

# **ITS Field Operational Summary**

## **Seattle Wide-Area Information For Travelers**

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### **Introduction**

The Seattle Wide-Area Information For Travelers (SWIFT) ITS Field Operational Test evaluated the performance of a large-scale, urban Advanced Traveler Information System (ATIS) deployment in Seattle, Washington. The SWIFT ATIS had several unique features. Among these were the provision of information for multiple transportation modes, the delivery of this information using three different devices, and the use of FM sideband as the primary communications medium.

Testing of the system took place from August 1996 to September 1997. The Evaluation Report will be ready in July 1998.

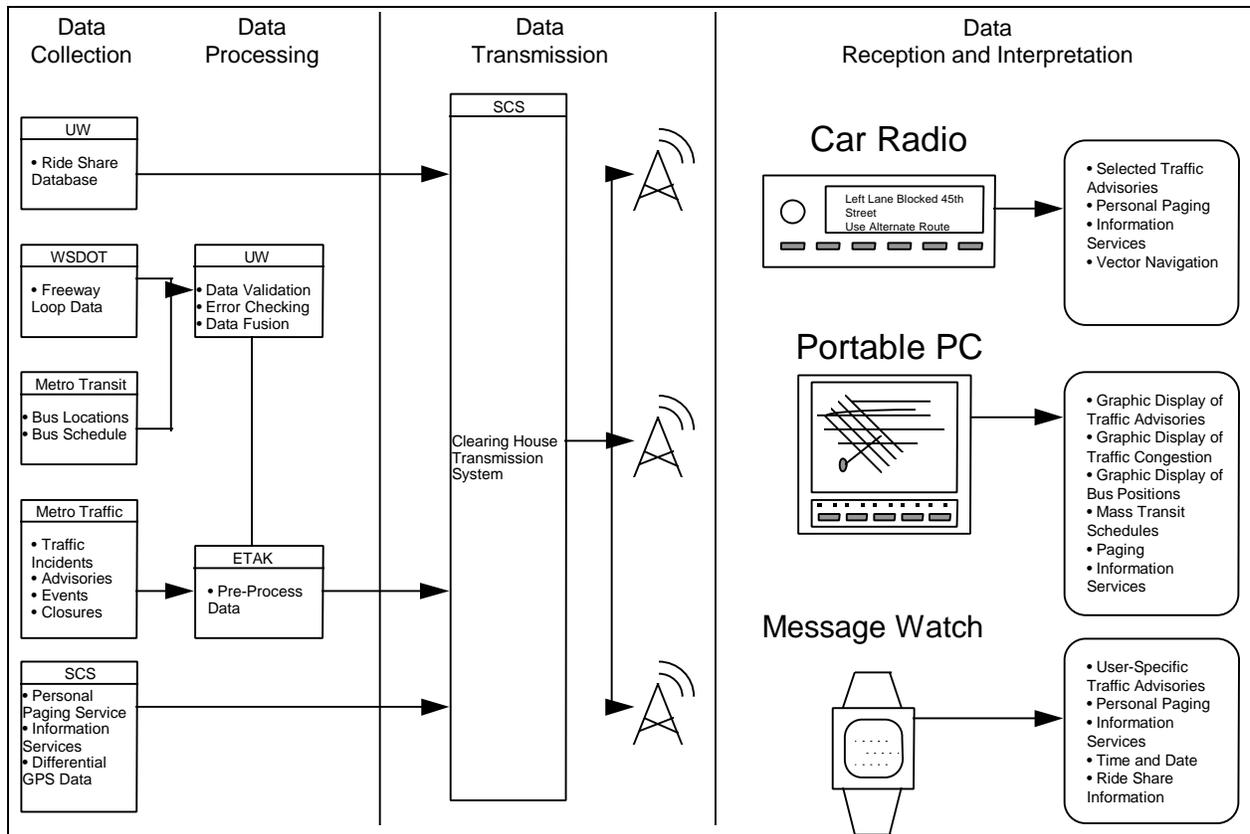
### **Project Description**

The Seattle Wide Information For Travelers Project tested the ability of a high speed FM subcarrier to deliver traveler information to users via a paging watch, a lap top computer, and an in-vehicle navigation device. Figure 1 shows the SWIFT components and the flow of information between them.

The system used the existing infrastructure to capture traveler information. Washington Department of Transportation's freeway management system provided information pertaining to freeway conditions. King County Metro in Seattle provided bus locations. Traffic incidents were encoded then sent to the in-vehicle navigation device, which announced incidents through the car radio system. The system also sent traffic information to lap top computers, which in turn, plotted incidents on a map data base and displayed them on the screen. The Message Watch alerted the commuter to problems for routes and times that the user specified in an individual travel profile.

Additional features of the delivery systems consisted of the following. The in-vehicle navigational system included a yellow page directory of local landmarks, hotels, and restaurants with GPS to show location and relative direction to the selected destination. The PC notebook computer displayed graphical maps with incident icons and showing details such as incident type, roadway affected, and direction. The system also provided bus schedules and locations and ride share matching information.

The SWIFT evaluation examined the system architecture, communications coverage, institutional issues, deployment costs and user acceptance.



**Figure 1: SWIFT Components and Data Flow**

### Test Status

SWIFT testing concluded in September 1997. The final evaluation report is due in July 1998.

A draft report about the institutional issues gave some evaluation results. The institutional issues that primarily affected the SWIFT project were:

- Responsibilities - Some SWIFT team members ended up performing activities that were outside of, or in addition to, their expectations when they started the project.
- Role Clarity - Differing expectations regarding the role and responsibilities of each organization in the SWIFT teaming agreement caused some development, testing and deployment delays.
- Public/Private Partnership - Confusion as to the exact role of public and private agencies in a public/private partnership caused delays in contract negotiations.
- Patent/Copyrights - Concerns about how patent and copy rights should be assigned to the SWIFT team members in the public/private partnership caused additional delays and or re-negotiation of SWIFT contracts.
- User Perception/Acceptance - Because user inputs and prototyping were minimal during the design phase, concern was expressed about how well the SWIFT system would be accepted by end users or operational test participants.

The primary SWIFT lessons learned were:

- ITS partners need to be both capable and committed to doing the work
- Each side of the public/private partnership needs to understand the principles and ideals that govern the other
- There needs to be team-member consensus regarding the development approach and the technical tools to be used
- Federal Accounting Regulations (FARs) need to be changed to include models for public/private partnerships that address the distribution of patent and copy rights among the team members
- Market research, user-system prototyping and user training should be included in ITS projects to ensure that the system is well received

One of the test partners, Seiko Communications System is continuing to transmit pre-trip and en-route traveler information, en-route transit information, traveler services information, and ride matching and reservation services, through the Seiko Message Watch.

### **Test Partners**

Delco Electronics

ETAK

IBM

Metro Traffic

Seiko Communications Systems (SCS)

University of Washington

SAIC

### **References**

Washington State Department of Transportation -Transportation Research Center, SWIFT Institutional Issues Study Final Report- Draft, December 1997

Dailey, Daniel J. and Haselkorn, Mark P., SWIFT: Technical and Institutional Issues of an Operational Test from a Public Sector Perspective