

Idaho Introduction

*Carl Main, Assistant Traffic Engineer
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Thank you very much, Mike. For those of you that read the program description, first of all I applaud you for that, second of all, if you have read the second part of the Idaho description we are not going to discuss CVISN in Idaho. We are not going to do that because I think we have a very exciting presentation. When most people talk about ITS they think mostly of “We’ve got a changeable message sign here, maybe we have some web cameras, maybe some traffic counting things”. It is all in the real nuts and bolts of cars and trucks on the highway. But there is a whole lot more to ITS than just those things. We have heard about CVISN, kiosks, etc. and another one is out there...the ON-STAR system put out by Chrysler. And that is part of ITS and it also

steps into some of the emergency response things that are going on out there. Today we have the opportunity to listen to somebody who has a lot of information about a new group that has been created out there – the ITS Public Safety Advisory Group. I am going to introduce you to Dia Gainor. Dia has served as the Bureau Chief of Emergency Medical Services for the State of Idaho for over nine years and has focused on regulatory reform for EMS and unique support systems for local EMS agencies. Dia is currently President of the National Association of State Emergency Medical Services Directors and represents them on the new ITS National Public Safety Advisory Group.

Public Safety: A New National ITS Focus

*Dia Gainor, Bureau Chief
Idaho EMS*

The introduction certainly says it all, I was really tempted to use engineer jokes to start us off. Although I did learn that I should not, during the course of my presentation, refer to the class as being half-full or half-empty, it’s just poorly designed for the occupants we have.

I am as excited about this Public Safety Advisory Group as I was when I first discovered EMS almost 20 years ago. I want to share something with you, Carl is right, this is sort of a new angle on ITS. Also, as he pointed out, I’ve [often] reflected on [the reason] why someone in emergency medical services would sort of latch onto an obviously transportation department issue.

This is the building that houses the State’s EMS communications center. We have been the proud providers of emergency communication services, primarily on the maintenance/operations side, for the Idaho

Transportation Department. As such, we literally look at snowplows the same way we do ambulances. I am fortunate to have state radio funding for these services. And if nothing else the most important thing is being able to protect the transportation department employee by providing immediate pre-arrival instructions in the event that they or a co-worker are injured or are experiencing a medical emergency. In such an emergency, our dispatchers are able to talk them through what to do for their co-worker or for themselves until EMS help arrives.

Today, really quickly, I will be going over two things in this brief time period, but given the opportunity I will talk to any of you at any time, for any length of time that you might like, about this subject. First of all, sort of as groundwork, I’d like to identify or give an overview of some opportunities that ITS presents to the emergency response community – by that I mean fire department, emergency medical services,

conventional ambulance services as well as non-transporting quick response vans that are in place in some of the western states, and law enforcement agencies. And then secondly, I'll go over the new Public Safety Advisory Group, which is literally just been formed within the last year or so as a federal utilized advisory group.

This is a classic example, "Are we to late?", this slide best summarizes sort of how the EMS and frankly most of the rest of the emergency response community feels about ITS. Literally we have just detected that it is out there. I'm sure that those of you who serve on state-wide coordinating council...I think if you think about it, it is pretty rare for you to find a representative of the state EMS Bureau or the State Fire Chiefs. Perhaps, as was pointed out, there is a certain infrastructure and operations slant. Essentially the question for each of you to ponder is, in your system – be it your state or your region or your city – what is your version of intelligence about the public safety vehicle? Not only is it dependent on your transportation pathway, but also upon those who use your transportation system (i.e., if an accident or crisis occurs while the vehicle is engaged in that system). What do we know about those public safety vehicles and the condition in which they are operating? Some say its public dollars and we need to do maintenance on a periodic basis. Others are fortunate enough to have some onboard measuring devices. Otherwise in Idaho, and I'm sure it is the same in other states, it is human beings detecting the need for maintenance or an incident report reveals that you need to work on the tires that just wore out.

We then turn our focus to projects to which we respond. What do we know – and I'm saying this a part of the emergency response system – if, in fact, I am in the ambulance or fire engine that is responding to a car crash? Here today is a representation of about the best intelligence we've got about what we're heading into. It is second or third-hand information through our dispatch centers (which may or may not have trained dispatchers). We get reports from the first units on the scene – which may or may not be part of the emergency response system and may not know what critical factors to look for

and report to the next arriving units – and observation from vehicle damage when we arrive on scene. We've also, over time, equated and in turn trained EMS and other emergency response personnel based on observations of vehicle damage – it is a formal part of the training program for even the most basic EMT. For example, you see a starburst pattern of cracks in the windshield, it is indicative that the occupants struck their head there. I learned that in crashes involving a rear-ended vehicle I need to be really alert to the presence of gasoline. And finally, seasoned guess! After you have seen enough car crashes, and to the extent you might have been privileged to learn some of the accident reconstruction science that the law enforcement community provides, mentally reconstructing, "Okay, I think I see what has happened here, and therefore I am going to focus my patient assessment, patient care activities on what I think happened to this vehicle." Which direction it was traveling, when it struck an object, if it rolled or not, etc.

Why do we care? Why is this such a big deal? This is a it folks, from whatever state you might have come, it is a fact in your state. Once an infant outlives its first year a vehicle is the greatest threat to their life or their longevity. And until someone gets old enough to start experiencing heart attacks at age 45 and older, motor vehicles present the leading cause of death. So that brings it into a sort of public health focus and explains why we care so much, because it happens a lot and kills more people than anything else and it kills people who have the greatest number of productive years (life) ahead of them.

So that leads to sort of two spaces at the public safety interest table. One is about the emergency response team – as Mr. Bower pointed out this morning. What is the security of those personnel? Are they responding safely, are they responding in a manner that protects them from all manner of anticipated consequences? And secondly, how can we use and deliberately deploy ITS systems to prevent that health risk such that an individual survives. We are confident that can be done with better responses and better tailored reporting of

resources and more speed in reaching the patient.

So within the ITS scope of things, there are these four – and of course many more areas – but there are four that readily enter the public safety frame of mind and are of immediate interest: (1) crash avoidance system, (2) automatic crash notification, (3) injury telematics, (4) smart routing. I am going to go into each of these in just a little bit. Not because you are not already aware that these systems are out there, but because we have unique perspective on how they can be used for one of the two objectives I just shared with you; (1) protecting the respondent and (2) protecting the public. In essence, we are interested in finding the unintended...every possible roadblock to maximizing the outcome for that patient and the safety of the respondent. And locating that roadblock before we are in the midst of an emergency response and have it interfere with our patient care or patient transportation activities [is crucial].

Crash avoidance systems are squarely in the face of that first objective. How do we protect our responders? Certainly we'd like to see that the next citizen doesn't have a crash as well, but some of these types of devices have been deployed in other countries and have been implemented already. They are not "pie-in-the-sky" ideas that we have to wait for technology to catch up with they have already been developed. The question is how and when will it involve the United States? There is a sentiment that, "Well, we'll wait until we see them emerge as vehicle manufacturers start putting them on as value-added products for which the purchaser of the car is willing to pay more for." However, we might need to think a little differently about getting these in an after market type form to install in emergency vehicles. Emergency vehicles have long spans, much longer than most passenger cars. In Idaho, as recently as last year we still had 37 communities with ambulances that are 20 years old or older. So it would not be appropriate, from a public safety frame of mind, to say that as far as crash avoidance goes we will just wait until it starts getting installed automatically in vehicles. We absolutely need

to look at putting them into thousands of vehicles across our states that we have every reasons to expect will be on the road for the next 10-15 years. Along with that, we go to great lengths to provide emergency vehicle operations training to the law enforcement, fire department, and EMS field on how to safely control a vehicle under duress (i.e., higher rates of speeds, under adverse weather conditions, etc.). Essentially, there is the recognition that the introduction of this technology will provide an added benefit over and beyond the training already in place.

Crash notification is probably getting the most coverage on a commercial basis with the Bat Man commercials and On-Star, not that dinner reservations are that much of a crisis. But if my vehicle crashes – and more so if I am unable to place a call by any means whether it is by walking to a pay phone or picking up my cell phone and hoping that it works – these devices essentially detect a crash or a crash indicative event like an airbag deploying. A GPS transmitter senses your location along with a cell phone or cell phone like device. In rural areas you need to talk about satellite phones and what for them it is \$2.00 a minute charge – let's get real! And then thirdly, I will show you an example of one in just a minute, qualifying types of information.

I can't imagine it is much different in other rural states, but I can think of at least three crashes in the last year that went undetected for hours or days. These crashes, which were not in all cases immediately fatal, involved individuals who were unable to exit their vehicles, who were unable to get to a location where they could communicate by any means with anybody else. That is unthinkable in terms of the presence of this technology and the existence of these systems.

[The Public Safety Advisory Group (Group) was established by the U.S. Department of Transportation (US DOT) in December 2000 to serve both the DOT and the ITS America Coordinating Council. It consists of representatives from several state and federal emergency response trade groups as well as state and county transportation departments, state

police and the technology industry. The Group is now viewed as the “speaker” for the public safety community to the US DOT.

Between February and July 2001 the Group met, agreed to write vision documents/white papers and formed two subcommittees. It is anticipated that these papers will be completed by Spring 2002. In the interim, what is the role of the Group and its subcommittees?

Among other activities, the focus has turned primarily to the immediate medical implications (i.e., improving patient outcomes) of the current, and future, EMS system. The Group and its subcommittees are providing Earmark guidance geared to the local, regional and state public safety communities. They are also becoming actively involved in E-911 and location technology (both existing and cutting edge). Because of these and other activities, it is expected that more aggressive action and its corresponding progress will be made in the upcoming months to provide for more uniform funding, standards of care, and technology applications to all regions of the country.]