

ITS Field Operational Test Summary

TravInfo

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Introduction

The TravInfo ITS Field Operational Test evaluates a regional Advanced Traveler Information System (ATIS) in the San Francisco Bay Area. The ATIS provides up-to-the-minute traffic information and current transit and ride-share information to Bay area travelers. TravInfo provides traveler information through a regional no-area-code telephone number. It aims to:

- Collect, integrate, and broadly disseminate timely and accurate traveler information throughout the San Francisco Bay Area
- Stimulate and support the deployment of a wide variety of ATIS products and services leading to the creation of a competitive and viable market
- Test the value and effectiveness of a public/private partnership to collect and disseminate traveler information.

The test began operations in October 1996. It will continue to operate until December 1998 when the Final Evaluation Report is expected.

Project Description

As a regional ATIS, TravInfo aims to increase transportation efficiency by providing timely and accurate traveler information in the San Francisco Bay Area. The dark bands shown on some highways in Figure 1 indicate the route segments incorporated in TravInfo.

The TravInfo project collects information from several data sources, integrates it into a single, comprehensive database, and disseminates the information to the public, both directly and through third parties.

Information on speed and congestion comes from the California Department of Transportation's (CalTrans's) Traffic Operations System in Oakland. This system is an area-wide network of freeway sensors and closed-circuit television cameras. Similar information comes from the Freeway Service Patrol's roving fleet of tow trucks. These trucks contain an automatic vehicle location system. The California Highway Patrol's Computer-Aided Dispatch (CAD) system provides information on accidents and other incidents. Additionally, the CAD system provides data on construction work, other road closings, and sports events or concerts that may affect traffic.

The TravInfo database also contains transit information from the Metropolitan Transportation Commission. In addition, the TravInfo Traveler Information Center (TIC) in Oakland gathers information on bicycling and park-and-ride facilities. The TIC screens, processes, and formats the information in a uniform database before disseminating it to the public and the private sector. The TIC houses the public domain database and supports its update and dissemination.

using the TravInfo information, such as pager systems, cellular phones, on-line computer services, in-vehicle navigation systems, and kiosks.

The evaluation of the test assesses the effects of TravInfo on a broad array of issues including:

- Entrepreneurial response to improved travel information
- Changes in individual travel behavior
- Impact on overall transportation system performance
- Value and effectiveness of public/private partnership
- Timely and accurate dissemination of traveler information through the Bay area.

Test Status

The TravInfo test began operations in October 1996 and will continue until December 1998. The TravInfo Management Board is currently considering various issues pertaining to TravInfo's potential deployment after the test. Several interim evaluation reports have been published. These reports examine institutional issues, traveler response, value-added resellers, and the performance of the Traveler Information Center. A brief synopsis of these reports follows.

Interviews conducted with members of the Management Board, the Steering Committee, and the Advisory Committee indicated that TravInfo has been quite effective in achieving the goal of developing a partnership between the public and private sectors. The interviews showed that private sector participants felt involved in the project and believed that the public sector had listened and responded to their concerns. At the same time, interviewees believed that the organization's efficiency could be further enhanced by better defining the roles and responsibilities of the Steering Committee and the Working Group.

Implementation issues dominated TravInfo during the second year of testing. These issues included public/private controversies in the design of TravInfo and completion of a temporary data collection center to meet the TravInfo test schedule. The majority of the partners agreed that the TravInfo organization had been effective at resolving these issues. They felt that TravInfo strengthened the public/private partnership by establishing a clear and balanced vision for the public and private sectors. This vision assigned to the public sector the responsibility for data collection and database operation/supervision. The vision also promoted the private sector's development of products and services. This vision has helped delineate the explicit boundary between public and private responsibility with respect to data broadcasts and data processing issues.

Evaluators conducted interviews during fall of 1995 with registered value added resellers (VARs). The VARs indicated that TravInfo has stimulated their business opportunities. The VARs also felt TravInfo has effectively resolved the ATIS competition issue between public and private sectors. The VARs support the project and plan to disseminate TravInfo information through their products and services. VAR participation, however, depends on their satisfaction with TravInfo's data and operations. The primary goal of the VARs is to test the ATIS market. Presently, three project partners are offering real-time information to the public through the Internet:

- Maxwell Technologies, Inc. and the Contra Costa Times provide real-time traffic information.
- ETAK provides Bay Area Traffic Pages.

Surveys of travelers conducted during November 1995 indicated that three quarters of the participants listen to traffic reports, at least occasionally. Approximately one half of those who listen to traffic reports change their travel habits because of the information they hear. These travelers listed being able to make informed travel decisions, save travel time, and reduce anxiety as benefits of the TravInfo services.

Evaluators examined the performance of the Traveler Information Center (TIC). This examination found a total of 73 system reliability problems during the period from January to June 1997. Eighty-nine percent of the problems originated within TransView, the primary TIC program. The operator's role in the flow of information through the TIC has been crucial in terms of data entry, data interpretation, and prioritization. The two most time-consuming data sources are the California Highway Patrol's Computer Aided Dispatch (CAD) system and Metro Network's airborne reports.

The publicly available traveler information telephone service, TATS, recorded a constant monthly volume of between 50,000 and 60,000 calls from September 1996 to June 1997. TATS usage for Oakland, the busiest regional system, averaged only three percent of the system's capacity. The private sector access of the data, via the Landline Data System, has also been quite limited.

The results of telephone surveys conducted of 212 commuters immediately following two congestion-causing incidents suggest that traveler behavior is largely unaffected by individual incidents or congestion. Furthermore, although many commuters listen to traffic reports, they do not often respond by modifying their travel behavior. The survey showed that even if they are aware of incidents, travelers do not believe that changing their travel plans will result in shorter travel times. The survey results also indicated that most participants were unfamiliar with TravInfo. Even the 75 percent of those who were familiar with the service never used it.

Test Partners

California Department of Transportation

California Highway Patrol

Federal Highway Administration

Metropolitan Transportation Commission (MTC)

TRW

References

Hall, Yim, Pfeifle, and Weissenberger, TravInfo Evaluation: Institutional Element Phase 1 Results, California Path Working Paper UCB-ITS-PWP-95-01, February, 1995.

Hall, Loukakos, Weissenberger, and Yim, TravInfo Evaluation: Institutional Element Phase 2 Results, California Path Working Paper UCB-ITS-PWP-96-14, August, 1996.

Loukakos, Hall, Weissenberger, and Yim, TravInfo Evaluation: Value Added Reseller (VAR) Study Phase 1 Results, California Path Working Paper UCB-ITS-PWP-96-13, August, 1996.