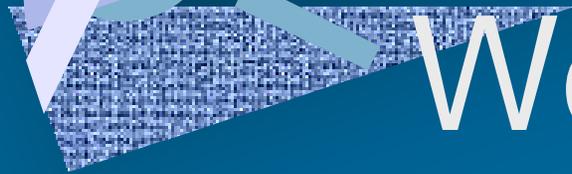


Module 9



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 is "FORETELL - Netscape". The address bar is empty. The page header includes the FORETELL logo and navigation links: "File", "Edit", "View", "Go", "Communicator", and "Help".

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 heading towards the northeast. A detailed information popup is visible over the Tomah area, stating: "Traffic slow due to freezing rain on I-90 at I-94 for the next hour." The popup has a "Less" button.

On the left side of the map, there is a "MAIN" menu with the following items:

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

At the top of the map area, there is a date selector set to "Friday April 2, 6 AM" and a time dropdown menu set to "April 2, 3 AM". There are also buttons for "Info Type" and "Map Settings".

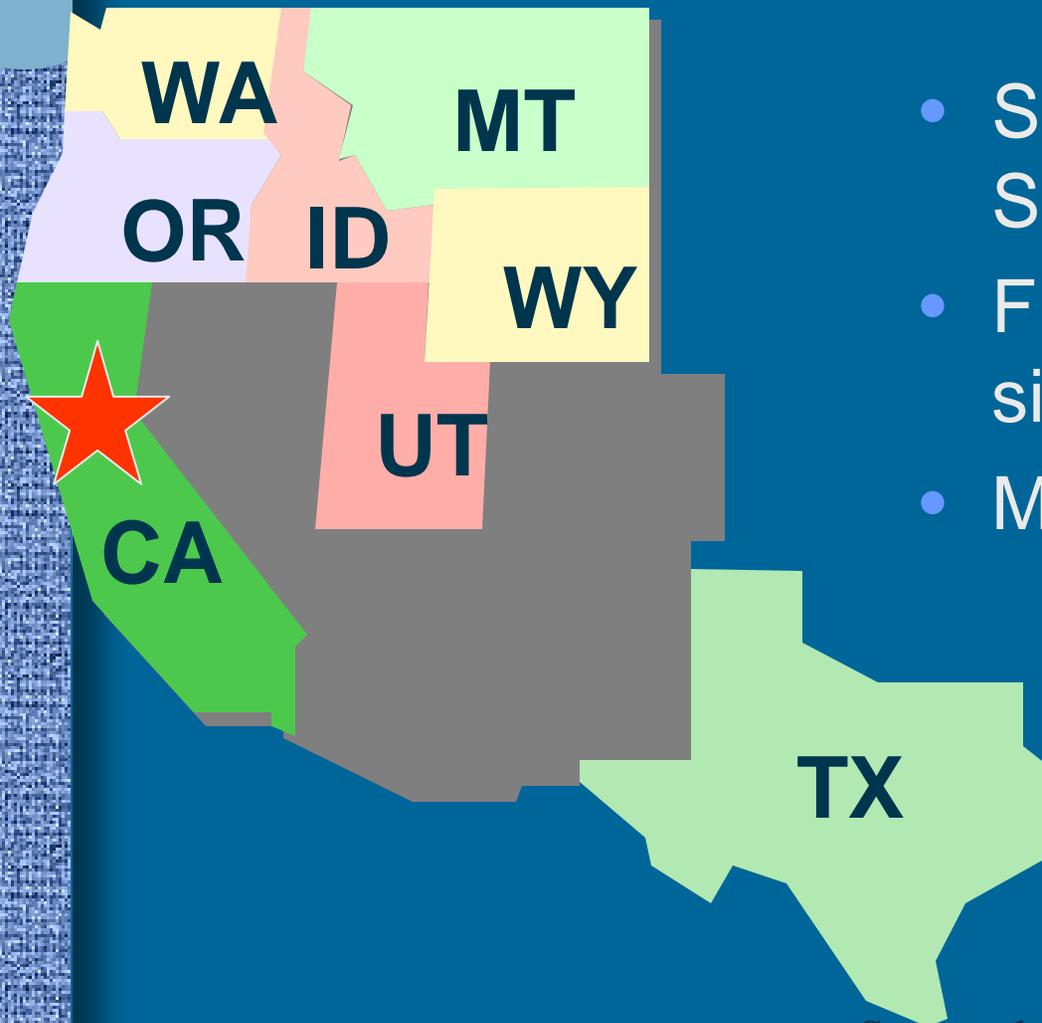
At the bottom of the map area, there are "Pan controls" and "Zoom controls". The status bar at the bottom of the browser window displays the message: "JavaScript error: Type 'javascript:' into Location for details".

Safe Passage -- Weather



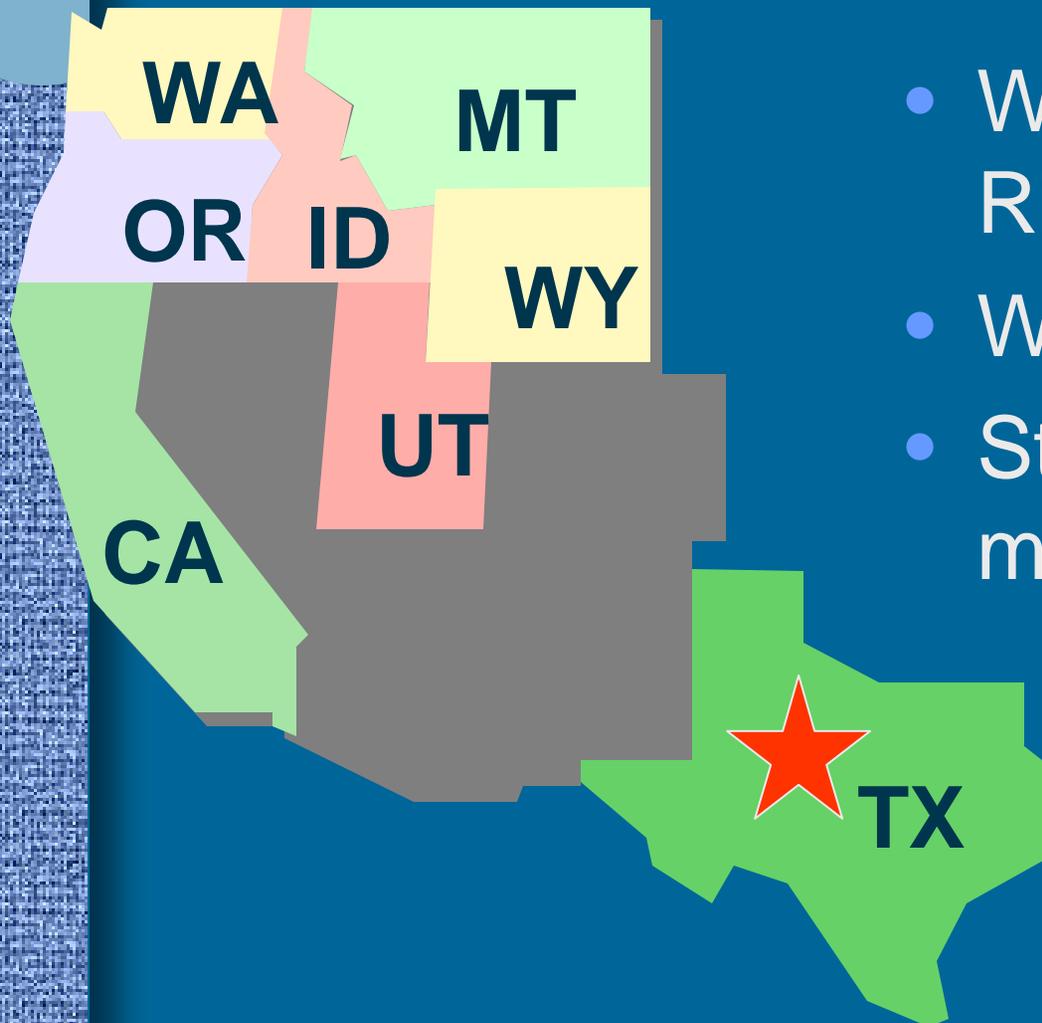
- Extrapolates pavement temperatures over entire roadway sections
- Considers sunlight, shadowing, radiant heat
- Graphically displays temperature changes
- Predictive
- Mountainous Region

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.

