Alberta’s Strategic Plan on Intelligent Transportation Systems - a Primer

Introduction

The new millennium will see Alberta continue to experience considerable growth in exports and tourism. Emerging e-commerce and the growing exports of value-added products are shifting Alberta’s traditional resource based economy to a new economy, which relies heavily on just-in-time performance and integrated transportation logistics systems. The new economy requires more efficient trucking services and highway infrastructure to sustain the growth and competitiveness.

Governments are now turning to the emerging and evolving technologies known as intelligent transportation systems (ITS) for solutions to help them to meet the many challenges and demands placed on transportation systems. A general definition of ITS is as follows:

“Intelligent Transportation Systems include the application of advanced information processing (computers), communications, technologies and management strategies, in an integrated manner, to improve the safety, capacity and efficiency of the transportation system.”

ITS applications can generally be divided into the following seven major functional categories:

1. Travel and Transportation Management (e.g. advanced traffic signal systems, freeway incident detection and management systems, real-time data collection and surveillance, etc.)

2. Travel Demand Management (e.g. traveller advisory systems, etc.)

3. Public Transportation Operations (e.g. electronic transit schedule information, GPS tracking of bus movements and locations, etc.)

4. Commercial Vehicle Operations (e.g. weigh-in-motion, electronic truck clearance at vehicle inspection stations and border crossings, etc.)

5. Electronic Payment (e.g. electronic toll payment, transit fare payment, etc.)

6. Emergency Management (e.g. improving emergency vehicle response time by fleet tracking, route guidance and signal preemption, etc.)

7. Advanced Vehicle Control and Safety Systems (e.g. in-vehicle technologies such as on-board computers, collision avoidance sensor technologies, etc.)
Current ITS Initiatives in Alberta

Most of the department’s current ITS initiatives are demonstration projects and include:

- Global Positioning System (GPS) videolog van - collecting GPS-tagged video images of highway and roadside objects since 1995.
- Vehicle weight and identification system - gathering automatic axle-weight information, coupled with manual input of truck identification, at static weight scales.
- Traffic safety data collection system - using GPS, GIS, mobile computing, and wireless communications to collect accurate traffic collision and violation data.
- Advanced Travelers Information System - using highway advisory FM radio and variable message signs to advise motorists of weather and road conditions.
- Winter maintenance tracking using GPS - using GPS technology to track location and movement of snowplows, aiming at improving accountability and productivity.

A Strategic Plan

The Deputy Minister has directed that a task force be formed to develop an ITS strategic plan. Membership of the task force includes:

- Brian Marcotte, Infrastructure Policy and Planning (Executive Sponsor)
- Vince Wu, Infrastructure Policy and Planning
- Jeanette Espie-Lefebvre, Transportation Safety Services
- Allan Lo, Transportation and Civil Engineering
- David Bass, Corporate Services

Some of the key objectives of the plan are to:

- provide a long-term ITS vision,
- review the department’s current functions and activities and identify short (3-year) and long (10-year) term opportunities for ITS applications,
- develop strategic direction and identify priority areas,
- recommend a systematic and practical approach to ITS deployment in an incremental manner, and
- develop policy, guidelines and criteria on partnering with other levels of government, the private sector and research community.

The immediate task for the task force members is to work with their respective divisional staff to review their current functions and activities and to identify ITS opportunities.
If you like to find out more information on ITS and happenings from around the globe on ITS, check out some of these sites:

**ITS Canada** (your browser has to support frames)

**ITS Online** (for US happenings)

**Japan ITS**

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