The Western States Rural Transportation Consortium– An Implementers Pooled-Fund to Tackle the Challenges of Rural ITS

Sean Campbell  
Caltrans Division of Research and Innovation

Ted Bailey  
Washington State DOT

Ian Turnbull  
Caltrans District 2

Galen McGill  
Oregon Department of Transportation

Doug Galarus  
Western Transportation Institute  
Montana State University

Leann Koon  
Western Transportation Institute  
Montana State University

David Veneziano  
Western Transportation Institute  
Montana State University

NRITS 2012

Session A1: Multi-Agency Collaboration: Leveraging Resources and Improving Services for the Traveling Public

Monday, September 17, 2012  
1:00 PM
Overview

• What the WSRTC is and what it does
• Origins and history of WSRTC
• Challenges it addresses
• Benefits it provides
• Incubator and spinoff projects
• Technology Transfer
WSRTC – What it is and does

• Facilitates and enhances safe, seamless travel throughout the western United States
• Promotes innovative partnerships, technologies and educational opportunities to meet these objectives
• Provides collaborative mechanism to leverage research activities in a coordinated manner to respond to rural transportation issues
• Focuses on technology transfer/education and incubator projects centered on the pillars of technology, operations and safety
Origins

• 1991- California Department of Transportation (Caltrans) inquired into rural concerns dealing with advanced transportation technologies

• 1995 - Program for Advancing Rural Transportation Technologies (PARTT), a rural ITS scoping study
  – Reviewed advanced transportation technologies, identified issues concerning them, and developed conceptual ideas for future activities
  – Geographic area in Northern California designated a study area to refine the need and application of rural ITS
  – Caltrans and the Oregon Department of Transportation (ODOT) expanded the study area into Southern Oregon to maximize resources, foster cooperation, and investigate feasibility of ITS in a bi-state study area
    • Result was California Oregon Advanced Transportation Systems (COATS)
Origins

• COATS (1998-2000) - Identified several regional needs that ITS could address
• COATS Showcase (2001 – 2006) - Focused on demonstration and evaluation activities
• COATS Phase 3 (2005 – 2009) – Promote technology transfer and coordination
• COATS Phase 4 (2008 – 2011) – Continue technology transfer, initiate incubator project concept
  – Investigate expansion of COATS to include additional states
WSRTC History

• June 2009 - Informal discussions occur regarding Consortium establishment/expansion of the COATS project/region
• August 2009 - Formal discussions between COATS members of expansion/consortium development result in agreement to pursue development of WSRTC
• August 2009 – October 2009 - Development of Consortium charter and mission/vision/goals documents undertaken
• November 2009 - Formal discussion between potential consortium members regarding charter and mission/vision/goals documents, intended roles and responsibilities, etc. occurs. All parties agree to move forward in formalizing Consortium
• February 2010 - Follow-up discussions on Consortium documents occur; Year 1 incubator projects are discussed,
• April, 2010 - Scopes of Work completed for incubator projects
Challenges Addressed

• Tighter agency and research budgets reducing opportunities to conduct technology, safety and operational research aimed at rural transportation

• Projects must be justified, often requiring an initial proof-of-concept

• Research involving multiple agencies likely to be of interest and transferable to others
  – Mechanism to promote results and share developed products does not exist

• Need existed for agencies to partner and leverage research funding, share technical findings and products, and promote educational opportunities

• The WSRTC addresses these challenges through collaboration
Mission and Vision

• Mission: The WSRTC shall provide a collaborative mechanism to leverage research activities in a coordinated manner to respond to rural transportation issues among western states related to Technology, Operations and Safety.

• Vision: The WSRTC shall promote innovative partnerships, technologies and educational opportunities to facilitate and enhance safe, seamless rural travel throughout the western United States.
Goals and Benefits

• Provide a framework to leverage research and promote collaboration in solving rural transportation issues.
• To leverage research resources related to rural issues concerning technology, operations and safety.
• Provide technology solutions in the form of technology transfer to rural areas and training on a regular basis.
• Recycle and reuse existing research, applying its results to rural issues.
• Development of a rural western states integrated corridor management system to improve seamless, coordinated and safe transportation to the public.
• Continued fostering of tech transfer activities through venues such as the Western States Forum
WSRTC Incubator Projects

• Radar Speed Signs deployment guidance
• Evaluation of the Fredonyer Pass icy curve warning system
• Analysis and recommendations for optimization and deployment of web-based projects
• Survey of western states safety warning devices (ongoing)
• Regional Integrated Corridor Management planning (ongoing)
• Bluetooth and other passive ID technologies for weather-related rural travel times (upcoming)
Safety Warning Device Survey

• Focused on western states – CA, OR, WA, ID, NV, UT, AZ, NM, CO, WY, MT, AK

• Ex. Intersection or curve warning systems, work zone safety systems, etc.
  – Identify location, function/purpose, components, effectiveness, and other info

• Seeking contacts from above states to interview and obtain information
  – Please see us after the session or send contact information to david.veneziano@coe.montana.edu
Spinoff Projects

• One Stop Shop for Rural Traveler Information
• WeatherShare
• Integration of Aviation AWOS with RWIS
• Automated Safety Warning Controller
• Redding Responder
• Professional Capacity Building (PCB) for Communication Systems
Prior and On-Going Investment in OSS

Past Projects

- Western States OSS Prototype via Clarus
  FHWA 2010-2011
- OSS Phase 1
  Caltrans 2008-2010
- OSS Phase 2
  Caltrans via WSRTC 2011-2013
- OSS Phase 3
  Caltrans via WSRTC TBD

Future Projects

- WeatherShare Phase 1
  Caltrans 2003-2005
- WeatherShare Phase 2
  Caltrans 2006-2009
- WeatherShare Phase 3
  Caltrans 2012-2014
- AWOS/RWIS Phase 1
  Caltrans 2008-2010
- AWOS/RWIS Phase 2
  Caltrans 2012-2014
- COATS IV Deployment Assistance
  Caltrans 2009-2010

Blue=
Covers WSRTC Region

Ice=
Covers California

ICM
Caltrans 2006-2009
Integration of Aviation AWOS with RWIS

Integration of Aviation Automated Weather Observation Systems (AWOS) with Roadside Weather Information System (RWIS) Demonstration

Wind Speed/Direction Aloft (15000 ft MSL) - 1:00PM Mon Feb 6 PST

Map | Satellite | Hybrid | Terrain

Surface Layers: AWOS/ASOS (METAR), Pilot Reports (PREPS), Terminal Aerodrome Forecasts (TAF), Radar, NWS CONUS Merged Reflectivity Composite, Satellite

Aviation Layers: Wind Aloft, Temperature Aloft

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Automated Safety Warning Controller
Redding Responder

Redding Responder Incident Organizer

Summary | Mapping | Photos | Weather | Sketches | Messaging

Incident Closed

Organization: Caltrans
District: 2
Observer: Responder

Date: 2/26/2004
Time: 08:35 AM

Description: Rockslide 1.5 miles west of Pulga. Includes more than 200 yards of material including some weighing well over 200 tons.

Facility: Lane blocked
Incident Type: Rockslide/ Mudslide

Location:

SR-70, Oroville, CA 95965
Mile Marker / Landmark: BUT 70 39.52
City: Butte
County: Butte
State: California

Maps and Location Data: Set to Current Location

Pen Color: Red

Redding Responder Incident Organizer

Summary | Mapping | Photos | Weather | Sketches | Messaging

Add Blank Sketch | Remove Sketch | Erase Ink | Undo Last

sketch 1 | sketch 2 | sketch 3 | sketch 4 | sketch 5 | sketch 6 | sketch 7 | sketch 8 | sketch 9

Description: Relative size of slide

Notes:

1 Lane open
320 tons
200 tons

PAPMENT DAMAGE

ES

Redding Responder Incident Organizer

Summary | Mapping | Photos | Weather | Sketches | Messaging

Add Blank Sketch | Remove Sketch | Erase Ink | Undo Last

sketch 1 | sketch 2 | sketch 3 | sketch 4 | sketch 5 | sketch 6 | sketch 7 | sketch 8 | sketch 9

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PAPMENT DAMAGE

ES

Western Transportation Institute
Professional Capacity Building (PCB) for Communication Systems
Technology Transfer

• Western States Rural Transportation Technology Implementers Forum (WSRTTIF)
• Consortium Website
• NRITS, etc.
Awards

• ITS America 2007
  – Finalist: Best New Product, Service or Application
    • Redding Responder Project

• National Rural Intelligent Transportation Systems (NRITS) Conference 2010
  – Winner: Best of Rural ITS Awards - Best New Innovative Product, Service or Application
    • Responder System

• National Rural Intelligent Transportation Systems (NRITS) Conference 2012
  – Winner: Best of Rural ITS Awards - Best New Innovative Product, Service or Application
    • Western States Rural Transportation Technology Implementers Forum
For further information … please visit http://www.westernstates.org/
Disclaimer

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Questions