

Module 9



Surface
Transportation
Weather

Surface Transportation Weather

User Needs

- Advisory Information
- System Operational Effectiveness
- En-Route Services Information
- Leveraging Weather Information to Cost Containment, Profitability & Safe Operations/Travel
- Data Sharing
- Roadway Condition Monitoring

Stakeholder Partners

Who are they?



Applicable Technologies

- Road Weather Information Systems
- Variable Message Signs
- Internet
- Highway Advisory Radio
- Visibility Sensors
- Automated Deicing System

Projects

- Nevada Wind Warning System
- FORETELL
- Safe Passage -- Weather
- Frontier Fog Detection System
- Frontier High Water Level Sensors
- Traveler Warnings for Spot Hazardous Conditions
- Mobile Weather Sensors

Nevada Wind Warning System

- RWIS monitors sustained wind and wind gusts
- Sign information is tied to the Road Conditions Report
- Trucks are prohibited with wind gusts of 30 mph



FORETELL

The screenshot shows the FORETELL web application running in a Netscape browser window. The browser title bar reads "FORETELL - Netscape". The address bar is empty. The page header includes the FORETELL logo and the text "FORETELL". Below the header, there is a navigation menu with the following items: MAIN, User info, User profile, Contact profile, and Home. The main content area displays a traffic map for Friday, April 2, 6 AM. The map shows a route starting from Onalaska, passing through Sparta and Tomah, and ending near I-94. A detailed information popup window is open over the map, displaying the text: "Traffic slow due to freezing rain on I-90 at I-94 for the next hour." Below the text is a "Less" button. The map interface includes pan and zoom controls at the bottom. The browser status bar at the bottom shows a JavaScript error: "JavaScript error: Type 'javascript:' into Location for details".

FORETELL - Netscape

File Edit View Go Communicator Help

FORETELL

Friday April 2, 6 AM April 2, 3 AM Info Type Map Settings

MAIN

- ▶ User info
- ▶ User profile
- ▶ Contact profile
- ▶ Home

Onalaska Sparta Tomah

94 12 90 14

Detailed information ...

Traffic slow due to freezing rain on I-90 at I-94 for the next hour.

Less

Pan controls Zoom controls

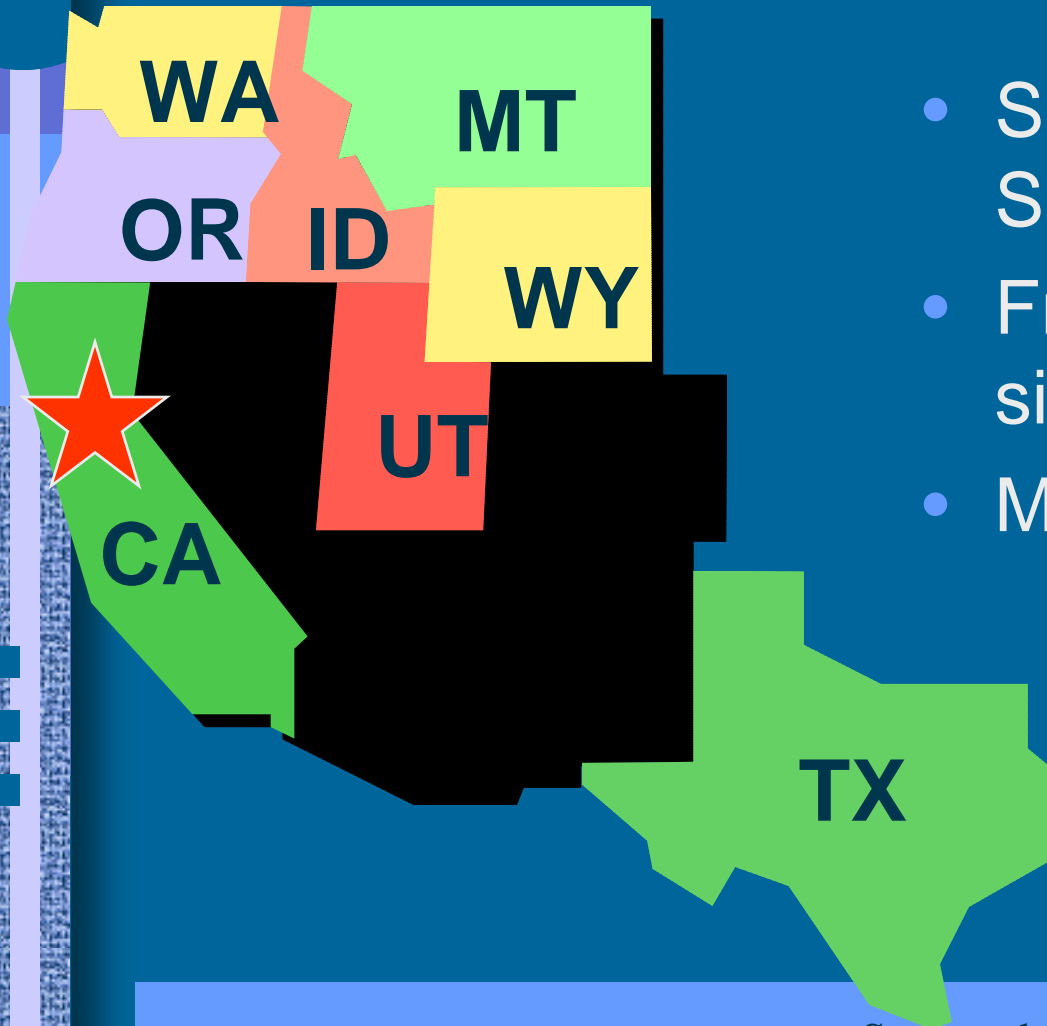
JavaScript error: Type 'javascript:' into Location for details

Safe Passage -- Weather



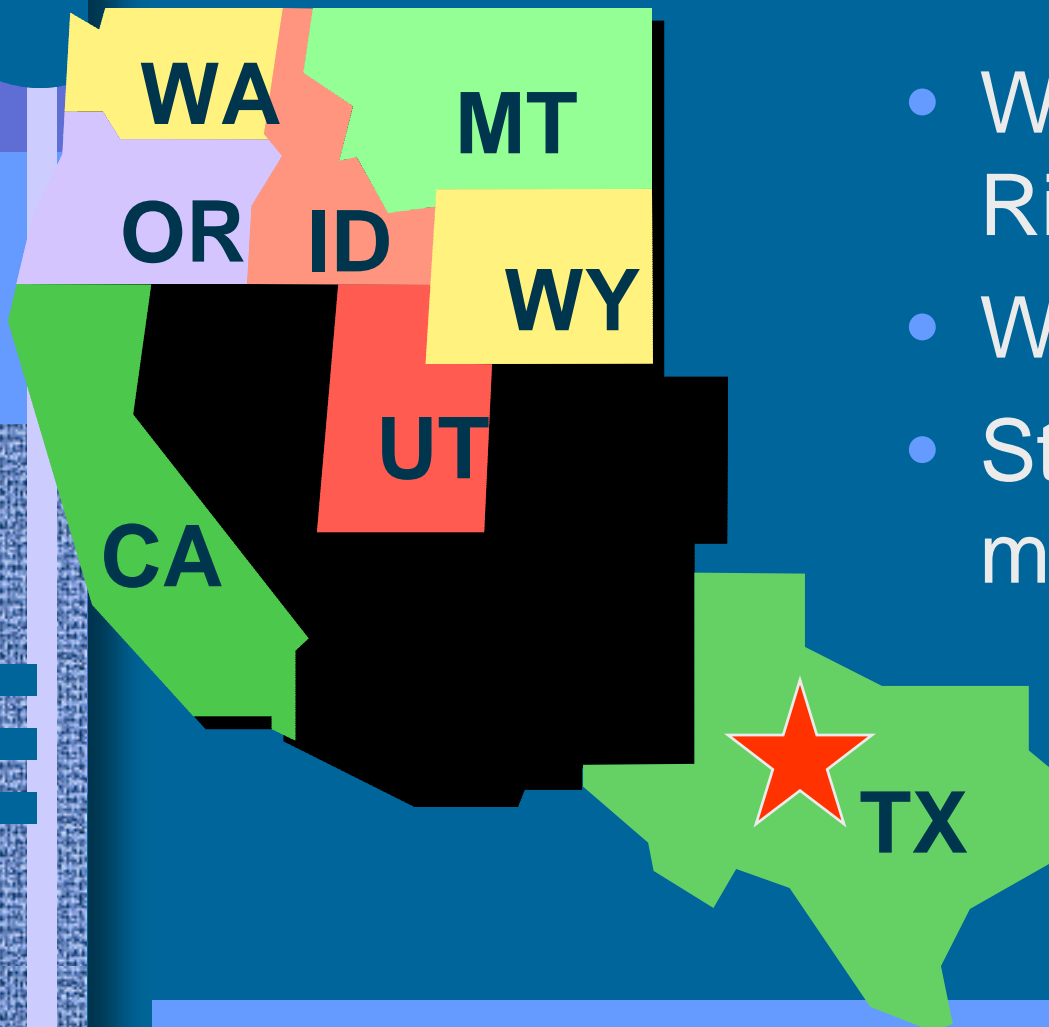
- Extrapolates pavement temperatures over entire roadway sections
- Considers sunlight, shadowing, radiant heat
- Graphically displays temperature changes
- Predictive
- Mountainous Region

Frontier Fog Detection System



- Site TBD, near Sacramento
- Frequent and sudden situations of dense fog
- Multiple vehicle crashes
 - Intelligent Road Stud technology

Frontier High Water Level Sensors



- West Fork, Trinity River near Fort Worth
- Water over roadway
- Stranded/endangered motorists
- Infrared water level sensors

Traveler Warnings for Spot Hazardous Conditions

- Equips bridges and overpasses with ice detectors.
- Warns drivers to slow down on icy surface.



Mobile Weather Sensors

- Monitors the weather and road conditions on-site with maintenance vehicles.
- Increases efficiency and cost-effectiveness of anti- and de-icing materials.

