SHRP 2: Project L14 Traveler Information and Travel Time Reliability

Overview

Travel time reliability information includes static data about traffic speeds or trip times that capture historic variations from day to day, and it can help individuals understand the level of variation in traffic. Unlike real-time travel time information, which provides a current snapshot of trip conditions and travel time, reliability information can be used to plan and budget in advance for a trip. Travel time reliability information can improve urban mobility by conveying reliability-related information to system users so that they can make informed decisions about their travel.

This project had six objectives:

1. Better understand the current and near-term future dimensions of the travel time reliability information marketplace, including technologies, the roles of the public and private sectors, and choices (both free and priced) available to travelers.

2. Better understand what network travel time and travel reliability information travelers require, particularly in complex metropolitan environments where many travel choices are possible. Better understand how travelers would use improved information.

3. Determine how best to communicate travel time reliability information to travelers so that they can understand it and use it to make optimal travel choices. Develop a guide to help providers of traveler information ensure that information regarding travel time reliability is offered in a manner that is most useful to travelers.

4. To the extent possible, quantify the potential for improvements in the communication of travel reliability information to affect traveler choices such that positive impacts on system performance occur (e.g., improved transportation system reliability).

5. Develop a simple and easily standardized lexicon for communicating travel time reliability concepts among transportation professionals and travelers.

6. Develop prioritized, near-term strategies for improved dissemination of travel time reliability information and provide guidance for state departments of transportation and other public sector transportation agencies that are contemplating providing travel reliability information to travelers.

Data Sets

- **Project L14 Enhanced Experiment Post Survey – Chicago:** This file contains the summarized results of the post-survey questions used in the Chicago distribution of the enhanced experiment.

- **Project L14 Enhanced Experiment Data – Chicago:** This file contains all the filled-out spreadsheets used in the Chicago distribution of the enhanced experiment.

- **Project L14 Enhanced Experiment Data – Washington DC:** This file contains all the filled-out spreadsheets used in the Washington DC distribution of the enhanced experiment.

- **Project L14 Enhanced Experiment Data – Houston:** This file contains all the filled-out spreadsheets used in the Houston distribution of the enhanced experiment.

- **Summary of Results Table:** This table, titled "Travel Time Reliability Terminology – Results Comparison from Three Human Factors Studies", summarizes the results from three survey methods: Focus Group, Computer Survey, and Open-Ended Survey.

- **Task 6-10 Computer Survey SuperLab Data:** This file contains data from a multiple-choice survey used to address comprehension and preference questions regarding reliability terms and associated trip information.

- **Task 6-10 – A3: Open-Ended Survey Data:** This spreadsheets contains the data documented in the A3 Open-Ended Survey Results report, as listed in the Related Artifacts section.

- **Enhanced Laboratory Experiment:** After careful assessment of travel time reliability terms and the results obtained in the various human factors studies and experiments conducted throughout the course of the Project L14, the research team established three key hypotheses related to the use and value of travel time reliability information from the user's perspective. Those hypotheses were tested in a second, enhanced laboratory study included in this file.

- **Original Laboratory Experiment:** The objectives of the first utility function laboratory study were (1) to assess the value participants placed on traveler information, and specifically reliability information, within the context of a simulated time-constrained trip, and (2) to determine whether having reliability information helped to speed the transition from an unfamiliar commuter to an experienced commuter.