Western States Rural Transportation Consortium (WSRTC)

Steering Committee Meeting
June 20, 2017
Yreka, California

Meeting Minutes

This document is the official record of the WSRTC Steering Committee meeting held June 20, 2017, in Yreka, California, just prior to the 12th annual Western States Rural Transportation Technology Implementers Forum.

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June 20, 2017
Meeting/Teleconference
Yreka, California

Meeting Minutes

Prepared by

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Western Transportation Institute, Montana State University

Doug Galarus called the meeting to order at 1:00 pm Pacific Time. Introductions were made by everyone at the meeting site in Yreka, California, and by those calling in. Doug reviewed the purpose of the meeting and the planned agenda.

The meeting agenda, slide presentation, and minutes are posted on the Consortium website at: http://www.westernstates.org/Documents/Default.html.

Western States Forum
Leann Koon provided an overview of the upcoming 12th annual Western States Forum. A total of eleven speakers were scheduled covering a variety of topics. A preview of the eight presentations was made available to those registered for the Forum. Forty-eight participants represented seven states, six state DOTs, ten of the twelve Caltrans districts, several Caltrans divisions, FHWA, three universities, and the California Department of Water Resources (Snow Surveys).

WSRTC Pooled Fund Updates and Discussions
Sean Campbell and Ron Vessey reviewed the Pooled Fund contributions to date. The commitments listed were taken from the pooled fund website. There are currently three active task orders – WeatherShare Phase 4, One-Stop-Shop Phase 3, and Meeting Coordination, Website, WSF Support, Travel. Ian Turnbull's pending retirement was acknowledged, including recognition that he has been a key player in the WSRTC.

Ron noted that Task Order 7 WeatherShare 4 will end in December 2017 and there is no need to extend the project. Task Order 10, meeting coordination/travel, will expire at the end of February 2018 and it will need to be renewed at the February/March WSRTC meeting. Phase 2 of the Pooled Fund will expire 3/31/2020.

Development of incubator project work plans has been deferred considering anticipated staffing changes.

The group reviewed the benefits and contributions to the WSRTC. Supporting the annual Western States Forum is important and member states consider the information sharing beneficial. The group was reminded that annual contributions increased from $2,500 (Phase 1) to $5,000 (Phase 2) per

member state. This contribution goes towards funding travel and pooled fund business, and supporting the Western States Forum. Ron and Sean will send an email to the group to clarify any questions in this regard. The funds spreadsheet will be sent monthly to Jeremiah Pearce (Caltrans), Don Anderson (Caltrans), NDOT, and ODOT. Member states can review related information on the pooled fund website.

The group moved to discussion concerning the WSRTC Charter and membership. What is the interest in expanding the WSRTC and bringing in other states? The rural perspective in the western region is a priority to maintain. Expansion could help improve diversity, bring in more and new perspectives, and increase information sharing.

Discussion included the following:
- Don Anderson asked if other states had shown interest in joining the WSRTC. Sean replied that others haven't been asked at this point.
- Doug Spencer commented that expanding participation in the Western States Forum is an opportunity to have them help keep the Forum going, and continue to share information. He thought we would want to open membership to additional states. Jim Whalen agreed.
- Does the group want the WSRTC to grow or stay the same?
- Potential member states that could be asked about interest in joining – Arizona, Idaho, Montana, Utah, Wyoming.
- The WSRTC Charter includes a voting mechanism. Sean will check with Nathaniel Price, FHWA, on any rules applicable to expanding the membership of the WSRTC pooled fund.
- There has not been interest in doing a group project together.
- Sean and Ron posed questions about level of Consortium activity (more involved vs. minimalist).
- Doug Galarus commented that we are still not getting the word out enough. There is a large body of work related to and conducted through the Consortium, COATS, and other related spin-off projects.
- Sean asked for thoughts on how to garner more involvement/engagement and how to bring in new people.
- Don Anderson mentioned that he has asked for more ITS resources and so far, it looks as if those funds will come through. He commented that partnerships help facilitate resource allocation.
- Sean commented that Balwinder Tarlock, who has attended the Forum and used to be in District 10, is now at DRISI to conduct transit research. There is the potential for rural transit research (through the WSRTC) or a pilot project similar to OSS.
- Don said that if you want something to stick and grow, it is important to set goals and then publicize those goals. It doesn't have to be done all at once; take things slow so there are no growing pains.
- Doug Galarus stated the desire to keep the Forum as a cornerstone of the Consortium. There is the potential for other Forum venues.
- Utah – two individuals are attending the Western States Forum this year. UDOT is the leading state regarding signal performance. There was agreement that Utah could be a good "test bed" for Consortium expansion and project work.
- Arizona – Greg Larson has many contacts with Arizona and they've discussed the WSRTC and the WSRTTIF. It does seem like there is an interest in rural transportation. With no NRITS conference, there could be the potential for involvement in the Forum and the WSRTC.
- Idaho – has regularly participated in the Forum. Largely a rural state, Idaho has much in common with the WSRTC.

- Would four new states be too many?
- Sean suggested taking a phased approach and targeting states. Approach the first target state, incorporate, and evaluate how well integration ensues.
- It was again emphasized that it is important to keep the focus on rural technologies. The group also desires to keep the Western States Forum in Caltrans District 2 for now.
- Part of the approach in talking about the WSRTC with potential new members is the opportunity for them to vet their own projects. It isn't just about what value the WSRTC receives, but what the member states gain as well.
- The group agreed to initiate informal discussion with Utah DOT. Depending on interest, the group will discuss expansion again at the next meeting.
- Any changes to the Charter will be made at a later date.

Doug Galarus announced that he has taken an Assistant Professor position in the Computer Science department at Utah State University. This change will impact some projects. However, steps are being taken with steering committee members to establish a mechanism and plan for carrying forward.

Incubator Project Updates

The current incubator projects are related to COATS for funding. The ones identified thus far are ideas and placeholders for COATS.
- Rural Winter Travel Times
- Chain-Up Delay Tracking with Bluetooth (Part 2)
    - Doug Galarus spoke to a few companies who sell Bluetooth devices. At first, the companies indicated that this problem was already addressed by their products, but then realized that the problem was more than simply determining travel times between fixed points and acknowledged that more research would be required.
    - If there is interest in moving forward with this project, Caltrans District 2 would deploy the units, collect data, etc.
    - Doug Spencer mentioned that ODOT worked with Oregon State University to develop Bluetooth equipment for travel time calculations, if the group didn't want to start from scratch.
    - Doug Galarus indicated that the challenge for this project is application-specific, and there is no intent to further develop Bluetooth readers.
    - This project is not only related to Bluetooth but instead is a fusion of technologies and data.
- Data Quality for Aggregation and Dissemination of DOT Traveler Information: An Analysis of Existing System Best Practices (Part 2).
    - The intent would be to develop best practices for traveler information data quality.

General Project Discussions
Doug Galarus reviewed the status and activities of several spin-off projects of interest to the WSRTC.
- Professional Capacity Building (PCB) for Communications Systems
    - Phase 4 started 12/9/2016.
    - The project will run until June 2019.

- o Three courses will be delivered during this phase. WTI will procure and facilitate one and Caltrans will facilitate the others.
  - o Jim Whalen asked about the project and its applicability to other states.
- California Oregon Advanced Transportation Systems (COATS)
  - o Phase 7 started 2/14/2017.
  - o Duration: Two years
- Integration of Aviation AWOS with RWIS
  - o Phase 3 started 2/20/2017.
  - o Duration: Two years
- WeatherShare Integration with QuickMap
  - o 3/17/2014 – 6/30/2017
  - o About to conclude
- Automated Safety Warning Controller
  - o Deferred.
  - o Project will go through the WSRTC.

Roundtable of Recent ITS Activities

Doug Spencer – Oregon DOT
- ODOT has several active projects implementing variable speed limits. Doug discussed advisory versus regulatory speed limit changes.
  - o In general, they are implementing variable speed limits based on weather conditions or congestion. In many cases, the speed limits are considered full regulatory speeds. ODOT is working closely with law enforcement. If speeds are changed, ODOT has a portal for law enforcement to access. The data is available if law enforcement needs it in a court of law or in other similar situations. Law enforcement is now working on their own software as well.
  - o Speed limit changes are made in 5 mph increments. The lowest is 30 mph.
  - o Doug has the VMS signs programmed with a variety of messages so the signs support variable advisory speeds, regulatory speeds, lane management, etc. When other ATM systems come on-line, the signs already have the messages programmed.
  - o To make the change based on weather conditions, they are just looking at grip factor and using a statewide algorithm.
  - o Variable speed limits have to go thru an engineering study and have the corridor listed in statute. Advisory speed limit systems do not have to do this.
  - o One piece of software is being used across the whole state for ATM operations. This software operates variable speeds systems, queue warning, weather warning, etc.
  - o Many lessons have been learned.
  - o Projects include:
    - 20 mile segment of I-84 between Pendleton and Cabbage Hill; speeds adjusted based on pavement and road conditions.
    - I-5 over Siskiyou Pass, variable speed limits and curve warnings.
    - 30-mile segment of US-97 south of Bend.
    - Expansion of the system deployed in the Portland area and the system around Mt. Hood. The Mt. Hood system issues advisory speed limits while the others issue regulatory speed limits.

- Signal upgrades are being made, including migration to the Advanced Transportation Controller (ATC) and the use of automated signal performance measures.
  - Several discussion points were made about compliance with ADA when controllers are changed.
  - Don Anderson mentioned they have tried to do the ADA work first, then the rest of the project.
- Development of a Transportation Systems Management and Operations (TSM&O) plan is in the beginning stages.
- Developing a portal to make TripCheck data available for use with connected vehicles.
  - The controller must be upgraded in the field.
  - Data is provided in real-time.
  - Working to phase out TransCore software. New traffic signal software is now being installed. ODOT will also be using new software to provide MAP and SPaT data thru its TTIP portal.
  - The City of Portland has been proactive regarding connected vehicles testing.
  - Daimler-Chrysler is doing platooning through the Colombia River Gorge.
  - Laws have not been put in place to prohibit such activity so ODOT is trying to partner and have a seat at the table.
- Ron Vessey asked about the ODOT-WAZE partnership. TripCheck is publishing WAZE data, although there is certain data that can and cannot be used.

Jeremiah Pearce – Caltrans, District 2
- Ian Turnbull has retired. His last day in the office was March 10th, and he will be officially retired as of September 11th. Jeremiah is currently the Acting Chief of the Office of ITS Engineering and Support.
- The RWIS upgrade is in progress. They are deploying open source RWIS RPUs and evaluating out of pavement sensors. Out of pavement sensors have been deployed at seven sites thus far with five more sites to be completed soon.
  - Have upgraded to Campbell Scientific data loggers which are working well with WeatherShare. They are providing data that is accurate, timely, and reliable.
- The Responder project team has developed a system that appears to be working well and will be a very valuable tool. The system is currently being tested by District 2 Maintenance personnel.

Sean Campbell – Caltrans Division of Research, Innovation, and System Information (DRISI)
- An advanced camera lowering device (MG2) is being developed. Devices will be deployed near Donner Summit and around the US 50 corridor. Doug Spencer mentioned that ODOT has standard drawings for such devices. Doug provided ODOT's drawings and specifications to Caltrans. He also discussed camera lowering devices with the research staff contracted by Caltrans' research department.
- The hand-held ITS field controller is in development. The device and software will have an interface for such field elements as CCTV and CMS so that maintenance does not need to haul a computer into the field for troubleshooting, routine maintenance, etc.
- Info-relays for CCTV and RWIS are being deployed in the districts. The CCTV Info-Relay has been deployed to seven other districts with two more in the works. WeatherShare 4 will be in statewide production and the RWIS Info-Relay is the communication piece for the system. Info-relays will push data into WeatherShare. (WeatherShare is replacing ScanWeb and ScanSentry.) The team has worked hard to make the Info-Relays open source.

- Caltrans is exploring the idea of putting solar generation sites within roadway right of ways.
    - The project team is currently looking at best practices both nationally and internationally.
    - California has renewable energy bonds.
    - The project team is using source code from the Info-Relays to develop a means to measure performance of solar installations.
    - There was discussion about solar performance monitoring via the controller in District 3.
- Sean mentioned the large volume of research being done at Caltrans.

Jim Whalen – Nevada DOT
- NDOT has signed an agreement with WAZE and they are currently working on specifics for using the data.
- NDOT is replacing the entire statewide radio system as partners with NV Energy and Washoe County. The RFP has just been released. The primary users of the system are public safety agencies. The new system will be p25 and will provide increased capability.
- They are installing wrong way driver warnings between Reno and Cold Springs. The system has a camera which sends a notice to the TMC and the Highway Patrol of a driver traveling the wrong direction on the road. UC Davis is also working on a similar project.
- The central systems software is being upgraded. It will be moved to a KITS platform by Kimley-Horn. Doug Spencer would be willing to discuss costs, etc.
- Jim indicated that NDOT is moving away from H.264 video encoding.
- Networking – generally moving towards a shortest path bridge protocol. There is also a move towards center to center operations between districts. NDOT has deployed an Alcatel-Lucent hard switch for cabinets which seems to provide better connectivity from the field.
- An 80 mph speed limit has been approved for the Interstate around Winnemucca.
- The variable speed limit system in the Washoe Valley was removed. More reliable controllers and communications, or redundant communications, were needed. Cell modems and microwave wireless seem to be better options.

Don Anderson – Caltrans, District 2
- Has the Western States Forum ever been published in The Mile Marker? He is willing to look at how to publicize or otherwise promote the event. The sharing of ideas is beneficial. The dialogue is good; problems are often similar, but solutions might be different.

Ron Vessey – Washington State DOT
- A past governor of Washington has started a group called Challenge Seattle which is concerned about city livability. Some major incidents in the past have resulted in severe traffic congestion. The group is interested in helping spearhead development of a better way to deal with major incidents and mitigate resulting traffic. (E.g., could UAVs be used by the highway patrol for collision investigation?)
- This is a peak period in construction projects.
- Bertha, the tunnel boring machine, made it through. Now, the project is dealing with technology that has changed since the RFP was issued.
- WSDOT is considering changes in operational strategies – How can improvements be made without making capital improvements?
    - E.g., Adaptive lighting – WSDOT is moving away from lighting everything to being more selective. The current system being tested may not be the best choice. They are

> looking at a different system for chain-up areas. The energy savings is a huge benefit. Generally, the concept of the system is good, but the implementation has room for improvement.

- WSDOT is creating a Transportation Systems Management and Operations (TSM&O) plan. They have developed an internal website which will eventually be promoted outside the agency.
    - o E.g., Orange County is focusing on ITS technologies because it is the only way to grow.
- Workforce development is a current issue. 44% of WSDOT engineers will be eligible to retire in 5 years. WSDOT is looking for ways to attract younger people and train them in TSM&O areas.
- An order has just been signed to create an inter-agency autonomous vehicle working group. Ted Bailey is the WSDOT representative.
    - o Greg Larson is the point person from California on this topic.
    - o ODOT is putting everything in the Controller.
    - o Potential need for making signal cabinets larger, etc.
- Project engagement – weather responsive traffic management in central Washington; maintenance vehicles with devices to share real-time road information.
- Ron asked Doug Spencer how Oregon plans to deal with increased traffic for the solar eclipse on August 21st. ODOT is deeming that day a holiday.

Flint Jackson – Washington State DOT
- Dynamic hard shoulder running systems have been installed. There will be some kind of evaluation although it may not be formal. Doug Spencer is interested in the results.
- Their first two camera lowering devices have been installed. They had the same discussions with structural personnel as did Caltrans. The biggest struggle has been camera type.

Other Items

The group generally agreed that a meeting at the Northwest Transportation Conference, March 13-15, 2018, would be in order. (http://nwtc-conference.org/)

The National Rural ITS Conference will not be held in 2017. Status in subsequent years is uncertain.

Leann Koon reviewed the action items from this meeting. See below.

Sean Campbell thanked the group for the discussion and participation, and the meeting was adjourned.

Action Items

Item	Deadline
1. Ron Vessey and Sean Campbell will send an email to the group clarifying any questions about annual contributions, obligations, and commitments. (Annual contribution change for Phase 2 noted in the minutes from the 2015 annual meeting: http://www.westernstates.org/Documents/WSRTC/Default.html.)	As soon as possible.
2. Sean Campbell will check with Nathaniel Price, FHWA, about any rules applicable to expanding the membership of the WSRTC pooled fund.	As soon as possible.
3. Discussion will be initiated with Utah DOT about potential membership in the WSRTC pooled fund.	Summer, Fall 2017.
4. Depending on interest for joining the WSRTC pooled fund, the group will discuss expansion at the next meeting.	NWTC, March 2018.
5. Ron Vessey and WTI will work to renew the meeting coordination / travel task order. (The current task order (#10) will expire at the end of February 2018.)	First quarter of 2018.

Meeting Participants

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