ITS in the Great White North (West)

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GREETINGS FROM TORONTO AND CANADA
Canada’s National ITS Strategy

Canada’s ITS Plan: En route to Intelligent Mobility

Partnerships
Development of Canada’s ITS Architecture
ITS research and development
ITS deployment
Strengthen industry
ITS CANADA

- Public-private partnership
- Non-profit organization
- Membership
  - Consultants, suppliers and IT firms
  - Federal, provincial and municipal agencies
  - Academia
- Over 400 members
TRANSPORT CANADA - ITS CANADA PARTNERSHIP

KEY ACTIVITIES

◆ Awareness building
◆ Building of knowledge and capability
◆ Provider of professional services
◆ Principal ITS technical advisor
◆ Promotion and facilitation of ITS deployment
◆ ITS export development
Current Status – ITS Canada

◆ A vibrant ITS community with a successful partnership between ITS Canada and Transport Canada

◆ International cooperation with our counterparts in:
  » United Kingdom - Malaysia
  » Hong Kong - ITS America
  » Brazil - France
  » Chile - South Africa

◆ MOU’s with ITSA, South Africa, Malaysia, UK
Current Status – ITS Initiatives in Canada

- Updating our national ITS Architecture
- Updating our national strategic plan
- Developing a new round of funding
- Implementing national strategic projects
- Fostering regional and corridor integration
- Continuing emphasis on public-private partnerships
The ITS Architecture for Canada

Travelers
- Remote Traveler Support
- Personal Information Access

Centres
- Traffic Management
- Emergency Management
- Emissions Management
- Maintenance Management
- Transit Management
- Toll Administration
- Archived Data Management
- Fleet and Freight Management
- Commercial Vehicle Administration
- Information Service Provider

Vehicles
- Vehicle
- Transit Vehicle
- Commercial Vehicle
- Emergency Vehicle
- Maintenance Vehicle
- Intermodal Container

Wayside
- Roadway
- Toll Collection
- Parking Management
- Commercial Vehicle Check
- Intermodal Terminal

Communications
- Wireline (Fixed-Point to Fixed-Point) Communications
- Wide Area Wireless (Mobile) Communications
- Dedicated Short Range Communications
## ITS WORLD MARKET

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OVERALL DIRECTION AND GROWTH OF ITS MARKET
LEVERAGING POTENTIAL OF PUBLIC SECTOR INVESTMENT IN ITS...

INITIAL INVESTMENT

FUTURE INVESTMENT
ITS PARTNERSHIP MODEL

Aggressive Public Sector

Policy & Mandates

Dedicated Funding

Deployment Plan

Market Forces

Market Development

High Investment

Regular Funding

Non-Assertive Public Sector

Vision

Proactive Private Sector

Reactive Private Sector
PARTNERSHIPS: THE ESSENTIAL BUILDING BLOCKS

Universities

Users

Industries

The Federal Government of Malaysia

Governments
ITS GLOBAL

- Europe: Communications focus
- USA: Intellidrive® and Infrastructure
- India: Billions in planning – World’s Largest Democracy
- China: High Growth – driven by Government
ITS GLOBAL cont’d

- **Hong Kong**
  - tolled tunnels with sophisticated ITS

- **Malaysia**
  - ITS mandated for tollways but not defined

- **Argentina**
  - tolled highways
  - strict specifications on incident detection
  - centralized co-ordinated agency

- **Indonesia**
  - Jasa Marga Ring Road
  - percent of toll revenue to pay for a traffic management system
ITS Development in Canada

- Original Focus on Automated Traffic Information Systems
- The “Canadian Way”: Public-Private partnerships
- Combination of corporate push and government pull
SAMPLE PPP FOR ATIS

Public

Data Collection
- Transit
- DOT
- TMC

Data Fusion

Data Dissemination
- Transit
- DOT
- TMC

End User

General Public

Private

Data Given Away

Data Sold to Customers

Cell Probe
- GPS
- Transponder

Application

Radio Broadcast
- Website
- Cell Phone Provider
Example: City of Toronto ATIS

◆ RESCU
  » Corridor Traffic Management Systems
  » Operating Cost $1 million / year

◆ Objectives
  » Decrease or eliminate annual operating costs
  » Pursue revenue possibilities
  » Increase dissemination of real-time traffic information to the public
  » Expand system to other expressway corridor
City of Toronto ATIS (cont’d)

- **Process (1996-97)**
  - Solicited ideas through a “Request for Qualification” process
  - Received 16 proposals; 7 short listed and 3 further short-listed; one selected to provide detailed proposal

- **Proposal from Lead Contender**
  - Pay for staffing costs of operations centre
  - Pay for system expansion through sponsorship
  - 50/50 split of net revenues from broadcasting (radio) services, selling packaged information and other products
City of Toronto ATIS (cont’d)

◆ Issues
  » Market - competition with established radio traffic reporting

◆ Business
  » Management structure of partnership - legislative constraints
  » Extent of public agency veto
  » Business plan details
E-Traffic ATIS

**Objective**

» To develop a profitable J.V. in providing travel information via cell phones, the Internet, etc.

**Partnership Proposal**

» E-Traffic to provide the “product”
» MTO, City of Toronto, TTC to provide data
» MTO to provide sensors for missing links
» E-Traffic to pay for installation
» E-Traffic to pay MTO for the data when revenue starts flowing
Process

» Several versions of unsolicited proposals submitted
» Industry Canada provided money for showcase
» RFP process initiated
» 2 proposals with E-Traffic’s being non-compliant
» Negotiation with winning proposal ended with no result
» Management consultant retained to study value of traffic data, etc.
» Showcase a success technically
E-Traffic ATIS (cont’d)

Issues

» Value of traffic data
» Who invests vs. who benefits
» The tendering process
» Engineering details
HELP, INC. (USA)

- A non-profit PPP
- BOD with strong mandate and balanced public and private representation
Objectives

» Maximizing highway network efficiency
» Enabling safety and productivity improvement
» Permitting governments to fulfil regulatory responsibilities cost-effectively
HELP, INC.

HELP uses PREPASS, a transponder technology available at 300 facilities in 28 states, providing:

» PREPASS – weigh station e-clearance
» PREPASS PLUS - e-tolling
» AgPASS – by pass of agricultural inspection stations
» GatePASS – automated entry to and exit from terminals
• Major Subject at NRITS: Rural Needs!
• Same Model: Public-Private Partners
• Nova Scotia, Yukon, Quebec complete
• Other provinces in process: BC and Alberta leading way with Ontario
• Funding, coherence critical
• Summit being held in Ottawa Sept 8,9
Advanced Road Weather Information System for Canada

Provincial Servers

Provincial Partners & Municipalities

RWIN Admin.

US Clarus System

CMC

RWIN

Data Management Framework (DMF)

EC Data Archive

MDSS

METRo

RWIN Status/ reports

Alerts

Products (OQ, CQ, MD)

RAIL

Partners & Municipalities

Translators
iMove (BC)

Metro Vancouver’s Traveler Information Site
Common Issues for Partnerships

- Objectives
- Value to Stakeholders
- Procurement rules
- Funding critical – cash? in-kind? who pays?
- Give-and-take criteria
- Institutional concerns
- Legislative concerns
- Social implications
CONCERNS FOR PUBLIC SECTOR

- Degree of public control
- Length of partnership period
- Transparency
- Quality and safety standards
- Social and cultural needs
- Accountability
- Long term benefit
CONCERNS FOR PRIVATE SECTOR

- Return on investment
- Fair allocation of risks
- Fair procurement rules
- Political stability
- Protection of intellectual property
- Balance between rewards and penalties
Conclusions

◆ Partnerships will continue to be the model in Canada
◆ The end user wins: benefits can be high
◆ Must adopt 5 C’s
  » Clear objectives
  » Clear rules
  » Clear responsibilities
  » Clear allocation of risks
  » Clear performance measurements
THANK YOU

Visit our website! www.itscanada.ca