

## Utah State Showcase

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I appreciate you coming to another round of Utah and New Mexico. I have a lot of slides to show, starting with ITS in Utah. We are really busy right now and we have a low turnout from Utah because we are only 4 months from the Olympic Games so there is a lot going on. I am not going to talk a lot about the planning for the Olympics, I am going to do that tomorrow [when I discuss how] we incorporate ITS into special event planning. Today, I am going to talk more about the deployment that we are doing. I want to be very clear and point out that we are not deploying ITS just for the Games. There are a few things we are putting in, but I know everybody is saying, “You are getting all this federal money for the Olympics, and you shouldn’t get anything else.” Well, I am going to demote that today, what we are doing we are doing because we believe in terms of what it will buy and not just because of the Olympics. Did we speed up the schedule and reprioritize? You bet!

We will talk first about Centers, everyone wants to see what your Centers are doing and are you doing some remote TV displays versus some other technology. Here’s a picture of UDOT’s Traffic Operations Center as depicted by an artist. What did the artist leave out? People! Most renditions leave out people. Here is a picture of the center today, it began operations in 1999 and we’ve just been adding more and more functionality and operations and tours. Be prepared that you’ll have to do a lot of tours! They should call it “ITS and Tours”. That is the building that I wanted it to be housed in. It was overruled – that was when I worked as a Federal Highway’s person. They fought through that and it was a design/build project for 4.5 million just to build the structure itself. It is connected through the CommuterLink network that we’ve put in place to the Salt Lake Traffic Control Center. They get at this using the same software control and view using the same cameras and signs. They have just adapted it to their needs

and their constituents. Also, [currently] being connected is the University of Utah’s Traffic Control Center. They will have access to the same information, but not being a controlling point, they will use it for simulation and research and training.

This is UTA, the Utah Transit Authority Center, part of the CommuterLink system. They have specialty things they do for transit that also benefit others. They do software for incidents, for cameras, signs, mapping, and they monitor signals and input. One of good things that we say is they have a lot of eyes and ears out on the road in there bus drivers. We don’t need to run cameras all over the place; we can get needed information from experts in the field.

We also have terminals and interfaces with a lot of dispatch centers. We heard earlier talk about what we are doing in public safety and we will talk more about that later. Right here is a picture of the Department of Public Safety Dispatch Center at the DOT. They moved in about a year and half ago, they operate twenty-four hours per day, seven days week – we don’t. That was part of the agreement, they can come in and access the system and we work quite well together to help our customers who are out on the street (like this victim here who was in a crash and needed help). They come in during the midnight hours. We also have terminals at the Salt Lake City Police and Fire dispatch and the 911-dispatch area. It is a very good tool and you can see a lot of it that we have been flushing out.

Let’s talk a little bit about this “super-advanced” technology that we are using in Utah. I say that facetiously, what do you see in the ground there? A loop. Is that old? Only twenty or thirty years. So, we are the new kids on the block and we are not focusing on developing new advanced technologies. Instead, we try to take the “industry standards” from around the country and not focus on the new pieces, but how we can

integrate the older pieces more quickly and not have to pay lots and lots of money.

RWIS, you saw a reference to that earlier. We do have RWIS coming out of our canyon areas so that we can look at snow conditions.

Signals, nothing new. I don't want to downplay it because we do think we are doing a pretty good program out there, but we're not focusing on trying to set ourselves out from other states or cities. It is just what we can do to get the best services out there.

Fiber. You don't have to do fiber to do ITS, but if you have the means or opportunity it really helps. We have 300 miles in the Valley.

This is a quick summary of our deployment. By the games we will have 153 cameras operational throughout the network with all of the freeways having coverage in the Salt Lake Valley. We also have 480 traffic signals that we can monitor. I already mentioned the fiber.

One of the reasons we are up and running so fast, again we didn't try to do this out of product, but instead tried to find where this has already happened. We used GDOT (Georgia Department of Transportation). They spent 7 million dollars in ATMS software before their games and ran out of time. So we are dumb, but we're not that dumb. We said forget that, they gave it to us for free, we put in another million dollars to support it, change it and add new features. But it was cheaper than having to build a new deal. Other software, for example, here is a map showing locations and controller signs, etc. That was theirs and this is ours. We imported different hardware, different operating system, different times, etc., but it saved us a lot of money by not reinventing the wheel.

Mapping, change in our maps. It had Georgia maps so we had to change the base maps and added signal control software for the traffic software. We added our system here through Seamans Corporation, the icons are very good to look at, the arrows and colors tell you the main line activity second by second. Here is a corridor view so you can see how progression is

going before coming to each intersection. Again, not to take a shot at Georgia, but by the games they had no intersections on line. Here we are at 481 intersections online today. Some of those are city intersections, state, and county.

Working with UTA gave us an opportunity to work around transit systems that they were putting in place. While we were building ITS [systems/centers] they were building a north-south light rail operation. We don't really know what their ground level is, or should be or will be, but we monitor the system at our TOC for the UTA center (signal coordination for light rail).

Management software. Quite a few things worked for us from Georgia, but this was one of the best tools we got. It creates a lot of response time to help you automate, but it also helps an operator (unless you are able to afford rocket scientists for operators you are going to get people where it is good to have an assistant – i.e., software). We added software, just quickly, to do estimates on performance measures for delay; how many millions or thousands of hours of delay, fuel spills, financial costs, etc. We are adding and testing right now software to do online performance measures taking our real-time data and saying how can we see where the delays are?

Emergency management. We have integrated computer dispatch. UDOT bought GPS units. We are getting the interfaces going right now from dispatch, 911 dispatch, etc. into our program. The HazMat program deals with training and special vehicle crashes that involve HazMat. Now the first responder does not have to be the first victim. They can dial-up and find out what the chemical was, where it was going, etc.

Photogrammetry...how to clean up an incident more quickly. Instead of using [individuals] to walk around and enter information from every piece of glass found on the road, now we can take half a dozen snapshots, clear the road, go back and run it through an analyzer and get the same information.

Vehicle tracking. We mentioned connections between the city, police and fire and the county's emergency operation center as well as a terminal interface with the State Capital's Emergency Management Center. We really try to prepare well.

UTA's program could be a session in itself. We will quickly talk about the main points of how they can improve the efficiency of their program. How they can better track, in real-time, where their passengers are, where the demands are to adjust the fleets, integration with traffic signals, etc..

Public Relations (PR). If you have done this, if you are just starting in this take note...with PR, you don't want Engineers do it. You them to be giving you the right information, but you need to talk with the public and market something easy to understand – engineers are not very good at this. And so we came up with CommuterLink through a PR firm. We went through about 500 names, we had representatives that said that has to much highway, we need more transit sound in there. And that is one way that we built the program with the agencies. We are in this together. We recognize that it needs to reflect all of our identities. But, boy if I told you what the early top names were, we'd loose your attention rapidly because you would be laughing so hard. Changing our slogan – “technology in transportation”. It is still too much “engineer-speak”, to much technology. Our new slogan is “Know before you go” – focus on the customers.

Some of the ways we are trying to reach customers through traveler information: 1) television, 2) websites, 3) alerts, 4) 511, 5) webphones.

We are developing and deploying a traffic channel for CommuterLink TV. Westwood One, you know PBS, has one of our proposals and they are working frantically to get that up and running before the games. On the right is simple acknowledgement that we are working with channels already in place. We just want to help them do their job better so we have agreements with 4 channels. That is our studio; we hope to have people in those seats soon and

are shooting for January. We have outside agreements with a lot of traffic and radio reporters to come in to the TC, have a booth where they can broadcast. In exchange for letting them into our real estate, we get mentions in every traffic report – sponsorship for free. We have estimated the cost at \$2 million per year in bartered value.

Websites. Nothing new here. We just try to do the best we can for our area. Customers have access to construction incidents, weather, etc. This is actually going to be a key portal for Olympic travel demand management information. The Olympic community will be able to access information. Right now if you go to our site there is just a button that brings up a static site, but that will change. With regards to weather, we have our maintenance crews call in three times a day during the winter season, they enter a couple of codes and then enter the information. This is then put on the web.

You can sign up for alerts – you pick what you want (full messages, medium text, delivery time, etc.). You probably don't want you pager going off at two o'clock in the morning so you can get information about a crash that is along your route, but you can pick what messages you want, days of the week, etc. So you can pick what you want to “know before you go”. How many different accounts do you want? You can get it at your desktop during the day, on your home pager in the morning, etc.

511. You all remember 511. If I covered that up would you remember what our hotline is? That has benefited 511 nationally and it is very exciting to be part of a national program. It is an easy to remember, three-digit number to access traveler information, and we are working frantically to try to get ours up and going. We think we have a pretty good program. It has voice recognition where you just speak your commands. We hired a few networks to post it for us. We aren't going to buy a box that in five years is going to be obsolete, which we have done previously. They are going to host it for us – I have a demo recording here. We are shooting for December so that we can have the entire information ready before the games.

Recording.....

Web phones. Right now we are not committing to having that by the Games. Both UTA and UDOT are working to determine if that is something we need to do. We have so much going on that I don't think that we are going to have activated websites. An example of our focus group, it helps to hear from our customers what they want in a 511 system, they want live operators – can't afford it. Once we played them a voice recognition program all the comments about live operators went away. If you think 511 should definitely be one of those flagship things that are done in the Rocky Mountain states and CANAMEX to help show that we are doing things to be a "one-stop shopping network".

Event tracking. You've heard of a Highway Closure Restriction System. There is also a system in Utah. We looked at the different systems themselves. For integration with our program, we felt an event-tracking system with instructions for permanent closures, construction, maintenance operations, special events [would be most appropriate]. It is a quick way to track [closures] between all jurisdictions. It is setup now so that I can get into the event tracking system to see what all the other agencies are doing and feed it into the traveler information site. You just go to the website, click here, it brings up the software and then you right click to add an event or right click on an event to check the properties, etc. We are very pleased with the system we've got in place. We've noticed if you have to use the website it is easier to keep it updated between all the clients. But you still need experts in the field that know what is going on statewide. I mentioned earlier that our weather guys from the maintenance shop call in and hit a few codes to enter the weather. We are doing the same for construction.

For Olympic highways, I'm already mentioned that we are going to talk more about how we did the planning for ITS in the Olympics in tomorrow's session. But these were our priorities, ranked in order: 1) Incident

Management – let's not let an avalanche or crash or spill shift us off of our plan. As much as possible how can our technology focus on dealing with the unexpected, getting information out to people, dealing with parking issues, expanding our capabilities for surveillance, fleet management, and coordinate the operations with the TOC? The TOC being a certain center point, but not the main hub of the Games (but for transportation it is). Up at the TOC, we get access to all the real-time information that is going on, note the plan, coordinate if there are interruptions in the plan with security areas, venue areas, etc. Next door to the TOC is a room for Secret Service, FBI, Public Safety, etc. and that is even now on more heightened alert after September 11<sup>th</sup>. We try not to let some of the technology go out of the service we are providing... We've reduced crashes 20%, freeway delays 30%, our governments are working and playing well with each other. Just in the Salt Lake Valley, the deployment analysis we did showed between \$100 -\$200 million dollars per year saved in user costs.

I just want to point out here that there are a bunch of people who say, "You got all this money for your product, and that is the only reason you are doing this." Well, we put \$121 million dollars between 1996 and 2001 with what I just showed you. \$121 million dollars, 72% of that is state funds. Now the majority of that is for the CommuterLink Project, but we don't just hand out money. Our leadership, our legislation, have participated in this. To counter the notion that we get all kinds of federal funds, we do get earmarks but so do 50 other states around the country who don't hold the Games. And this year is the first year that we had anything that was specific for the Games and that was for \$800,000. Our program will use local, state and federal money in the coming years. In finishing, I've got to show a picture of I-15.