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FHWA SELECT DORMAN VARITEXT VATCS TO FEATURE ON NATIONAL TRAFFIC SAFETY STUDY OF DYNAMIC CURVE WARNING VEHICLE ACTIVATED SIGNS

By Jerry Britton

The FHWA together with transportation university center research partners CTRE Iowa and TTI Texas have commenced a long term national study to evaluate the effectiveness of vehicle activated sign technology on traffic speed and hazard awareness on horizontal curves in rural roadway applications.

The purpose of the trial is to undertake a national field test of vehicle activated sign technology as a speed management technique undertaken in a coordinated effort to manage speeds on horizontal curves in rural roadways.

The study which commenced in the last half of 2008 is to be conducted for a minimum two year period across installations in Iowa, Texas, Florida, Arizona, Oregon, Ohio and Washington to capture long term accident and speed data observations. The results are expected to be published during 2010 and if successful new policy guidelines will be produced to assist in future deployment. The first installs went live in Q4 2008 in WA, IA and AZ and Q1 2009 in FL.

Two types of sign have been selected for the study, a radar speed feedback sign which provides the targeted driver with notification of vehicle speed together with slow down message and the Dorman Varitext curve warning VATCS which provides the targeted driver with an advance MUTCD curve warning pictogram together with slow down message and dynamic flashing beacons in each corner of the sign face.

Both sign types utilize microwave Doppler radar to detect vehicle approach speeds and are configured to become active when approach speeds exceeding the advisory speed for the curve are detected.



Washington State DOT VATCS Install Olympic Region



Florida state DOT VATCS install District 3 Tallahassee

Speeding continues to be one of the most significant contributing factors to fatal crashes in the USA. One of the major issues for speed related crashes is the impact of horizontal curves, especially in rural roadways. As described in A Guide for Reducing Collisions on Horizontal Curves (NCHRP report 500, Volume 7), about 75 percent of all fatal crashes occur in rural areas, and more than 70 percent are on two-lane secondary highways, many of which are local roads.

In addition the average crash rate for horizontal curves is about three times that of other highway segments and, 76 percent of the curve related fatal crashes involve single vehicles leaving the roadway and striking various fixed-roadside objects or overturning. Another 11 percent are head-on collisions where vehicles drifted into the opposing lane because drivers were trying to cut the curve or re-direct the vehicle after having run onto the shoulder. Finally it has been reported that 56 percent of all run – off the road fatal crashes on horizontal curves are speed related.

Uniquely and a first for this type of national vehicle activated study in North America the dynamic curve warning VATCS employed are hazard specific and do not inform drivers of their speed but rather target excessive speed detection with an advance slow down warning message which incorporates a hazard specific MUTCD pictogram, immediately allowing the driver to connect the request for an adjustment in their driving speed and behaviour and to allow them to safely maneuver the approaching curve.

The Dorman Varitext dynamic curve warning VATCS hazard specific models are available for the following horizontal curves depicted in the MUTCD , W1-1, W1-2, W1-3, W1-4 and W1-5 in both 24 x 24" and 30 x 30" diagram sizes to suit both conventional and highway road speeds respectively.

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**FHWA SELECT
DORMAN VARITEXT VATCS
TO FEATURE ON
NATIONAL TRAFFIC SAFETY STUDY . . .**

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The curve warning VATCS were introduced to North America by Dorman Varitext in 2006 after being independently trialed in the United Kingdom on a similar large scale independent 3 year study which was published in 2002.

The UK TRL548 study report provided a strong endorsement for the vehicle activated sign technology approach with the following summary results:

- 1/3rd reduction in accidents recorded over the 3 year period
- A 7 MPH reduction in the average speed at curve hazards

This subsequently led to the signs being incorporated into the UK Highways Agency MUTCD.

The FHWA study will use a combination of speed data logging distribution collection features standard on both sign types, pneumatic tubes and accident data to analyze performance of the technologies. Initial short term results to date have proved very positive and it is hoped that the study reinforces and builds upon the UK findings in the joint global objective of deploying proven IT technology to reduce road traffic fatalities.



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A total of 8 TARP Points shall be assigned to the Author (who is an IMSA Member) of a Technical Article published in the IMSA Journal.

Do you have something exciting happening at your place of employment? A new installation? A new program you have put in place that might help others? Your fellow IMSA members would love to read about what may be happening in your area.

Please submit articles to Sharon Earl at: sne@IMSAsafety.org

**Reliable In-Building
Wireless Communications . . .**

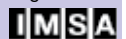
Continued from page 47

tempting to reset gain to satisfactory levels that enable service to continue. All this sophistication must be transparent to the users and immediately flag faults to remotely situated installation engineers in the rare event that local control hardware and software cannot overcome the issue.

Continuing to meet first responder needs is more paramount now than ever with Signal Boosters that must address the current needs with flexibility for future changes while at the same time remaining fully compliant with the robust NEMA-4 standards. What's more they must offer complete power protection in case of an outage – to further protect uninterrupted in-building communications during emergencies.

Why do these devices need to be robust? Because when these boosters are really needed is often in adversarial conditions including loss of power and uncontrolled ingress of water. The primary purpose of the Signal Booster is to absolutely support the safety of both building occupants and our first responders.

Martin G Cassidy, Vice President, Business Development, Cellular Specialties
Cellular Specialties is an industry veteran with more than twenty years of international and domestic experience in wireless and data communications. He has held senior positions with British Telecom, Ericsson and a number of successful start-ups. He is the president of CSI international joint venture INNOVA Wireless, based out of the United Kingdom, and holds an honors degree in Electronic Engineering and an MBA from Liverpool University.



It seems like we just finished cleaning the desert sand off our clubs, and here we are already thinking about next years Outing. The Florida Section is already hard at work planning what we hope will be a great golf outing at one of the premier golf courses in Central Florida.

The National Course at Champions Gate was designed by Greg Norman and offers a great mix of American style bunkers to challenging tee shots for every skill level. As you

drive towards a couple of the greens there's enough sand and water to make you think your over on Daytona Beach.

The Outing is going to be held on Saturday the 22nd at 8:00 AM. The price is \$55.00 per person. This will include your round, cart and a catered lunch after in the Club House. Registrations can be downloaded from the IMSA web site or contact the Golf Committee for more information and pricing on club rentals.

We hope all of you can join us for one of the more unique events of the conference.

Sincerely, The Officers of the Florida Section
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