



Road Weather Information Systems (RWIS)

Many states use RWIS equipment to support maintenance operations. RWIS consists of a variety of sensor technologies that provide information about the current weather conditions, precipitation, concentration of de-icing chemical on the road, visibility, and other information. Engineers at the Utah Traffic Lab (UTL) and the Utah Department of Transportation (UDOT) envision RWIS equipment enabling Advanced Traveler Information Systems (ATIS) for public guidance.



UTL and UDOT research investigated what type of RWIS information is appropriate to distribute to the public through a series of public opinion surveys. Surveys were directed to four groups of travelers: Commuters, long distance travelers, recreational travelers, and truckers. UDOT representatives from public relations,



research, commercial vehicle operations, the ATIS group, and RWIS management comprised a Technical Advisory Committee who designed a survey that was adapted for each of the traveler groups. The survey questions sought to answer the following questions:

1. What RWIS information is most important?
2. When should information be available?
3. How should the information be delivered?
4. What area should the information cover?

The survey showed that drivers want to know about conditions that affect vehicle performance. Most drivers want to know about sticking or drifting snow, fog, and slush on the road while truckers wish to be advised of high winds. Figure 1 shows the conditions that various groups prefer.

Long-distance travelers, who may be traveling more infrequently, seek information up to two days in advance. Truckers and their dispatchers check road-weather information most often from three

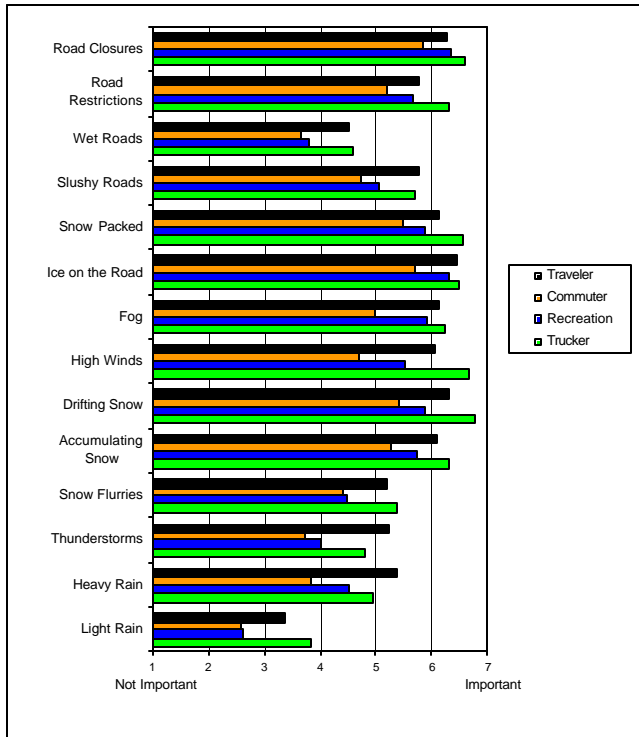


Figure 1: Importance of Specific Condition Information

hours before departure to when they are on the road. Commuters usually check weather conditions while en-route, and occasionally one hour before departure. Recreational travelers most often seek road-weather information one hour before departure, but only occasionally check at other times up to two days before departure, depending on their type of recreation.

Surveys showed that Variable Message Signs and radio (Commercial Radio and low-power Highway Advisory Radio [HAR]) are the most popular forms of RWIS information dissemination. Commercial radio and television reports are very popular among all groups except truckers. Telephone services, paging services, and in-car navigation systems were ranked low on the preference lists by any group possibly due to unfamiliarity with such technologies (see figure 2).

Overall, the surveys provide information that is valuable in designing an interaction between RWIS and ATIS systems.

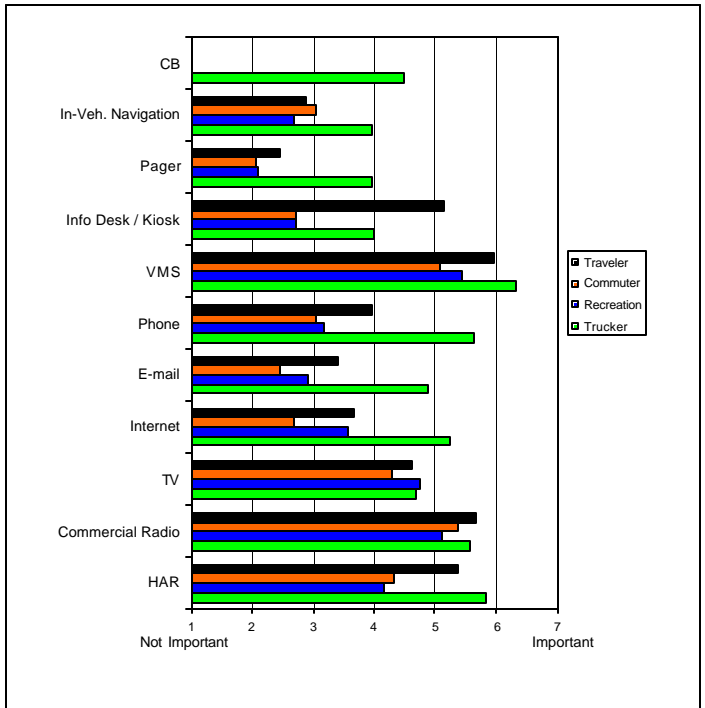


Figure 2: Preferred Information Delivery Methods

Project Contacts

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For more details, see our website.

www.trafficlab.utah.edu

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Researched by UTL 1999-2000