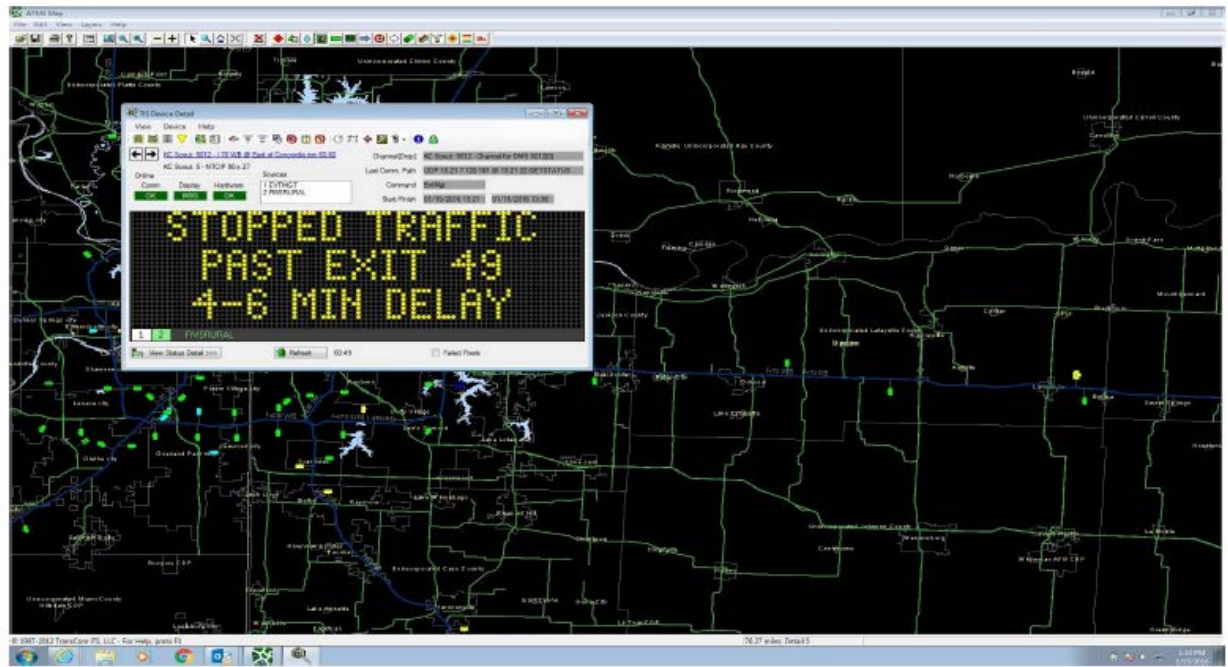


Rural Queue Warning System



Description

Kansas City Scout implemented a new software system along rural I-70 so that existing Dynamic Message Sign boards could automatically warn motorists of slow or stopped traffic ahead. One of the most hazardous conditions along rural I-70 is when high speed truck traffic suddenly encounters slow or stopped traffic that is moving less than 10 miles an hour. Often these secondary accidents occur toward the back of a queue and can be much more severe than the original incident that started the slowdown.

The software system uses the existing HERE probe data that MoDOT already obtains every 60 seconds of the day. Those speeds are constantly checked against speed thresholds and as soon as any segment of I-70 receives a speed number that is low enough to trigger a slow or stopped designation, a warning message is immediately posted on the two DMS boards preceding that I-70 roadway segment.

Although the third line about the approximate level of delay is not the most critical piece of information, it is great extra information that can hopefully lead traffic to either divert or to stop and take a rest break.

The location where motorists should expect to encounter either slowed or stopped traffic is the most critical piece of information, especially along rural interstate corridor where high speed truck traveling at 70 mph suddenly encounter stopped traffic.

Benefit

The software automatically posts a rural queue warning message on rural DMS boards without any operator action needed. High speed secondary accidents at the back of queues are one of MoDOT's major problems, especially as distracted driving becomes more prevalent. The Rural Queue Warning System has a safety benefit that works equally well whether the slowdown is caused by construction, weather or any kind of sudden incident.

The system allows queue warnings to be provided for work zones without the need for extensive smart work zone systems. The system leverages existing rural DMS boards and existing HERE probe data to provide a new service that better uses the rural ITS infrastructure.

Materials and Labor

One-time TransCore consultant fee of \$160,000 to develop the software for I-70 with no additional cost to apply the software to other routes.

For More Information Contact:

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Additional photos or videos can be seen by accessing the Innovations Challenge SharePoint page at: <http://sharepoint/systemdelivery/TP/Documents/InnovationsChallenge.aspx>.