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This issue marks the start of a new feature focusing on advanced technologies used to reduce red light running. Also in this issue: an Iowa family's attempt to strengthen red light running penalties; a back-to-school article featuring results of a recent AAA Foundation poll; and a letter from Campaign Executive Director Leslie Blakey.

Technology Spotlight

Engineering measure used by more & more U.S. communities

Continuous Radar Decreases Unintentional Red Light Running and Increases Road Efficiency

Can traffic engineers predict which drivers will run a red light and then use those predictions to prevent red light running crashes? At high-speed intersections, the answer is yes.

While traffic monitoring and detection systems have been used for years — most relying on in-ground loops and, to a lesser extent, video cameras — only recently has radar been employed to continuously track vehicles approaching a signalized intersection and, monitoring their speed, determine whether the vehicle will stop prior to running through the intersection. It measures vehicle approach speed as well as time and distance from the intersection to estimate arrival time at the intersection.

If it is clear that the vehicle cannot stop prior to the stop line, the advance radar dilemma zone protection system, which is integrated with the signal controller, extends the green phase while holding the red on the side street. The green light extension is based on a vehicle's speed and the estimated time it will take the vehicle to reach the stop line. It typically is used at intersections where the posted speed limit is 35 or greater.

"There are the three E's to reduce red light running: engineering, enforcement and education," said Brad Giles, a systems engineer at Wavetronix, LLC, and a leading developer of the company's dilemma zone protection system. "Red light cameras are used for enforcement. Our product is an engineering countermeasure to reduce the incidence of people being caught in a decision dilemma zone and who don't mean to run the red light."

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www.stoppedlightrunning.com

Radar tracking decreases red light running

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The vehicle sensor and monitoring technology is also intended to improve intersection efficiency by minimizing unnecessary stops and delays. By continuously monitoring approaching traffic the system can change the signal as soon as a safe gap in traffic flow is detected, allowing traffic on the side street to proceed. That means less idling and less gasoline use.

Giles said most red light running problems occur if a motorist is about 2.5 to 5.5 seconds away from entering an intersection when the light turns to yellow. That creates a “decision dilemma zone” when the driver’s dilemma is whether to continue through the intersection and risk running the red light and/or cause a right-angle collision, or slow down and stop, sometimes at the risk of being rear-ended by a vehicle following too closely.

When the advance radar system determines that vehicles are in that dilemma zone and are traveling too quickly to stop in time, it will hold the light green for a fraction of a second or more until traffic flow is less dangerous. A 10-year study of green light extension systems at high-speed, signalized intersections found that they reduced right-angle collisions by 31 percent, rear-end collisions by 75 percent and overall incidents of red light running by 65 percent.

The system won’t prevent intentional red light running.

“If a driver is 7.5 seconds away from the intersection when the light turns yellow and they decide to continue through the intersection, they’re going to run a red light,” Giles said.

He said he wasn’t aware of the advance radar dilemma zone protection being used in conjunction with red light cameras, but he thought the two technologies would complement each other because one would reduce unintentional red light running while the other would photograph and ticket those who intentionally blow through a red light. The radar system is only for dilemma zone detection and does not cover the stop line area, which is where red light cameras provide coverage.

Red light camera opponents claim that simply adding time to the yellow light phase would solve the red light running problem. Giles disagrees. In a recent article he wrote: *“No matter how long the light stays yellow, motorists arriving at the intersection within three to five seconds after the onset of yellow will still encounter a decision dilemma zone — does the clearance indication mean stop or go? So traffic engineers continue to search for ways to further refine traffic control during the clearance phase.”*



SmartSensor Advance mounted at an intersection

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Radar tracking decreases red light running

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Giles said using radar for dilemma zone protection is relatively new and that most traffic detection systems continue to use in-ground loops, while some use video. He said one benefit of using radar is that the system has a detection range of 500 feet, which is twice the range of most video monitoring systems, and it is installed above ground so that, unlike loops, it doesn't require pavement cuts — it can be mounted overhead or at roadside. It requires little maintenance and works in all weather conditions.

There are about 300,000 signalized intersections in the United States, and Giles estimates approximately 50,000 intersections are using some form of dilemma zone protection.

While most states in the U.S. have only a handful to a couple dozen installations of the advance radar dilemma zone protection system — which Wavetronix calls *SmartSensor Advance* — a few have hundreds of installations. Texas, Ohio, West Virginia, Kansas and Utah each have a large number of installations. Oregon has used the system at each intersection along a high-speed trucking corridor, and Pennsylvania and New Jersey just this year received formal approval for the device to be used.

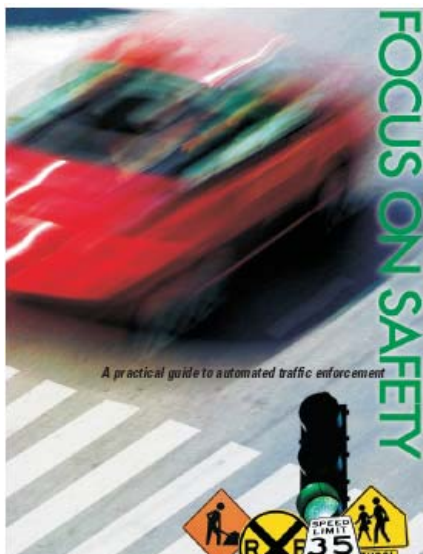
Mark D. Taylor, signal systems engineer with the Utah Department of Transportation, said “UDOT has had so much success with the radar advance system —in terms of theory, field evaluation and concept — that we are now using it as our standard design for every intersection with a speed of 40 mph and greater. We are doing this for both safety and efficiency, due to the safe arrival features the dilemma zone offers and the ‘quickness’ to find a gap out and reduce overall intersection delay.”

Taylor said Utah is operating several hundreds of the advance radar units.

“I am really impressed with the ability of the radar to dynamically adjust the dilemma zone for each vehicle at its speed,” Taylor said. “My observations at the intersections are that vehicles travel at various speeds and the radar will adjust for this, as other detector technologies don't.

The street price of *SmartSensor Advance* is set by local dealerships that distribute and support product installations and often fluctuates based upon the particulars of a specific project. First-time cost per unit can vary from about \$5,500 to \$7,500. The product typically is sold to state and local transportation departments.

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Focus on Safety: A practical guide to automated traffic enforcement is a comprehensive resource to help state legislators and local policymakers, law enforcement officers, highway safety advocates and community groups design, operate, and support effective photo enforcement programs.

The guide is available from the Campaign for \$9 a copy, or it can be downloaded in PDF format from the Campaign website at www.stoppedlightrunning.com.

Radar tracking decreases red light running

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Because the advance radar detection system was first introduced in 2005, few studies have been completed. A 2008 Bradley University study of one intersection compared the use of traditional, in-ground loop monitoring with the radar advance monitoring. The study found that, compared to the loop detection system, the radar system produced a

- 74 percent reduction in yellow light running per hour;
- 75 percent reduction in yellow light running per 1,000 through vehicles;
- 58 percent reduction in red light running per hour; and
- 63 percent reduction in red light running per 1,000 through vehicles.

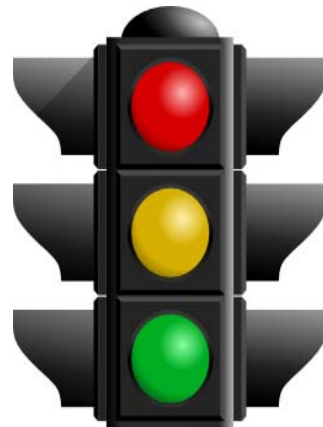
“The advance radar system truly treats the dilemma zone correctly,” Giles said. “It only requests more green if the real-time trajectory and closing velocity of approaching vehicles indicate a high potential for rear collisions or red-light running.”

Dr. Dan Middleton, a researcher engineer and program manager with the Texas Transportation Institute, has conducted numerous vehicle detection studies. He said he hopes to compare the continuous radar tracking system to systems that measure speed once and then estimate the vehicle’s arrival time at the intersection. This system is referred to as a detection-control system, or D-CS.

“In my opinion, there is an advantage to using radar compared to measuring a speed once (D-CS method),” Middleton wrote in an email, “because the radar detector continues to follow each vehicle it sees until that vehicle gets to within about 100 ft of the detector. Therefore, it should see speed changes that might occur as vehicles approach the intersection. A possible advantage to D-CS, on the other hand, is that it gives preference to trucks whereas the (*SmartSensor Advance*) does not distinguish vehicles by type or by lane.”

Have information about new technologies or research about intersection safety? Email us at info@stopredlightrunning.com.

**2010
NATIONAL
STOP ON RED
WEEK
AUG. 1ST – 7TH**



www.stopredlightrunning.com

From the desk of Leslie Blakey
Campaign Executive Director



No longer supported by photo enforcement industry

New Chapter for the Campaign

Since 2001, the National Campaign to Stop Red Light Running and its public education efforts have received financial support from the equipment and service providers of the photo enforcement industry. The companies that make up that industry are now choosing collectively to invest their funding elsewhere.

However, the need remains for fair and objective information about the danger of aggressive and inattentive driving behaviors, such as red light running and speeding, and about photo enforcement as one of many remedial measures.

In the past two months we have received a number of emails and phone calls from organizations and companies asking that we highlight countermeasures other than photo enforcement for reducing red light running and speeding. We plan to do just that in each of our *Safety Focus* newsletters, starting this month with our feature on a system that uses radar to provide dilemma zone protection to prevent red light running.

The National Campaign to Stop Red Light Running is comprised of grassroots members and crash survivors who care deeply about traffic safety and want to see the Campaign persevere in its mission. As we turn the corner in this new situation, we will rely on the support, enthusiasm and creativity of our members to help us find the resources to continue as an independent advocacy organization. We are looking for like-minded organizations and companies who want to support our traffic safety initiative.

Moving forward, we believe the Campaign can be more relevant than ever in promoting responsible driving behavior and fostering effective, accountable traffic safety photo enforcement programs to help meet that goal.

School's In: Your Assignment — Slow Down and Stop on Red

Red light running & speeding are “completely unacceptable” to nearly 80% of drivers who continue to speed & run red lights

WASHINGTON, DC (September 10, 2009) — As U.S. primary and secondary schools welcome more than 55 million students this month, drivers need a traffic safety refresher course. According to new figures from the AAA Foundation for Traffic Safety, the vast majority of drivers find speeding on residential streets and red light running “completely unacceptable,” but a quarter of those same drivers say they continue to speed and run red lights.



“Unfortunately, public support and public compliance are two very different things,” said Campaign Executive Director Leslie Blakey. “Giving lip service to traffic safety isn’t enough.”

In 2007, 13,040 people died in speed-related crashes. That same year almost 900 people were killed and an estimated 153,000 were injured in crashes involving red light running.

“It is our hope that with school resuming, drivers will be mindful of the increase in pedestrians and motorists during peak hours,” continued Blakey. “The AAA Foundation figures show that too many people believe in traffic laws but prefer not to follow them. It’s time to correct that dangerous contradiction.”

In a presentation earlier (in September), AAA Foundation President & CEO, J. Peter Kissinger said 81.5% of drivers surveyed found speeding (15 mph and over speed limit) on residential streets to be “completely unacceptable” and 77% found running a red light to be completely unacceptable. Yet 20 to 25% of those same people admitted to running a red light or speeding in a residential area in the past month.

The same AAA Foundation telephone survey found 67% of drivers supported red light cameras and speed cameras on residential streets.

Kissinger made his presentation at the Governors Highway Safety Association’s annual meeting in Savannah, Georgia. The presentation was based on information obtained in the AAA Foundation’s *2009 Traffic Safety Culture Index*, which was released this summer.

October 7th is International Walk to School Day

This year, an estimated 6,500 schools in the United States plan to participate in International Walk to School Day — is your school one of them?

For more information on International Walk to School Day, or to register your community’s event, visit www.walktoschool-usa.org. To learn more about safe walking and cycling to school year-round, visit Safe Routes to School at www.saferoutesinfo.org.

Parents want increased penalties for running a red light

Iowa family forever changed by red light crash

Educators for a combined 67 years, Rick and Jody Dosser have recently found a *second career* in advocacy. The couple is reaching out to Iowa's legislators and public asking for support to increase red light running penalties.

On March, 22, 2007, Rick and Jody's only child, Jermiah, was waiting at an intersection for the light to change when his motorcycle was struck from behind by a pick-up truck, killing Jermiah just days before his 25th birthday.

Unable to have children, Rick and Jody adopted Jermiah when he was three days old. "He always knew he was adopted," said Jody. "We always told him he was our gift from God — and he really was."

At the time of the crash, Jermiah "Doz" Dosser was working at his first post-college job as a computer programmer for an insurance company in Des Moines. Throughout his education, Jermiah excelled in athletics as well as academics. As a student at Osage

High School, he earned all-state honors in football and wrestling. He graduated cum laude with a degree in computer information systems from his parents' alma mater, Waldorf College in Forest City, Iowa.

Jermiah dedicated much of his time to humanitarian efforts

— from volunteering at Des Moines' inner-city after-school program, the Shalom Zone, to donating his time at Forest City High School and Middle School, working on the school's computer network. Weeks before his death, Jermiah enrolled to be an organ donor. His corneas and tissue were used to help between 10 and 12 people following the fatal crash. "He had a heart to help other people," said Rick. "He made us better because of who he was."

Following Jermiah's death, Rick and Jody became active proponents of organ and tissue donation. "Working to raise awareness of organ donation has allowed us to take Jermiah's tragedy and find the positive in it," said Jody.



Rick, Jody and Jermiah Dosser in 2001

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Parents working for tougher penalties

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Rick and Jody are also working to have a bill introduced that, if enacted, would increase the severity of consequences for those who run red lights in Iowa. The pick-up truck driver who crashed into Jeremiah was charged with two misdemeanor traffic citations: 1) failure to stop in a safe and sure distance; and 2) failure to respond to a steady red light.

Disturbed by the lenient punishment the pick-up truck driver received, Rick and Jody contacted the Polk County Attorney. They questioned why the driver was not charged with vehicular homicide or vehicular manslaughter — both felonies in Iowa. Rick and Jody were told that in Iowa, alcohol and/or drugs should be in a driver's system to press such charges. The pick-up truck driver passed an alcohol test at the accident scene; drug use was never determined. According to the sheriff's report, the pick-up truck left no skid marks, which indicates there was no attempt to stop.

"How many more people need to be killed or seriously injured by red light runners before we change the law? How many more families have to live with the loss of a loved one before we have stricter penalties?" asked Jody. "We are doing this to help other people. No one should have to go through this."

The couple is asking for the support of Iowa legislators and citizens, the Iowa Governor's Traffic Safety Bureau and the Iowa Department of Transportation and have prepared a letter for circulation. Below is an excerpt from the letter, detailing their goal:

"When the Red Light Running Law becomes 'enforced,' other families and friends will not need to go through the frustration [we] went through regarding the lack of a serious consequence to/for a driver who elects to run a red light which unintentionally causes the death of a person(s) or unintentionally causes serious injury to a person(s)."

If you are an Iowa resident interested in joining Rick and Jody on their mission for harsher penalties, they encourage you to contact the Governor's Traffic Safety Bureau at www.dps.state.ia.us/commis/gtsb and the Iowa Department of Transportation at www.iowadot.gov. To find and contact your Iowa state legislator, visit www.legis.state.ia.us.





Talk to us!

The National Campaign to Stop Red Light Running has expanded its reach to social media. You can become a fan on Facebook by typing "The National Campaign to Stop Red Light Running" into the search bar and clicking "become a fan." To follow us on Twitter, search for "Stop4RedLights" and click "follow."



**For daily updates
(like this one ►►)
follow us on Twitter!**

What are you doing?

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What is your community doing to stop #RedLightRunning?

Latest: How does your community cut down on red light running? Automated enforcement cameras? Alternative technology? We want to h...about 4 hours ago

update

Social media provides a great venue to hear from our Campaign members, and we welcome your feedback on both sites. Facebook allows fans to leave notes, photos and comments on our page. Please be sure to share relevant news clippings and thoughts with us, and all our fans. Twitter has allowed us to reach more people than ever — and we are always looking for news to tweet! Direct message or tweet @Stop4RedLights with your traffic safety news.

As always, for more information on the National Campaign to Stop Red Light Running, visit www.stopredlightrunning.com.





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The National Campaign to Stop Red Light Running is dedicated to reducing red light running in the U.S. and the fatalities and injuries it causes.

Information

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What's on your mind?

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National Campaign to Stop Red Light Running Just Fans Settings

National Campaign to Stop Red Light Running According to a survey conducted by the AAA Foundation, nearly 80% of motorists feel speeding and running red lights are unacceptable behaviors...but 20-25% of those SAME PEOPLE do it! Check out our latest press release: www.stopredlightrunning.com



The National Campaign to Stop Red Light Running
Source: www.stopredlightrunning.com
Red light running and speeding are "completely unacceptable" to nearly 80% of drivers who continue to speed and run red lights

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