



Western States
Rural Transportation
Technology Implementers
Forum



SYSTEMS ENGINEERING DEVELOPMENT AND INTEGRATION PROGRAM

Western States Rural Transportation Technology Implementers Forum

There are numerous examples of ways in which the Forum has helped participants with implementation of ITS technology:

- Jose De Alba (California) has attended and presented at the Forum several times. His District used the information from a Caltrans District 2 RWIS presentation to upgrade and transition District 6's RWIS system, which is resulting in a substantial cost savings. (*A Tale of Two RWISs: RWIS Trials and Tribulations*)
- Members of the Nevada DOT have participated in nine of the ten Forums and presented at four. In 2012, they demonstrated a mobile ITS hotspot trailer that they developed after seeing a similar trailer demonstrated by the Western Transportation Institute at a previous Forum.
- Washington State DOT (WSDOT) has also attended most of the Forums and presented as well. "The presentation given by Oregon DOT during the 2010 Forum (*Support and Asset Inventory Management of ITS Devices*) has resulted in a number of changes to WSDOT's asset management process and data collection efforts." (quote from Ted Bailey, WSDOT)
- Jeremiah Pearce, Caltrans District 2, has attended nine of the ten Forums and presented at three. He is playing a lead role in District 2's large scale fiber optics project underway in Redding. The project design was influenced by Jose De Alba's Forum presentation, *Fiber Optic Network/Topology Design on State Highways*.
- Phil Graham from Caltrans District 9 has attended every Forum. His RWIS projects have been influenced by interactions with Caltrans District 2 at the Forums and by the working relationships that were fostered as a direct result of the Forums.
- Dean Campbell from Caltrans District 3 has attended eight of the ten Forums and presented at three. Starting with Sean Campbell's (Caltrans DRISI) presentation on *Web-Based ITS Field Element Control*, Dean developed a simple electro-mechanical relay with a built-in web server to control field elements and then demonstrated the system at another Forum a few years later (*Simple Network Contact Closure*).
- Phil Graham, Caltrans District 9, has also "gleaned valuable information about hardware and design criteria for wireless communications and solar power – essential elements for rural ITS." (quote from Phil Graham)
- Additionally, WSDOT has used information from the several Bluetooth presentations given at three of the Forums to support their decision to deploy Bluetooth equipment along corridors in Eastern Washington to collect and provide travel time information.



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In response to the Forum evaluation question

"Have you or someone in your department implemented or improved a project because of participating in a past Western States Forum? If so, what? Please list any other benefits that Forum attendance has had for you and your organization."

- The use of solar power and improved solar installations were listed after Nevada DOT's presentation *Photovoltaic Power Systems for Rural ITS*.
- Remote power control and investigation of remote restart technologies were mentioned after Dean Campbell's (Caltrans District 3) and Sean Campbell's (Caltrans DRISI) presentation *Avoiding the Remote Callout*.
- Providing traveler information and road weather information for maintenance personnel have been the topics of several presentations as well. A participant said that they benefitted from or were able to implement use of the One-Stop-Shop as a result of the presentation *Technical Development of the Western States One Stop Shop for Rural Traveler Information*.
- Over the years, several presentations have discussed wireless communications. Participants have mentioned "RF links," "roadside wireless links" and assistance with "wireless design" as areas in which they've benefited from Forum attendance.
- One participant commented, "From discussions previously with District Maintenance Staff, discussions with D2 staff at the Forum, and as reiterated in Keith Koeppen's 2015 presentation (*Safety Chain Control System*), I will move our district to maintain consistency with cabinet configuration to minimize field site confusion."
- One attendee said, "Yes, we presented our IRIS work, and received excellent questions and feedback. We made related changes."
- Another attendee commented: "Yes, will be looking into a portion of the technology of ASWC (Automated Safety Warning Controller)." (*Automated Safety Warning Controller (ASWC) Phase 1 – Proof of Concept*)
- Several other participants have mentioned that as a result of the Forum presentations their RWIS projects have been modified and improved. One commented that the statewide RWIS server implementation had benefited and another participant specifically mentioned improvements to RWIS used for warning systems.

Participant Comments from Forum Evaluations

"Exposure to equipment brands/models that are available helps when deciding what equipment to purchase to solve a particular problem."
"Once again I learned relevant information that I can take back to my department."
"All projects we've presented have benefitted greatly from the feedback and interaction. My staff learned a lot from others here!"
"I appreciate the opportunity for networking and hearing about current projects and progress in ITS."
"Great opportunities to see what others are doing and the networking is top notch."
The format of the technical presentations suggested some "improvements in my presentation approach (more technical detail, less fluff)."

Other Related Quotes

"The ability to peek into other states' deployed rural projects allows Caltrans' engineers to utilize the lessons learned from those projects and to maximize California's transportation system performance and accessibility."

Sean Campbell, Caltrans Project Manager for the Western States Forum & Chief of ITS Special Projects Branch, Caltrans Division of Research, Innovation and System Information

"The Western States Forum is the most rewarding activity my group at WTI is involved with. Forum participants are among the most dedicated in this field, and every year I walk away having learned something new and beneficial from them. It has been a pleasure and an honor to have worked with this group for ten years now."

Doug Galarus, WTI Systems Engineering, Development and Integration Program Manager

"In a world of real time decision making and bottom line conversations it's refreshing to have a forum where practitioners have set aside time to prepare and communicate their work at the level of detail necessary for understanding and application. The relationships established during the Forum have improved the effectiveness of my work which keeps me coming back year after year."

Ted Bailey, Traffic Signals, Illumination & ITS Engineer, Washington State DOT Traffic Design and Operations

"When we started the Forum, we envisioned it as a training opportunity for the participants - DOT transportation practitioners, but by hearing their input on the work of others and on some of the systems they're developing, the members of the steering committee get as much out of it as do the other participants. The Forum has been instrumental in technology transfer on all sides and in all directions."

Doug Galarus, WTI Systems Engineering, Development and Integration Program Manager

"The Forum is all about transparency and trust, getting the real story from the people who have actually done it – it's about designs and deployments that have really been done - about what worked and what didn't, about how systems work and what works well. If you are serious about doing Rural ITS, the Western States Forum is the only place you can interact with those who have made things happen."

Ian Turnbull, Chief, Caltrans Office of ITS Engineering & Support