



XML Traffic Files: A Private Sector Perspective

**Presentation to the Transport Canada /
ITS Canada Workshop on XML**

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1. **Background**
2. **Stakeholder groups**
3. **File formats**
4. **XML Working Group**
5. **Conclusions**

Globis Data Inc. Overview of DRIVES Services



Loop data



Traffic video



Cell-phones as traffic probes

Globis Data's servers



Traffic maps on Web sites



Maps and video to mobiles



TV



Fleet management



Government TMCs



Navigation Systems

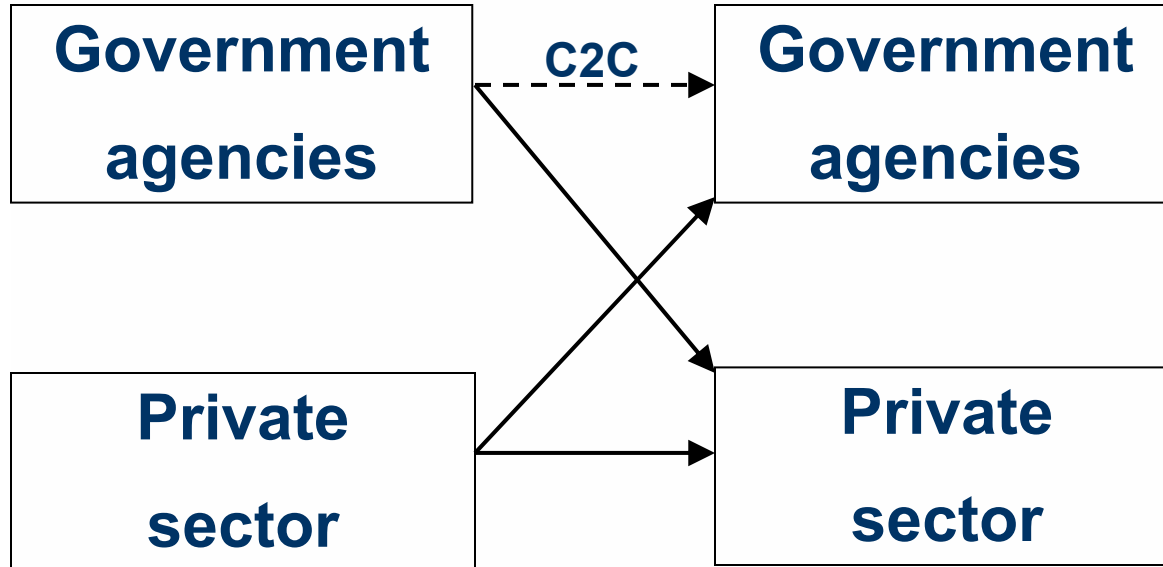
- **Trends:**
 - **More traveller and traffic information services**
 - **More organizations in this space**
 - **Increased exchange of bulk traffic speed and congestion files between these organizations**
- **Three main stakeholder groups:**
 - **Traffic data publishers**
 - **Traffic data users**
 - **System designers, standards organizations, consultants**

- **Government transportation agencies, e.g. TransLink, Alberta Transportation, MTO, MTQ, City of Toronto, NB DOT, etc.**
- **In the future, the private sector will also collect, process and publish traffic data, eg:**
 - **Globis Data's A-GPS cell-phones as traffic probes platform**
 - **ITIS (UK) and Delcan, AirSage (US) and other companies are involved in competitive approaches**

- **Providers of traveller information services to consumers:**
 - Traffic information, e.g. 511, Globis, Alberta Automobile Association
 - Navigation services, e.g. NAVTEQ, TomTom, etc
- **Government transportation agencies:**
 - US: the I-95 Corridor Coalition will soon issue an RFP to buy floating probe traffic data from the private sector
 - Canada: preliminary interest in buying traffic data from the private sector
- **Businesses for integration with fleet management systems**

Traffic Data Publishers

Traffic Data Users



Server-to-vehicle data exchange covered by SAE J2354;
suggest we exclude this

- **Globis currently receives bulk traffic files from 3 government agencies:**
 - MTO: text file
 - MTQ: Access database file
 - City of Toronto: binary file
- **Existing XML formats:**
 - MTO, City of Toronto, and Globis have all developed XML file formats
 - All are different from each other
- **Need a common file format**
 - Globis uses translators now
 - A consistent file format will make things easier for all stakeholders as more traveller information services develop

- **XML is increasingly being used for a variety of data transfer applications, e.g.**
 - **Financial (e.g. Sending T-4 information to CRA)**
 - **Legal**
 - **Traffic**

- **US: various standards activities, including TMDD and SAE**
 - Consistency with the US standards is important
 - The I-95 RFP specifies TMDD and XML
- **UK: The Travel information Highway (TIH) is an open and independent association of information publishers and receivers who have developed an agreed set of principles, e.g.**
 - “Data should be published using XML with compression”
 - For more information, see www.tih.org.uk
- **ISO held a briefing and workshop in October 2006 entitled “Using Web Services and XML in ITS”**

- **Initial objective: to develop a standard for the exchange of traffic data and congestion files using XML**
- **Later: concluded that TMDD is a good starting point**
 - **Some issues....next page**
- **Also concluded that this activity needs a home**

- **TMDD: Traffic Management Data Dictionary**
 - Provides a unique definition and description of the data elements used in the communication of messages and information between systems, including those needed for traveler information systems
- **Our requirements can be met by TMDD, but...**
- **TMDD is complex, has many options for customization, awkward to work with**
 - Need to focus on application development, rather than a new standard
 - Implement an application profile to meet the stakeholders' requirements

- **From the announcement for this workshop:**
 - “Some stakeholders have identified the need in Canada for a consistent file format”
 - “Other stakeholders say that existing standards contain all of the necessary information”
- **Both are right**
 - But the existing standard is not enough, we need to develop and agree on a common application profile based on the standard
 - Detailed work is needed to achieve this
- **Also need an education / outreach program**