Minnesota Statewide Plan For Advanced Traveler Information Systems (ATIS)
Executive Summary

December, 1998
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STATEWIDE PLAN FOR ADVANCED TRAVELER INFORMATION SYSTEMS

ATIS Policy Committee Members

Marthand Nookala, Chair
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Gene Ofstead
Assistant Commissioner
Mn/DOT TRIM
Dennis Lazenberry
DPS, MN State Patrol
Cecil Selness
Mn/DOT Access Management
Mary Welfling
Mn/DOT Finance & Admin.

Adeel Lari
Office of ATF
Karl Rasmussen
Mn/DOT Operations
Andrew Terry
Mn/DOT Operations
Mark Wikelius
Mn/DOT Operations
Mike Robinson
Mn/DOT District 1

Tom Satre
State of MN, Office of Tech.
Lucy Kender
Mn/DOT Communications
Dennis Foderberg
Mn/DOT OATS
Gary Workman
Mn/DOT Metro

ATIS Technical Committee Members

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Mn/DOT OATS
Karl Olmstead, Co-Chair
Mn/DOT Info Resource Mgmt
Tom Glancy
Mn/DOT Finance & Admin.
Tom Grimes
Mn/DOT Operations
Roberta Dwyer
Mn/DOT District 1

John Griffith
Mn/DOT Land Management
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Mn/DOT Communications
Sue Groth
Mn/DOT Metro Division
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Mn/DOT Div. Freight Plan.
Jason Archbold
Formerly Mn/DOT District 4

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Mn/DOT Operations
Dennis Lazenberry
DPS MN State Patrol
Judy Rockvam
Mn/DOT Operations
Ray Starr
Mn/DOT Metro Division
Sue Sheehan
Mn/DOT OATS

Committee Technical Support

Ferrol O. Robinson, Principal
SRF Consulting Group, Inc.
INTRODUCTION

The Advanced Traveler Information Systems (ATIS) Policy Committee and the ATIS Technical Committee were established by the Minnesota Department of Transportation’s (Mn/DOT) Deputy Commissioners’ staff in late 1997.

The ATIS Technical Committee, with oversight from the Policy Committee, was charged with the responsibility for developing a statewide ATIS plan. The plan was to identify short- and long-term goals and include all ATIS activities in which Mn/DOT is either a leader or a participant. The plan was also to address three major issues:

- Identify the highest priority issues facing ATIS initiatives, particularly clarifying the role of the private sector.
- Identify the highest priority ATIS standards issues and coordination and establishment of standards.
- Recommend mechanisms to ensure that the appropriate level of communications takes place among and between ATIS-related initiatives as well as with ITS and other transportation initiatives.

This Executive Summary is intended to highlight key elements of the plan. The Statewide ATIS Plan was presented to Mn/DOT’s Deputy Commissioners for consideration, and the Plan was approved in November 1998. It is expected that the plan will continue to be reviewed and refined.

In this report, the term “travelers” is used sometimes as a substitute term for “customers” or “users.” Also used interchangeably in this report are the terms “data” and “information.” Generally speaking, data refers to the raw material collected. This data can be given to travelers/customers either as unprocessed data or as processed, value-added information. In both cases the customer receives information. If the data is passed on to other information service providers for them to add value to it, the passed-on data is considered data, not information.

ATIS VISION AND GOALS

| VISION STATEMENT |
| TRAVELERS IN MINNESOTA WILL HAVE THE INFORMATION THEY NEED TO HAVE A SAFE, EFFICIENT AND SATISFYING TRIP. |

Minnesota’s long-term vision for ATIS is that a mix of public- and private-sector entities will deliver accurate, consistent and reliable information to make travel safer and more efficient, and to increase user satisfaction. Timely and accessible information will be provided to as many users as possible, using the most appropriate technology. ATIS will
address customer needs statewide, in coordination with adjacent states. To the extent practicable, ATIS will be self-sustaining. In the short term, ATIS will provide timely core information to core users at selected geographic locations, using available devices and technology.

**Goals**

The vision developed for ATIS identifies three priority goals: (1) to make travel safer; (2) to make travel more efficient; and (3) to increase customer satisfaction.

**Expected Outcomes**

Ultimately, the effectiveness of ATIS initiatives or applications will be measured by their ability to achieve certain desired outcomes. These outcomes are an outgrowth of the ATIS goals defined above and are listed in the table below.

**EXPECTED OUTCOMES FROM TRAVELER/CUSTOMER INFORMATION**

<table>
<thead>
<tr>
<th>Information Item</th>
<th>Decreased Accidents</th>
<th>Improved Emergency Services</th>
<th>Decreased Congestion</th>
<th>Decreased Delay</th>
<th>Decreased Infrastructure Wear</th>
<th>Increased Tax Revenue</th>
<th>Increased Traveler Satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Route specific road condition – weather related</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Road construction/ops</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight restrictions (weather related)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trip travel times/operating or actual speeds</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Congestion levels</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
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<tr>
<td>Incidents</td>
<td>✓</td>
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<td>✓</td>
<td>✓</td>
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<tr>
<td>Weather conditions (visibility, etc.)</td>
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<td>✓</td>
<td>✓</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>Posted detours</td>
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<td>✓</td>
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<tr>
<td>Closures/alternate routes</td>
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<td>✓</td>
<td>✓</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Tourist information: lodging and activities, gas stations, truck stops</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Medical emergency facilities locations</td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>Transit scheduling</td>
<td></td>
<td>✓</td>
<td>✓</td>
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<td></td>
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<tr>
<td>Park-and-ride locations</td>
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<td>✓</td>
<td>✓</td>
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<tr>
<td>Airport and parking information</td>
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<td></td>
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<tr>
<td>In-vehicle road guidance</td>
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<tr>
<td>&quot;Mayday&quot;</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Parking available (metro area)</td>
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<td></td>
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<td></td>
<td></td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Event parking and information</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
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</table>
ATIS PUBLIC/PRIVATE SECTOR POLICY

The Technical and Policy Committees have formulated the following policy regarding public/private sector roles. Further work on this policy needs to be conducted before it is presented to Mn/DOT’s Deputy Commissioners for discussion and adoption.

PROPOSED ATIS POLICY REGARDING PUBLIC/PRIVATE SECTOR ROLES

The state retains responsibility and accountability for ensuring that travelers have access to basic information needed to use the transportation system safely and efficiently. The state will encourage the development of public/private sector partnerships and continued operation of competitive private markets to provide travel information to the public. In cases where private markets cannot deliver that information, the state will fund development and operations. State-funded development and operations will be outsourced when that is the most effective and efficient way to deliver access to travel information.

The public sector’s core responsibility for providing travel information should reflect the goals defined in the ATIS vision by focusing on the top two priority goals:

- Provide information that will assist in preventing, avoiding or minimizing travel-related crashes and incidents.
- Provide additional information that is required to ensure that the transportation system operates efficiently, especially in terms of reducing congestion and delay.

ATIS BUSINESS MODELS

For purposes of the plan, the information related to business models and contracting options are taken from the recently completed “ATIS Business Model Framework,” prepared by the Washington State Transportation Center (TRAC), under sponsorship from ITS America and USDOT (1998).

Four business models or approaches are identified for operating an advanced traveler information system:

1. Public-Centered Operations
2. Contracted Operations
3. Franchise Operations

4. Private, Competitive Model (National Weather Service Model)

The following graphic illustrates the concept of shared responsibility for information delivery by the public and private sectors.

The public sector has the primary responsibility for providing safety-related information to the public. Its second priority is to provide information that is needed to improve travel efficiency; however, this responsibility can largely be shared with the private sector. In addition, the private sector has the primary responsibility for providing information aimed at increasing user satisfaction.
One of the primary conclusions is that, at this time, no single business plan will work successfully to attain every desired travelers information outcome.

The implication of the public/private sector policy is that Mn/DOT will actively promote maximum private sector involvement and competition (private, competitive model) in all elements of traveler information, from data collection to delivery. Mn/DOT will retain responsibility to traveler information when this private-sector model does not produce the expected outcomes.

**ATIS Guiding Principles**

A preliminary set of guiding principles was defined to assist in future ATIS system development. These principles should be validated through ongoing market research and operational tests. These principles are:

- Define Mn/DOT’s role and responsibilities
- Ensure quality and availability of information defined by its accuracy, timeliness, consistency and personalization
- Make public-sector data readily available to others
- Allocate resources for system operation and maintenance at time of deployment
- Minimize redundancies in data collection, processing and delivery
- Select appropriate delivery mechanisms
- Ensure ATIS system integration with other information and its systems
- Establish a cooperation and coordination process
- Include special events in ATIS planning
- Ensure that the appropriate information reaches specific customer groups
- Identify non-traditional stakeholders and ensure their accessibility to traveler information
- Conduct additional market research/business planning for ATIS deployment

**ATIS Project Development Guidelines**

Every ATIS project should have a clear statement of what outcomes it is intended to achieve or support. Each project should be consistent with the priorities and other initiatives of its public and private partners. It should conform to appropriate federal, state, and industry laws and standards. If it creates responsibilities for on-going maintenance and operations, the size of those “tails” should be estimated and responsibility for them accepted by the appropriate institutions. Every ATIS project should have a well-documented project plan that includes tasks and deliverables, a timeline, resource estimates and sources, a management structure, and risk management, coordination, and evaluation plans.
Adherence to a project development process will help each ATIS project:

- Clarify its goal, objectives and scope
- Clarify the roles of public and private partners
- Ensure fit with Mn/DOT and state priorities
- Ensure fit with other initiatives
- Secure review by appropriate oversight groups
- Ensure conformance with laws, rules, policies, principles and standards
- Account for “tails”
- Develop a thorough project plan
- Gain necessary approvals

**ATIS Plan Actions and Recommendations**

The following actions and recommendations are intended to better plan, coordinate and deploy the ATIS elements of project initiatives and operations in Minnesota:

**Actions**

1. Implement oversight of ITS projects (see attached figure)
2. Identify staff accountable for ATIS/ITS coordination
3. Create an ongoing ATIS technical group
4. Conform to the project development process
5. Establish stewardship for traveler information
6. Define accessibility of public sector data by the private sector
7. Coordinate metro and statewide ATIS services
8. Keep up with ongoing work on standards
9. Use market research to validate ATIS plan elements

**Recommendations**

1. Consider establishing “traveler information” as a core business of Mn/DOT
2. Conduct further work on the ATIS policy regarding public/private sector roles, and present to Commissioners for approval
Figure – Oversight Structure