

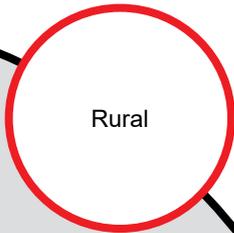


Caltrans Division of Research,
Innovation and System Information

Research



Results



Rural

MAY 2019

Project Title:

One Stop Shop for Rural Traveler Information Phase III

Task Number: 1760

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Task Manager:

Sean Campbell
Senior Transportation Electrical Engineer,
Specialist
sean.campbell@dot.ca.gov

Multi-State Traveler Information Planning Tool

Travel does not stop at a regional or jurisdictional border

WHAT IS THE NEED?

Real-time traveler information services have thrived in two primary contexts: urban-focused systems and statewide or regional systems. However, neither urban systems nor statewide/regional systems efficiently serve the rural traveler, whose trip may span a great distance between urban areas. In addition, these types of systems are typically designed to conform to specific jurisdictional lines, whereas rural trips typically span multiple jurisdictions. While many rural agencies and districts have sought to provide traveler information, there is considerable variation in the level of information provided and how to access it.

Real-time traveler information is a valuable tool in protecting and enhancing both traveler safety and mobility, especially in rural areas. From a safety perspective, it is important for rural travelers to know before a trip about potential challenges including snow, ice, high winds, fires and other hazards. These same challenges may degrade mobility, as many challenges such as vehicle crashes and work zones. While such information may currently be available through a variety of sources, there is inconsistency in the types and quality of information available. In addition, information is generally scattered over numerous web-based (and sometimes non-web-based) sources, meaning travelers must spend significant amounts of time assembling this information prior to a trip. As a result of the effort involved with gathering this information, many rural travelers do not seek out all the information they need, if they seek any at all. This may result in increased delays and can potentially degrade safety.



Caltrans provides a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability.

WHAT WAS OUR GOAL?

To provide real-time traveler and weather information across the entire western United States in a single, easy to use interface.

The geographic region includes 11 states – Washington, Oregon, California, Idaho, Nevada, Arizona, Montana, Wyoming, Utah, New Mexico and Colorado.

We also wanted to investigate additional data that is available from the states including changeable message sign messages, incidents, maintenance and construction reports and other relevant traveler information data.

In addition to a desktop web application, there was emphasis on designing a mobile interface since there was a strong desire to access traveler information via smartphones and tablets. These mobile devices are far more prevalent and more powerful than when prior phases were conducted.

Finally, we also wanted to conduct further evaluations to examine the way users interact with the application, using data including counts of selection of specific information and their origin / referring sources.

WHAT DID WE DO?

The One-Stop-Shop application currently provides traveler information for 11 states including Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington and Wyoming.

This research served as a proof of concept for route-based traveler information provided in one location. While this scale of implementation will yield some direct benefits for the selected states, it is believed that the principal value of this research was to demonstrate the feasibility and

attractiveness of a One-Stop-Shop for real-time, route specific traveler information for rural areas.

The website was designed in a scalable fashion so that the concept may be expanded to other routes and states. We also designed and implemented a mobile application that was usable across multiple smartphone platforms.

WHAT WAS THE OUTCOME?

The One-Stop-Shop application provides travelers with comprehensive, real-time data that can be used in trip planning. OSS presents routing functionality, CCTV images, weather information, elevation profiles, rest areas, points of interest and more in a consistent, easily accessible and intuitive interface that allows travelers to plan both in-state trips and trips that cross state borders.

The 2014 ITS World Congress in Detroit, Michigan awarded the One-Stop-Shop application the Best of ITS Award for Best New Innovative Practice – Research Design and Innovation.

WHAT IS THE BENEFIT?

Ultimately, the One-Stop-Shop could become an umbrella traveler information web site that can be used as a primary point of reference for longer distance trips, improving safety and mobility for all highway system users across the United States.

OSS provides real-time traveler information which protects and enhances traveler safety and mobility in rural areas.

OSS enables travelers to “know before they go” so that they may make the best travel decisions.

OSS can reduce the impacts of nonrecurring



congestion and unexpected delays by notifying travelers of various roadway incidents (e.g., vehicle accidents, weather, work zones, etc.).

Agencies responsible for managing the transportation system may find additional benefits from the interface and information provided through the One-Stop-Shop.

Provided Caltrans' Quickmap application with enhancements that were first developed on OSS.

LEARN MORE

<http://oss.weathershare.org>