

ITS FIELD OPERATIONAL TEST SUMMARY

TRAVLINK

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Introduction

TRAVLINK was a Minnesota Department of Transportation (MnDOT) Guidestar project that enhanced Advanced Public Transportation Systems (APTS) for the Twin Cities region. The project demonstrated the use of Automatic Vehicle Location (AVL), Computer-Aided Dispatch (CAD), and Automatic Vehicle Identification (AVI) systems on Metropolitan Council Transit Operations (MCTO) buses in Minneapolis and its western suburbs. The project distributed real-time bus schedule and traffic information to travelers using Advanced Traveler Information Systems (ATIS).

Project Description

Figure 1 illustrates the TRAVLINK test area. The corridor used in the test was a newly reconstructed freeway that included significant transit and ridesharing facilities. AVL transmitters were used in 80 MCTO buses. A workstation at MCTO's Transit Control Center provided two-way communication with the buses. It also sent real-time bus status information to a computer server at the MnDOT Traffic Management Center (TMC) in downtown Minneapolis. From the TMC, bus status and other travel information, such as real-time traffic conditions, were reported to several sites. These sites included three travel information kiosks located in downtown Minneapolis and two video monitors and four electronic signs located at MCTO park-and-ride lots along the I-394 corridor. The information was also sent to 212 TRAVLINK on-line users with video text terminals or personal computers at home or work.

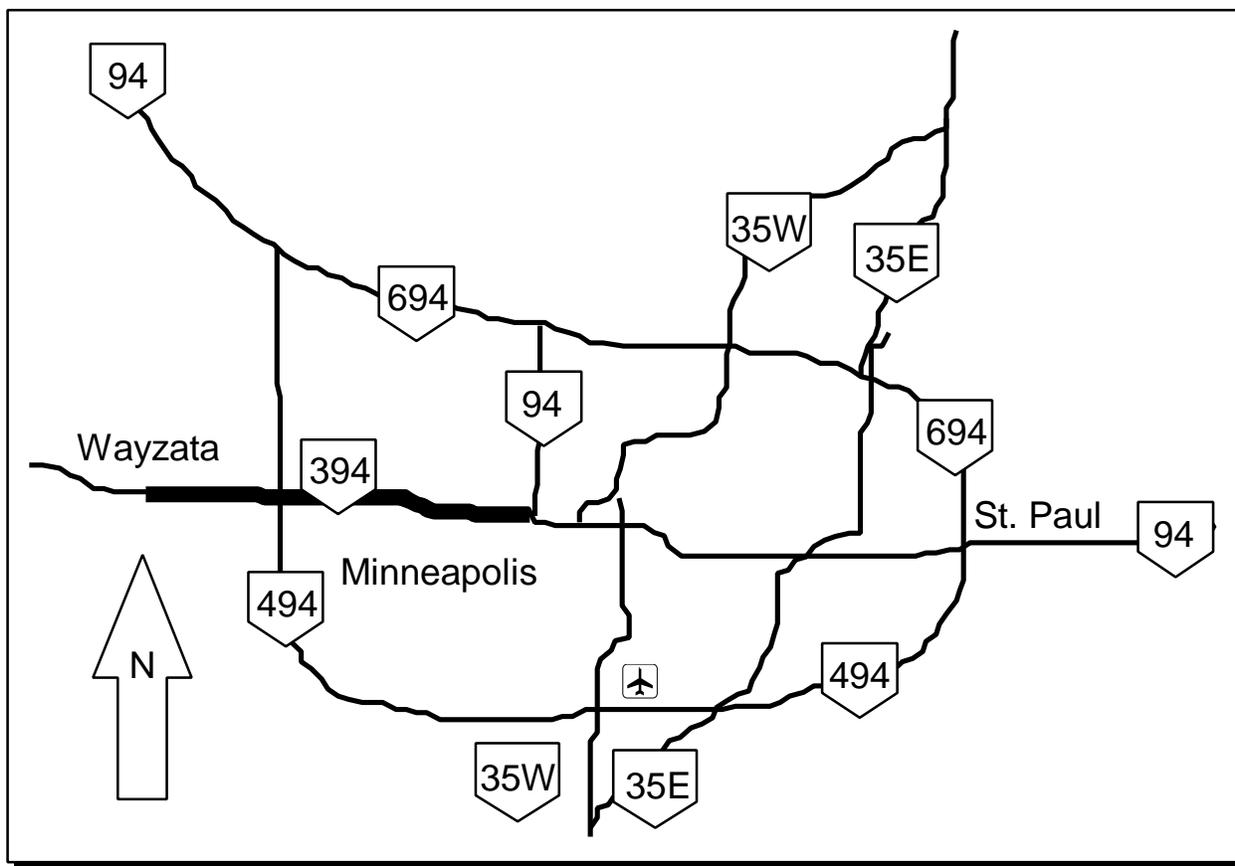


Figure 1: TRAVLINK Test Area

The evaluation consisted of the following:

- Collection and analysis of data about the project objectives
- Collection and analysis of data about site characteristics
- Compilation of a chronology describing the implementation and operation of the test
- Recording of external factors that might influence the test findings and results.

Results

TRAVLINK made significant strides towards improving transit information for commuters with the use of the kiosks, signs, and personal computers.

- TRAVLINK was an early demonstration of the use of multiple APTS technologies. This demonstration provided information to commuters about the location and status of buses that they planned to board, along with real-time traffic conditions and other static traveler information.
- Enhanced security was demonstrated during an incident involving a bus driver who was being threatened. The driver activated the “silent alarm,” an MCTO police officer who was nearby investigated, and the perpetrator was arrested.

Significant obstacles, primarily funding limitation, MCTO operations cutbacks, a 3-week bus strike, and the limited test area (I-394 corridor only) resulted in moderate use of the kiosks, limited use of the electronic signs, and declining on-line use during the 12-month period. There was general agreement among the partners that if such a system were to be implemented on a permanent basis more benefits would be realized.

Legacy

The project ceased operation after the test was completed. MnDOT intends to transfer the kiosks to the Duluth area for inclusion in their public transportation upgrade program as part of the Guidestar statewide ITS program.

Test Partners

3M and Rennix

ETAK

Federal Highway Administration

Federal Transit Administration

Metropolitan Council Transit Development

Metropolitan Council Transit Operations

Minnesota Department of Transportation - Guidestar

Motorola

Transportation Management Solutions, Inc. - formerly Westinghouse

US WEST

References

Cambridge Systematics, Inc., TRAVLINK Operational Test Evaluation Report; August 1996.

Cambridge Systematics, Inc., TRAVLINK Operational Test Institutional Analysis;