alcohol sensors, and in-car facial recognition are just a few currently being tested. A short review of these potential tools will help the reader see where the next steps in impaired-driver prevention may rest.

#### **Transdermal Monitoring**

Another way of keeping an eye on the impaired driver is the utilization of electronic monitoring devices for repeat offenders. One monitoring system is the Secure Continuous Remote Alcohol Monitor (SCRAM); this system monitors individuals on a

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<sup>24</sup> Annual Performance (2009), Office of Traffic Safety online accessed May 15, 2009 available at [www.ots.ca.gov](http://www.ots.ca.gov)

24 hours basis. The SCRAM ankle bracelet measures alcohol through transdermal absorption. Transdermal technology measures the concentration of alcohol present in the insensible perspiration constantly produced and given off by the skin. If an offender has been drinking, it shows up in the level of ethanol vapor present in the insensible perspiration and is translated into a blood alcohol measurement for inspection purposes.

San Francisco County is currently using SCRAM on impaired drivers on court probation. The ankle bracelet takes a blood alcohol content reading every half hour, reading the amount of alcohol in a person's sweat. If it detects any alcohol, the readings are uploaded for review by a case agent. The price to the County to use the ankle bracelet is approximately \$5.00 a day, which is extremely reasonable if proven successful in deterring a person from driving impaired.

Program administrators who use this device have reported 90% of the repeat offenders being monitored have not been arrested for any impaired driving offenses. Although 100% would be ideal it may not be realistic said Linda Connelley, SCRAM program coordinator from Riverside County.<sup>25</sup> Alcohol Monitoring Systems who manufactures the SCRAM ankle bracelets are available and active in 46 states. Courts nationwide are starting to embrace this type of monitoring to help track and deter repeat offenders from driving impaired.<sup>26</sup>

### **Alcohol Sensors**

Nissan Motor Company has revealed a new concept car featuring multiple preventative features designed to reduce impaired-driving incidents. The various

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<sup>25</sup> [www.totaldui.com](http://www.totaldui.com) DUI offenders prove sobriety with Alcohol Monitoring Ankle Bracelet, accessed online July 16, 2009

<sup>26</sup> New Technology to fight Drunk Driving Examined, DUI Attorneys nationwide online accessed May 20, 2009

technologies are designed to detect the driver's state of sobriety, and then to activate a range of preventive measures including immobilization of the vehicle.

In the concept car, a high-sensitivity alcohol odor sensor is built into the transmission shift knob, which is able to detect the presence of alcohol in the perspiration of the driver's palm as he or she attempts to start driving. When the alcohol-level detected is above the pre-determined threshold, the system automatically locks the transmission and immobilizes the car. A "drunk-driving" voice alert is also issued via the car navigation system. Additional alcohol odor sensors are also incorporated into the driver's and passenger seats to detect the presence of alcohol in the air inside the vehicle cabin. When alcohol is detected, the system issues both a voice alert and a message alert on the navigation system monitor.<sup>27</sup>



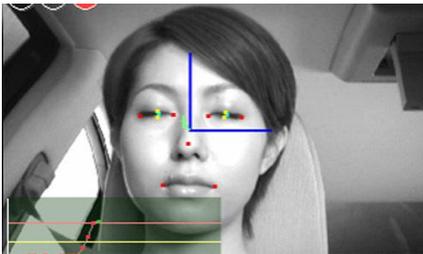
### **Facial Recognition**

Nissan has also tested systems using facial recognition system to determine the driver's state of consciousness through the blinking of his eyes, and a driving behavior

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<sup>27</sup> <http://allworldcars.com/wordpress/?p=1835> accessed online June 23, 2009, Nissan Drunk Driving Technologies

system that senses if the car is wandering out of its lane. If the vehicle detects this type of movement or observations it will give a verbal command to the driver to pull over and stop. The facial monitoring system identifies major facial features before zeroing in on the eyes, watching for drooping eyelids which then sends a verbal response to the computer for the driver to pull over and stop. Although this type of technology is coming with some concerns from the Civil Liberties Union it is worth considering for future use as allowed by law and policy. Nissan officials hope to cut impaired driving in half with this technology which they hope to have in their vehicles by 2015.



Laura Dean-Mooney, National President for Mothers Against Drunk Driving (MADD), has joined New Jersey Senator Jim Whelen supporting advancing technology that will detect and deter impaired drivers from injuring/killing another person. MADD New Jersey is one chapter of many that has joined and supported several state and national legislators to sign bills implement the use of advancing technology.<sup>28</sup> They seem to have a strong sentiment of support from the public in this effort. MADD's Bill McInurff conducted a 2006 survey of Americans regarding the use of smart vehicle technology to prevent drivers from driving drunk concluded in his findings that the general population supported this technology overwhelmingly by a 4 to 1 margin

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<sup>28</sup> [www.madd.org](http://www.madd.org). recent MADD press releases accessed online July 13, 2009

(58%).<sup>29</sup> The dialog over the use of technology to aid impaired-driving prevention, though, is far from settled.

The ACLU recently opposed Arkansas State Troopers regarding their use of “Sniffer Flashlights” these flashlights detect odor of Alcohol inside a vehicle. The ACLU concluded motorist would not even know it was being used causing some civil liberties advocates to question whether the practice violates the constitutional right against “unreasonable searches.” “They’re always coming up with something to push the limits of the Fourth Amendment,” said Rita Sklar of the American Civil Liberties Union in Arkansas. “You should know what kind of search you are undergoing. That seems to me the American thing to do.”<sup>30</sup> In the midst of this national conversation, though, the police must still work every day to combat impaired driving, and strive to keep our streets safe.

## **Conclusion**

It is up to our future leaders to ensure their agencies are equipped to detect and deter impaired driving. As the economy continues to struggle more and more individuals will lose their jobs, and some will turn to alcohol as a remedy to their stress. This will increase the incidents where alcohol is a factor not only in impaired driving but other crimes as well. Law enforcement agencies will be tasked to address this issue and with the limited resources available these agencies will have to use some type of innovative approaches and or advancing technologies to assist them in saving lives.

Law Enforcement leaders have support from their communities to do more to

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<sup>29</sup> McInturff, Bill. “ A Presentation of key finding from a national survey, Presented at the MADD International Technology Symposium: June 19-20, 2006

<sup>30</sup> [www.talkleft.com](http://www.talkleft.com) ACLU Sniffer flashlights violate Fourth Amendment, accessed online July 12, 2009

remove the impaired driver from our roadways and with the advancement in technology our leaders need to invest and utilize technology that will make removing impaired drivers and monitoring repeat offenders from getting behind the wheel and driving impaired.

With over 36 million residents, 33 million registered vehicles and over 23 million licensed drivers, California law enforcement will continue to have its challenges in addressing the impaired driver. Emerging Technology and Innovative Approaches will play a vital role in saving lives. Mothers Against Drunk Driving, Community Leaders, Legislators and the victims of impaired driving support zero tolerance for impaired driving. The question is not if we will use them, but how.