

ITS Field Operational Test Summary

North Seattle Advanced Traffic Management Systems

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Introduction

The North Seattle Advanced Traffic Management Systems (NSATMS) ITS Field Operational Test is developing and implementing an area-wide, multi-jurisdictional advanced traffic management system (ATMS) in the Seattle metropolitan region. The Washington State Department of Transportation joined forces with public and private partners in the greater Seattle area to design a system to control inter-jurisdictional arterial roadways and freeways and to share traffic data. The system serves as a test bed for ITS technologies such as advanced traveler information systems (ATIS), advanced public transportation systems (APTS), automatic vehicle identification (AVI) and video imaging.

System deployment will be completed by the third quarter of 1998. Inclusive dates for the evaluation of the project have not yet been determined.

Project Description

The NSATMS is a multi-jurisdictional effort to develop a regional traffic monitoring and data sharing system. The system will offer agencies and communities throughout the greater Seattle area access to timely traffic data. The system's goals are to promote agency coordination and cooperation throughout the Seattle area, to manage area traffic more efficiently, and to serve as a data source for future metropolitan transportation planning and operations efforts.

The NSATMS establishes a computer network of remote workstations that provide the user access to a common database of frequently updated information about traffic conditions throughout the Seattle area. The system also provides information about the status of traffic control equipment in the area of coverage. Additionally, the system supports the region's commitment to ridesharing, transportation demand management, and HOV facilities. It will build on the area's historical strengths in transportation system management.

Test Status

The North Seattle ATMS test partners signed a development contract in September 1994. This contract began the development of the system for gathering arterial data from numerous agencies and jurisdictions in North Seattle. The original plan was to give the ATMS limited control over the local agency signal systems through designed signal plan changes. After numerous meetings, however, the test partners modified the plan to focus on gathering and sharing data among the partners. The ATMS will still have limited control of state owned signal systems within the freeway system and on state roads.

In April 1996, the development contract was modified to change the operating system from IBM OS2 to Windows NT. This change delayed project completion for a full year. Despite the delay, the project plan demonstrated the feasibility of coordinating traffic data sharing. The plan was incorporated into the Seattle Model Deployment Initiative along with plans for similar ATMS centers in South and East Seattle.

The North Seattle ATMS is being deployed in three phases. Test partners anticipate deployment to be completed by the third quarter of 1998. The first phase is presently underway. The first phase implements the central server system and links it with the WSDOT freeway management system (TSMC). The second phase will combine data from a variety of signal systems among the participating agencies. The final phase will include software delivery to agency sites.

Figure 1 illustrates the complete communication coverage that will share data among all the elements in the NSATMS. When all three ATMS centers are fully operational, more than 25 different agencies will have access to traffic information concerning the entire Seattle metropolitan area. These agencies include cities and counties in the Seattle area as well as transit agencies and the Washington State Transportation Center at the University of Washington (TRAC). The system will also share data with two other field operational tests, SWIFT and TravelAid.

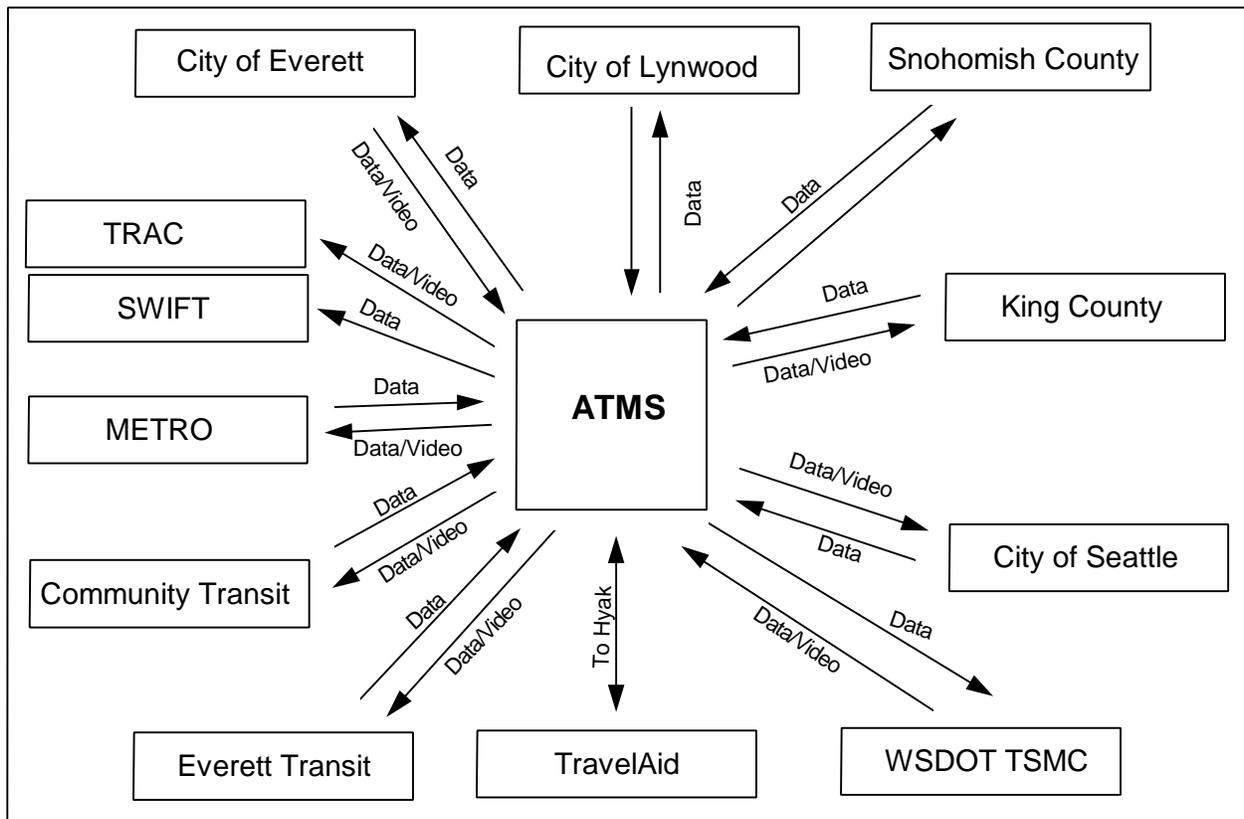


Figure 1: NSATMS Communications Overview

Test Partners

- City of Everett
- City of Lynnwood
- City of Marysville
- City of Seattle Engineering Department
- Community Transit
- King County

Metro Transit

P.B. Farradyne

Snohomish County

Washington Department of Transportation

Washington State Transportation Center (TRAC), University of Washington

References

None published.